

ENGLISH CLASSES FOR 10-12th Grades

| Class Title | Prereqs and helpful information from the teacher |
|-----------------------------------|--|
| English 10 (Standard) | <p>English 10 focuses on essential questions related to the overarching theme, "Community." Students read WHOLE novels to better understand communities, both ones that are familiar and ones that are unfamiliar. Students will read and respond to texts orally and in writing, with an emphasis on full-length fiction and nonfiction and persuasive, reflective, interpretative, and analytical writing. Students are expected to write often and at length, expounding and expanding on their ideas. Furthermore, students are expected, in their reading, to move beyond understanding and to analyze in depth. The standard level devotes more time than the Intensified level on skill development in reading, writing, and speaking.</p> <ul style="list-style-type: none"> * Small and whole-class discussions about literature and nonfiction reading * Multi-paragraph writing in different genres (narrative, research, argumentative) * Homework requires an average of 30 minutes between classes of reading / writing assignments. |
| English 10 Intensified | <p>The Intensified level requires more extensive workload of reading and writing, advanced vocabulary, independent management of project-based learning steps, and high-level performance beyond that required in the Standard sections.</p> <p>Expectations:</p> <ul style="list-style-type: none"> * Students should be able to independently manage their workload and submit assignments based on Canvas due dates * Homework requires an average of one hour between classes of reading / writing assignments. * Teacher recommendations are based on high performance in previous English classes. |
| English 11 (Standard) | <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. |
| English 12 (Standard) | <p>We will be looking at a variety of texts from past and present utilizing both fiction and non-fiction, as well as theory, poetry and film. We'll be looking deeper into a few types of writing that you may not be familiar with, focusing on technical, argumentative, analytical and research. Projects will include presentations, tests and papers, as well as a zine project in the third quarter. In the fourth quarter, every student will be required to complete a 10 page research paper in MLA or APA style.</p> <p>Our units will include (but are not limited to) the following:</p> <p><u>Looking Forward:</u> This unit will contain a presentation detailing what your ideal job for the future will be.</p> <p><u>Love and Passion:</u> In this unit, we will read Chaucer's "The Wife of Bath's Tale," selections from Romantic poets and a film about John Keat's muse.</p> <p><u>Human Nature, Society and Morality:</u> We will be reading Mary Shelley's "Frankenstein" and creating zines based off the main themes.</p> <p><u>Research Writing:</u> every student will responsible for writing a 10 page research paper on the topic of their choosing.</p> |

| | Class Title | Prereqs and helpful information from the teacher |
|---|--|--|
| Social Studies Classes for 10-12th Grades | DE Eng 12 College Comp | <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." |
| | DE Eng 12 World Lit | <p>Prereq: Completion of DE Eng 11</p> <p>DE Literature: NVCC ENG 255 is a college-level course in British and world literature. Students study major English works from the Anglo-Saxon period to the present, emphasizing ideas and characteristics of the British literary tradition. Students also examine major works of world literature, from canon to contemporary. This course involves critical reading and writing experiences throughout.</p> <p>DE Expectations:</p> <ul style="list-style-type: none"> * Read texts in a variety of formats and engage in seminar-style discussions and submit approximately ____ pages per quarter. * Adhere to strict due dates by navigating NOVA Canvas. <p>Devote at least 60-90 min to prepare for each block period.</p> <p>Analyze texts about various cultures and from different periods of history through multiple lenses.</p> <p>Teacher recommendations are based on the successful completion of DE English 111/112.</p> |
| Science Grade 10 | Economics & Personal Finance (10th Grade) | <p>Learn about the financial and occupational side of life. Short term and long term projects and units teach you about the ins and outs of personal finance. In the Macro Economics half, you will learn about basic economic concepts like supply and demand, markets, supply chain, fiscal and monetary policy, banking, and cover topics like microlending's impact on poverty and small business entrepreneurship.</p> |
| | 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> |
| | VA/US Government (Standard) | <p>This class covers topics relating to government, political systems and how they function rather than the history of the system. All units are taught through PBL (like US/VA and WHII)</p> |
| | DE VA/US Government | <p>Teaches the political structure, processes, institutions, and policymaking of the US national government. Focuses on the three branches of government, their interrelationships, and how they shape policy. Addresses federalism; civil liberties and civil rights; political socialization and participation; public opinion, the media; interest groups; political parties; elections; and policymaking.</p> <p>The assignments in the course require college-level reading fluency and coherent communication through written reports.</p> |
| Science Grade 10 | Chemistry (Standard) | <p>This course prepares students for college-level chemistry and enhances their critical thinking skills. It focuses on laboratory work, including data analysis, chemical quantity manipulation, and problem-solving. Students will learn about the interactions of matter and energy through experimental and analytical investigations, with a strong emphasis on project-based explorations as a key component of the curriculum.</p> |
| | Chemistry Intensified | <p>Prereq/Co-req: Algebra II.</p> <p>Intensified includes all of the above in greater detail and the independent research project as spelled out in the Summer Assignment</p> |

Science Classes for 11-12th Grades

| Class Title | Prereqs and helpful information from the teacher |
|---|--|
| DE General Biology | 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. |
| DE Biology II Anatomy & Physiology | 4 credits from NOVA, need to take a test through NOVA to place into this class. Lots of memorization but less fast-paced than Bio 101. Quite a lot of homework. |
| Physics | (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. |
| | Co/Prereq: DE Pre-Calculus This year-long, Algebra-based 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 College Physics I | This year-long course builds on Physics I, focusing on waves, electromagnetism, optics, and selected topics in modern physics. Students explore advanced concepts such as electric fields, circuits, magnetic forces, electromagnetic induction, and wave optics, all grounded in calculus-based problem-solving. Labs provide practical experience and exploration of phenomena like wave interference, optical systems, and the principles of electromagnetism. This course challenges students to integrate their mathematical and scientific knowledge while preparing them for further STEM studies. Strong calculus and math skills are essential for success in this course, as the material is highly mathematical and requires analytical thinking. |
| DE College Physics II | Prereq - Calc I & II <u>Level I (semester 1)</u> : Covers classical mechanics and thermodynamics. Includes kinematics, Newton's laws of motion, work, energy, momentum, rotational kinematics, dynamics and static equilibrium, elasticity, gravitation, fluids, simple harmonic motion, calorimetry, ideal gas law, and the laws of thermodynamics. <u>Level II (semester 2)</u> : Covers waves, electromagnetism and optics. Includes mechanical waves and sound, electrostatics, Ohm's law and DC circuits, magnetic forces and magnetic fields, electromagnetic induction, AC circuits, ray optics, and wave optics. This is a Calculus-based class. |
| 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. |
| | This class is for seniors seeking a fourth lab science class. Students must complete a core science (Biology, Chemistry, Earth Science or Physics) before taking this class. |
| Astronomy | Learn about the universe! Black holes, light, gravity, stars, galaxies, and the origin of the universe. How can we "see" and measure objects that are incredibly far from Earth? What have we learned about the solar system (planets, dwarf planets, asteroids, comets, moons and the Sun) in the past decades? This class also helps students use the scientific method to experience and make inferences. We will use tools of Physics and some math. Mainly we will conduct labs and use online resources to understand what telescopes have helped us learn about the universe. |
| DE Elements of Astronomy | Teaches the history of astronomy and its recent developments. Stresses the use of astronomical instruments and measuring techniques and includes the study and observation of the solar system, stars, and galaxies. |

| | Class Title | Prereqs and helpful information from the teacher |
|---------------------------------|--|---|
| Math Classes for 10-12th Grades | Ecology | <p><i>For those who passed Biology, but failed the Biology SOL</i></p> <p>This course is designated to build on biological concepts that focus on the relationship and interactions between organisms and their environment. Topics include the flow of matter and energy in biotic and abiotic components of an ecosystem, geochemical processes (carbon, nitrogen, phosphorus, and oxygen cycles), chemical and biochemical processes essential for life, water on life processes, and processes and interactions of Earth systems.</p> |
| | Algebra Functions and Data Analysis (AFDA) | <p>by invitation <u>only</u></p> <p>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</p> |
| | Algebra II | <p>Prereq: Geometry</p> <p>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.</p> |
| | Algebra II/Trig Intensified | <p>Prereq: B in Geometry Intensified or Prerequisite: Grade "B" or better in Geometry, Intensified or "B" in both Algebra I and Geometry</p> <p>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.</p> |
| | Advanced Algebra with Trigonometry (Alg III) | <p>Prereq: C in Algebra II</p> <p>Students who struggled in Algebra 2 and need reinforcement of Algebra 2 concepts. Students will dip their toes into trigonometric functions</p> |
| | DE Pre-Calculus | <p>Prereq: 3.0 GPA and C in Algebra II</p> <p>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.</p> <p>This is taught in a flipped style, students will be expected to watch videos and prepare before coming to class.</p> |
| | DE Quantitative Analysis | <p>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).</p> |
| | DE Calculus I | <p>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.</p> |
| | DE Calculus I/II | <p>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.</p> |
| | DE Calculus II | <p>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.</p> |
| | DE Calculus III Vector (Sem 1) | <p>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.</p> |
| | DE Linear Algebra (Sem 2) | <p>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</p> |
| | Probability & Statistics | <p>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.</p> |

| Class Title | Prereqs and helpful information from the teacher |
|---------------------------|---|
| DE Statistics I/II | <p>6 college credits</p> <p>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.</p> <p>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</p> |

