PWCS

PRINCE WILLIAM COUNTY PUBLIC SCHOOLS
LAUNCHING THRIVING FUTURES

HIGH SCHOOL
COURSE CATALOG
2026-27

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Your Future Starts Here!

Dear High School Student,

We are committed to your thriving future at Prince William County Public Schools (PWCS). This includes choosing a meaningful postsecondary path to pave the way for future study and employment. With a clear focus on your learning, we provide you with rich and engaging experiences to help you to make these decisions. New courses have been developed to provide you with opportunities to explore a variety of career areas. Options are available with the potential to earn college credits through increased Advanced Placement (AP), International Baccalaureate (IB), Cambridge, and dual enrollment (DE) offerings. We have created an environment where you will learn about your strengths, how these personal strengths connect with career opportunities, and what preparation is needed to successfully transition to the world beyond high school and **your vision for a thriving future**.

The 2026-27 High School Course Catalog provides you and your family members with information about available courses, support services, and serves as a resource to you throughout the school year. Use this tool to start meaningful conversations with your parents and guardians, siblings, and other trusted adults who walk alongside you during this journey.

Our PWCS school counselors, college and career counselors, teachers, and administrators will work with you to ensure your continued success in meeting graduation requirements and to be certain that your 2026-27 academic program meets your interests and needs. **Your thriving future starts here.** Embrace every opportunity presented to ensure that you will graduate on time with the knowledge, skills, and habits of mind necessary to create a thriving future for yourself and your community.

Tools for Your Journey

Make the Most of Your High School Experience

Making the transition to high school is an exciting and challenging time for students and their families. There are many options to choose from and a number of requirements to meet. In Prince William County Public Schools, we believe that all students should have a rigorous educational experience based on curriculum that builds on what students have

learned at home, in our community, and at school. The high school experience is designed to prepare students for future employment, further study at the college and university level, and to be effective citizens in our local, national, and global community. It consists of high-quality diploma options, a wide choice of specialty programs, core required coursework, an array of elective offerings, and nontraditional options for earning credits. While academic programs form the core of our high school program, it is also important to take advantage of the many opportunities to participate in the rich extracurricular programs at all our high schools.

Where Do I Start?

Select the **diploma type** you wish to earn. Students entering the 9th grade are strongly encouraged to consider the Advanced Studies Diploma option to maintain the greatest number of options as they progress through their high school career. School counseling services provide regular opportunities for families to evaluate student progress toward diploma requirements and to make adjustments to the type of diploma selected. All PWCS high schools provide diplomas and certificates to meet the needs of students with different interests and needs.

The purpose of this course description catalog is to describe in general terms the courses taught in Prince William County Public Schools high schools, grades 9-12. Students should study this course catalog and consult with their parent/guardian, school counselors, and teachers in planning their individual program of study. It is the responsibility of each student and his/her family to ensure that requirements for an Advanced Studies Diploma or a Standard Diploma are met. Graduation requirements are based on the year a student first enters 9th grade. School counselors can help with planning by reviewing test scores and records of past achievements and by discussing current interests and long-term goals. School counselors also have up-to-date information available about various training programs, schools, colleges, universities, and employment possibilities. School counselors review graduation requirements with students annually, and the school counseling staff at each school is available to assist you. Please work closely with your school counselor in making academic planning decisions.

Academic Year

The state requires that the regular academic year is at least 180 days, divided into two semesters. Courses are generally one year in length, and students receive a final grade and one standard unit of credit at the end of the school year for each course successfully completed. Some courses; however, are individually designed for one semester only. A one-semester course receives one-half credit, upon successful completion.

Course Selection

The course selection process in high school is a highly personal task and should be based on the student's aptitude and interests, teacher recommendations, and close collaboration among school, student, and parent/guardian.

Courses listed will be included in the curriculum for the 2025-26 school year if there is sufficient enrollment and available staff. Grade levels listed for courses indicate the grade(s) in which the course is normally taken. All students will be expected to maintain a full-day schedule of classes required to meet the minimum standards necessary for graduation and Virginia Board of Education regulations.

All courses described may not be offered at all schools due to staffing and/or enrollment limitations. School counselors will work very closely with students and parents/guardians to develop academic plans where appropriate substitutions can be made for courses not offered.

When selecting courses for the upcoming school year, students and parents/guardians should choose carefully. The courses selected should be based on the student's ability, past record of academic achievement, interest in the subject, career goal(s), and teacher recommendations. The pursuit of a course of studies leading to entrance into college may include those courses not directly related to college entrance. Visual and Performing Arts (dance, music, theatre, or visual arts) and Career and Technical Education courses offer students the opportunity to explore new areas of study as well as to gain knowledge and skills that may likely prove useful to them in whatever career they choose.

Through careful course selection and close cooperation between the student and the school counselor, a student will be able to pursue their chosen pathway and still have time for other course offerings without excluding any area of study.

This catalog includes a listing of courses taught in Prince William County Public Schools high schools. Not all courses are taught in every high school. Course offerings are contingent on sufficient student interest. This may result in some courses not being available in certain schools even though they are listed for those schools.

A student desiring to take a course offered at a school other than his/her assigned school should contact his/her school counselor for details.

Driver Education

The classroom driver education course is offered as part of the 10th grade health education curriculum in all high schools. When students successfully complete the classroom phase and have secured a learner's permit, they then may take behind-the-wheel driver instruction. Behind-the-wheel driver instruction in Prince William County Public Schools is offered after school and during the summer. There is a fee for behind-the-wheel driver instruction.

Placement/Promotion Procedure

Recommendations concerning instructional placement of students are the responsibility of the teacher and other professional staff directly involved with the students. The final decision concerning placement, however, rests with the principal. Promotion at the high school level is based on the following guidelines:

- Students who are promoted from grade 8 will be placed in grade 9.
- Students in high school progress toward graduation on a course-by-course basis. Students take courses based upon academic performance, academic needs, graduation requirements, and previous credits earned.
- Graduation requirements for students shall be those in effect at the time the student entered the 9th grade for the first time.

Grade Placement

The requirements for membership in grades 9-12 are as follows:

- **9th Grade**: Successful completion of grade eight.
- **10th Grade**: Five units of credit, three of which must be in required courses.
- **11th Grade**: Eleven units of credit, six of which must be in required courses.
- **12th Grade**: Sixteen units of credit, nine of which must be in required courses.

To be classified as a 12th grader, a student must be in a program of studies which will enable the student to acquire the minimum number of standard units of credit and verified units of credit required for graduation by June of the senior year or by the end of summer school following the senior year. All alternative programs require the approval of the principal of the high school from which the student will graduate.

Course Requirements

All students, regardless of the diploma type or specialty program selected, will have to complete a set of required classes in English language arts, history and social science, mathematics, physical education, science, and other subjects. The Standard and Advanced Studies Diploma Charts are designed to help students see what required courses must be completed for each diploma type. Some specialty programs offer courses which may be substituted for required classes. Students and their families need to work closely with their school counselor to explore their available course options.

Specialty Programs

Specialty programs allow for career exploration, subject area concentration, and college/university preparation. Prince William County Public Schools provide excellent opportunities for students to explore a wide variety of special programs. These "specialty" programs give students the chance to investigate careers ranging from the various building trades to advanced computer science. Students participating in these programs can earn certifications, licenses, or other professional credentials in an area of study.

In addition to career exploration and concentrated study in fields of interest, all our high schools provide rigorous college preparation through the College Board's Advanced Placement (AP) courses, IB, Programme, or Cambridge

Programme (AICE). All three of these programs offer students the possibility of earning college credit for courses completed while in high school. There are also dual enrollment and College and Career Ready Virginia (CCRV) courses available to students in PWCS.

Families can explore the wide range of options available in their neighborhood high school program or consider one of the many options presented at our information nights held annually across the county. You can contact the counseling office of any high school for more information about programs of particular interest to you. Learn more about PWCS specialty programs to make the best choice.

Electives

In addition to the core course requirements and specialty programs, all PWCS high schools offer elective course options which extend and enrich the curriculum, and challenge students. Students may choose these electives to customize their educational experience to meet their interests. Some examples are: advanced physical education, astronomy, fine and performing arts, geography, journalism, international relations, theatre, and many more. Speak with your school counselor to learn about the offerings available at your school.

Why Should I Take Advanced Courses During High School?

College Admissions

- **Schedule Strength Matters**: Colleges want to see students challenge themselves to the best of their ability.
- **Preparation for College**: Many students find their college course work to be easier after taking a challenging high school curriculum.
- **Preparation for College Entrance Exams (i.e., SAT, ACT)**: Challenging coursework prepares you to perform at high levels on these tests.

Challenge Yourself

- **Rigor is Best**: Most colleges want to see students take English, history and social science, math, science, and a world language each year of high school.
- **Lifelong Payoff**: Students who take rigorous courses during high school often do better in college and in turn are able to secure more stable employment.

Start a College Transcript

- **Dual Enrollment**: Students start a college transcript in high school when they take an approved dual enrollment course.
- **Head Start**: Students who take college courses, at low or no cost during high school, can save money on college tuition and are more likely to graduate college early or on time.

Balance is Best!

Students should make sure to leave plenty of time to participate in extracurricular activities both at school and in the community.

Graduation Requirements and Your Diploma

The Virginia Board of Education sets forth requirements for students associated with the year the student entered 9th grade for the first time. Students will meet with their school counselor each year to update their Academic and Career Plan (ACP) and diploma type. Prince William County Public Schools Regulation 662-1B, "Graduation Requirements," states that a student must complete all requirements for graduation prior to participation in the graduation ceremony to include earning the required number of standard and verified credits based on the diploma type.

Standard Diploma

22 Standard Credits, 5 Verified Credits: Students who enter 9th grade in 2018-19 and beyond

Course	Credits	Verified Credits	Notes
English	4	2	Courses shall include English 9, 10, 11, and 12, or an advanced equivalent.

	Course	Credits	Verified Credits	Notes
☐	Math	3	1	Courses shall include at least two different course selections from among Algebra 1, Geometry, Algebra Functions and Data Analysis, Algebra 2, or other mathematics courses approved by the board to satisfy this requirement. AP Computer Science A or IB Computer Science course credit earned by students may be considered a mathematics course credit.
☐	Science	3	1	Courses completed to satisfy this requirement shall include course selection from at least two different Science disciplines: Earth Sciences, Biology, Chemistry, or Physics, or completion of the sequence of Science courses required for the International Baccalaureate Diploma and shall include interdisciplinary courses that incorporate Standards of Learning (SOL) content from multiple academic areas.
☐	History and Social Science	3	1	Courses shall include U.S. and Virginia History, U.S. and Virginia Government, and one of the following: World History to 1500 and World History from 1500.
☐	Health and Physical Education	2		Courses shall include Health and Physical Education 1 and 2. Students who participate in the JROTC program have the option of an alternate health and physical education sequence. **First Aid, CPR, and AED Training** *Students will meet the First Aid, CPR, and AED Training requirement while enrolled in Health and Physical Education 1 in Prince William County Public Schools.
☐	Economics/ Personal Finance *(Virtual course component included)*	1		Students will meet the virtual course graduation requirement after taking and passing this or an approved equivalent course in Prince William County Public Schools.
☐	Electives	6		Students can satisfy the sequential elective requirement with any two credits that demonstrate a progression in the study of a specific field (not two introductory courses) from any discipline. The two sequential electives may be in any discipline as long as the courses are not specifically required for graduation in 8VAC20-131-51 of the standards. Students may take the focused sequence of elective courses in consecutive years or any two years of high school. In addition to the two required sequential elective credits, students will need to satisfy the CTE/Visual and Performing Arts/World Language requirement by taking any of the following combinations: • One CTE credit and one Visual and Performing Arts credit. • One CTE credit and one World Language credit. • One Visual and Performing Arts credit and one World Language credit. • Two CTE credits. • Two Visual and Performing Arts credits.
☐	Other Requirements			**CTE Credentialing Exam**: Students must take and pass a Career and Technical Education credentialing exam that has been approved by the Virginia Board of Education **Or** **Take one advanced course during their high school career.** An advanced course can be defined as any AP/Advanced, IB/Pre-IB, AICE/IGSCE course, or dual enrollment. **Or** **Participate in a High-Quality Work-Based Learning experience** as defined by the Virginia Department of Education.

Advanced Studies Diploma

26 Standard Credits, 5 Verified Credits: Students who enter 9th grade in 2018-19 and beyond

	Course	Credits	Verified Credits	Notes
☐	**English**	4	2	Courses shall include English 9, 10, 11, and 12, or an advanced equivalent.
☐	**Math**	4	1	Courses shall include at least three different course selections from among Algebra 1, Geometry, Algebra 2, or other mathematics courses above the level of Algebra 2. AP Computer Science A or IB Computer Science course credit earned by students may be considered a mathematics course credit.

	Course	Credits	Verified Credits	Notes
☐	**Science**	4	1	Courses completed to satisfy this requirement shall include course selections from at least three different Science disciplines from among: Earth Sciences, Biology, Chemistry, or Physics or completion of the sequence of Science courses required for the International Baccalaureate Diploma and shall include interdisciplinary courses that incorporate Standards of Learning (SOL) content from multiple academic areas.
☐	**History and Social Science**	4	1	Courses shall include U.S. and Virginia History, U.S. and Virginia Government, and both World History to 1500 and World History from 1500. World Geography may be accepted as one of the required World History courses for transfer students.
☐	**World Language**	3 or 4		Students can satisfy the World Language requirement for the Advanced Diploma with either three years of one language or two years each of two languages.
☐	**Health and Physical Education**	2		Courses shall include Health and Physical Education 1 and 2. Students who participate in the JROTC program have the option of an alternate health and physical education sequence. **First Aid, CPR, and AED Training** *Students will meet the First Aid, CPR, and AED Training requirement while enrolled in Health and Physical Education 1 in Prince William County Public Schools.
☐	**Economics/ Personal Finance** *(Virtual course component included)*	1		Students will meet the virtual course graduation requirement after taking and passing this course or an approved equivalent course in Prince William County Public Schools.
☐	**Electives**	3 or 4		Students can satisfy the sequential elective requirement with any two of the three required elective credits that demonstrate a progression in the study of a specific field (not two introductory courses) from any discipline. The two sequential electives may be in any discipline as long as the courses are not specifically required for graduation in 8VAC20-131-51 of the standards. Students may take the focused sequence of elective courses in consecutive years or any two years of high school. Students can satisfy the World Language requirement for the Advanced Diploma with either three years of one language or two years each of two languages. If using World Language courses to meet both the sequential elective requirement and the World Language graduation requirement for an Advanced Studies diploma, students would need a total of five credits in World Language; either five credits of the same language, or (if taking two different languages) two credits of one language and three credits of another language.
☐	**Other Requirements**			**CTE Credentialing Exam**: Students must take and pass a Career and Technical Education credentialing exam that has been approved by the Virginia Board of Education **Or** **Take one advanced course during their high school career.** An advanced course can be defined as any **AP**/Advanced, **IB**/Pre-IB, **AICE**/IGSCE course, or **dual enrollment**. **Or** **Participate in a High-Quality Work-Based Learning experience** as defined by the Virginia Department of Education.

Sequential Elective Information

Graduation Information for Students with an Individualized Education Plan (IEP) or 504 Plan

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

Credit Accommodations

Students are eligible to pursue an Advanced Studies Diploma, Standard Diploma, or Applied Studies Diploma. Students may use credit accommodations to earn the Standard Diploma if they meet the following eligibility requirements:

1. The student has a current IEP or 504 plan with standards-based content goals;
2. The student has a disability that precludes him or her from achieving and progressing commensurate with grade level expectation, but is learning grade level content;
3. The student needs significant instructional supports to access grade level Standards of Learning (SOL) content and to show progress; and
4. Based on multiple objective measures of past performance, student might not be expected to achieve the required standard and verified units of credit within the standard time frame.

Credit accommodations shall be determined and documented by the student's IEP team or 504 plan committee, including the student where appropriate, at any point after the student's eighth grade year.

Applied Studies Diploma (For Students With An IEP)

Students with disabilities who complete the requirements of their Individualized Education Program (IEP) and do not meet the requirements for other diplomas shall be awarded the Applied Studies Diploma.

Transition Services (For Students With An IEP)

Realizing successful postsecondary outcomes is a goal PWCS has for all students. Depending on the severity of disability and the support services required in adult life, successful transition from high school to adult life may require that planning activities begin in elementary school with students exploring their interests in middle school. Starting the process early prepares students with disabilities to think about what they want to be able to do in adult life. High school transition planning includes exploring postsecondary opportunities and employment options and may include connecting with the adult service agencies that may provide the student with services.

Statement Of Needed Transition Services - Beginning No Later Than The First IEP Developed When The Eligible Student Is 14

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

Linkages To Post School Options - Beginning No Later Than The First IEP Developed When The Eligible Student Is 14 And Update Annually

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

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

Transfer Students

Students who transfer to Prince William County Public Schools from a public school system within the state of Virginia must meet all graduation requirements set forth by the Virginia Department of Education. Students who transfer to Prince William County Public Schools from a private or out-of-state school will work with their school counselor to make an individualized graduation plan that allows the student some flexibility in meeting graduation requirements as set forth by the Virginia Department of Education. Students who enroll during the school year after the first 20 hours of instruction will be required to meet the following verified unit of credit requirements for graduation:

Students entering 9th grade for the first time during 2018-19 and beyond, Standard or Advanced Studies Diploma.

Year Entering	Verified Credits Required
☐ Beginning of or during 9th grade	Student must obtain all five required verified units of credit
☐ Beginning of or during 10th grade	Student must obtain all five required verified units of credit
☐ Beginning of 11th grade	Student must obtain all five required verified units of credit
☐ During 11th grade	Student must obtain two verified units • One in English • One student selected* *One must be earned in mathematics if participation in mathematics testing is required by federal law.
☐ Beginning of 12th grade	Student must obtain two verified units • One in English • One student selected* *One must be earned in mathematics if participation in mathematics testing is required by federal law.
☐ During 12th grade	Student may apply for a waiver of verified units with the Virginia Board of Education.

Students transferring with weighted credits from other school districts will have those credits assessed and aligned with similar courses in PWCS. Students may also be granted additional flexibility in meeting some of the course requirements for graduation as outlined in the Virginia Standards of Accreditation. Any student or parent with questions about graduation requirements for transfer students should consult with their assigned school counselor. Students whose parents are active duty military may receive additional flexibility as outlined in the Interstate Compact on Educational Opportunity for Military Children. Information for transfer students is available in each school counseling office.

Diploma Warranty

Prince William County Public Schools provides a two-year warranty for diploma recipients. The diploma warranty guarantees minimum competencies in mathematics, reading, and writing. Students receiving a diploma from Prince William County Public Schools:

- Understand, interpret, and analyze written material;
- Carry out oral and written directions or obtain clarification when necessary;
- Express ideas both orally and in writing, using appropriate vocabulary and proper grammar;
- Locate and obtain needed information from common reference materials, computerized databases, maps and diagrams, and resource people;
- Apply basic computation skills; and
- Use problem-solving strategies in the work environment.

Prince William County Public Schools graduates who are identified by employers as lacking one or more of these minimum competencies may be retrained through Prince William County Public Schools' Evening School program at no expense to the graduate.

Diploma Seals

Students meeting specific requirements for graduation and demonstrating exemplary performance may receive diploma seals for recognition. Section 8VAC20-131-51 of the Standards of Accreditation establishes the requirements for diploma seals. The Virginia Department of Education provides the following seals to local school divisions.

Board of Education Seal

The Board of Education Seal is awarded to students who complete the requirements for a Standard Diploma or Advanced Studies Diploma with an average grade of "A".

Career and Technical Education Seal

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

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

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

Governor's Seal

The Governor's Seal is awarded to students who complete the requirements for an Advanced Studies Diploma with an average grade of "B" or better, and successfully complete college-level coursework that will earn the student at least nine transferable college credits in Advanced Placement (AP), International Baccalaureate (IB), Cambridge, or dual enrollment courses.

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

The STEM Seal shall be awarded to students who earn either a Standard Diploma or an Advanced Studies Diploma and satisfy all math and science requirements for the Advanced Studies diploma with a "B" average or better in all course work, and successfully complete a 50 hour or more work-based learning opportunity in a STEM area, and satisfy all requirements for a Career and Technical Education concentration (a concentration is a coherent sequence of two or more state-approved courses as identified in the course listing within the CTE Program Area Guide), and pass one of the following:

- A Board of Education CTE STEM-H credential examination; or
- An examination approved by the Board that confers a college-level credit in a STEM field.

Seal for Excellence in Civics Education

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

- Complete U.S. and Virginia History and U.S. and Virginia Government with a grade of "B" or higher; Complete Virginia & United States History and Virginia & United States Government courses with a grade of "B" or higher.
- Have good attendance and no disciplinary infractions as determined by local school board policies.
- Complete 50 hours of voluntary participation in community service or extracurricular activities, such as volunteering for a charitable or religious organization that provides services to the poor, sick or less fortunate; participating in Boy Scouts, Girl Scouts or similar youth organizations; participating in Junior Reserve Officers' Training Corps (JROTC); participating in political campaigns, government internships, Boys State, Girls State or Model General Assembly; or participating in school-sponsored extracurricular activities that have a civics focus. Any student who enlists in the United States military prior to graduation will be deemed to have met this community service requirement.

Seal for Excellence in Science and the Environment

The Board of Education's Seal for Excellence in Science and the Environment is awarded to students who entered the 9th grade for the first time in the 2018-19 year and thereafter, and meet each of the following criteria:

- Earn either a Standard or Advanced Studies Diploma.
- Complete at least three different first-level board-approved laboratory science courses and at least one rigorous advanced-level or postsecondary-level laboratory science course, each with a grade of "B" or higher.
- Complete laboratory or field-science research and present that research in a formal, juried setting.
- Complete at least 50 hours of voluntary participation in community service or extracurricular activities that involve the application of science such as environmental monitoring, protection, management, or restoration.

Seal of Biliteracy

The Board of Education's Seal of Biliteracy is awarded to students who earn a Board of Education-approved diploma and:

- Pass all required End-of-Course Assessments in English reading and writing at the proficient or higher level; and
- 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 to be approved by the Superintendent of Public Instruction. American Sign Language qualifies as a language other than English. Please visit the Seal of Biliteracy webpage for more information, including the list of assessment options for meeting the foreign language proficiency requirement.

Expand Your Academic Vocabulary

Advanced Placement, Cambridge AICE, IB Diploma, and Courses

Certain courses have been designated as AP, Cambridge (AICE), and IB courses . These courses are externally moderated and exceed the expectations of grade-level objectives for a specific subject. Students taking these courses will have a plus sign (+) beside the course title listed on the student report card and on the student transcript. These courses offer weighted credit.

Career and Technical Education Industry Credentialing

A Career and Technical Education (CTE) credential is a Virginia Board of Education approved competency assessment or industry certification that validates a student's academic and technical knowledge and skills. CTE industry credentials may include occupational competency assessments, industry certification exams from a recognized industry, trade, or professional organization (e.g., CompTIA, ServSafe), stackable industry certifications and entry-level exams (e.g., Automotive Service Excellence, Microsoft Office Specialist), a State-Issued Professional License required for entry into a specific occupation (Licensed Practical Nurse (LPN), Cosmetology), and/or the Workplace Readiness Skills for the Commonwealth assessment, which is most valuable when given in addition to appropriate course specific credentials that demonstrate mastery of valuable CTE Skills. High school students who are enrolled in a second-, third-, or fourth-year CTE course in a state-approved sequence are eligible for the industry credential aligned with the content of the course. These credentialing opportunities are provided to all students enrolled in the course at no cost to the student or family. Students who earn a credential by passing a certification or licensure examination **may** earn verified credits to meet graduation requirements. Earning one or more CTE industry credentials may be required for graduation if the student has not successfully complete an Advanced Placement (AP), International Baccalaureate (IB), or Dual Enrollment (DE) course, or a High-Quality Work-Based Learning (HQWBL) experience.

Dual Enrolled

Students taking courses from a community college, trade school program, college, or university for a credit, while simultaneously enrolled in Prince William County Public Schools are said to be dual enrolled. Agreements between the college and PWCS must be in place before courses being approved for dual enrolled credit.

Elective

Electives are additional courses beyond the required courses that are needed to meet the total minimum standard units of credit for graduation.

Visual and Performing Arts or Career and Technical Education

- Visual and Performing Arts courses include those courses which lead to student's aesthetic education in the areas of visual arts, theatre arts, music, dance, creative writing, journalistic writing, or speech. The course taken to satisfy the visual and performing arts requirement may also serve as one of the two courses required to satisfy the sequential electives requirement.
- Career and Technical Education courses focus on 21st-century career skills presented in a real-world setting. All courses listed under Career and Technical Education, except Economics and Personal Finance; and Office Specialist 1, 2, and 3; and Employ 1 and 2 courses listed under Special Education meet this graduation requirement. The course taken to satisfy the CTE requirement may also serve as one of the two courses required to satisfy the sequential elective requirement.

First Aid, CPR, and AED Training

The requirements for the Standard and Advanced Diplomas shall include a requirement to be trained in emergency first aid, cardiopulmonary, resuscitation, and the use of automated external defibrillators, including hands-on practice of the skills necessary to perform cardiopulmonary resuscitation. PWCS students will be trained in these skills while enrolled in Health and Physical Education 1.

Sequential Electives

According to the Virginia Department of Education's Standards of Quality, students who enter the 9th grade for the first time during the 2018-19 school year and beyond who are pursuing either the Standard or Advanced Studies Diploma must complete at least two sequential electives. Students who successfully complete any career and technical education sequence that consists of at least two 36-week courses or semester equivalents that equal two 36-week courses will fully meet this requirement. For students pursuing the Standard Diploma, Career and Technical Education, Visual and Performing Arts, or the World Language course credit may be used to partially satisfy the sequential elective requirement.

For students pursuing the Advanced Studies Diploma who enter the 9th grade during the 2018-19 school year and beyond, the Visual and Performing Arts or Career and Technical Education course credit may be used to partially satisfy the sequential elective requirement.

Standards of Learning (SOL)

The Standards of Learning for Virginia Public Schools describe the Commonwealth's expectations for student learning and achievement in English, driver education, health and physical education, history and social science, mathematics, science, technology, visual and performing arts, and world language and for grades K-12.

Standards of Learning Tests (SOL Tests)

SOL tests are End-of-Course (EOC) tests which are required by the Virginia Department of Education (VDOE) to verify attainment of knowledge and skills in specific English, math, science, and history and social science courses. A standard unit of credit is earned when a student passes the course, he/she is taking. If a student passes the SOL test but fails the course, the student does not retake the SOL test. The student must, however, repeat the course. If they pass the course but fail the SOL test for that course, the student may retake the SOL test until he/she passes it. Students passing a course may proceed to the next level of a course without having passed the SOL test in the previous level. If both the course and the SOL test are failed, both must be repeated.

Standard Unit of Credit

A standard unit of credit for graduation is based on a minimum of 140 clock hours of instruction and successful completion of the requirements of the course. A semester course receives one-half credit.

Verified Unit of Credit

A verified unit of credit for graduation is based on a minimum of 140 clock hours of instruction, successful completion of the requirements of the course, and achievement of a passing score on the End-of-Course (EOC) Standards of Learning (SOL) test or additional test for that course as approved by the Board of Education. A verified unit of credit is earned when:

1. The course is passed in which a Standards of Learning (SOL) test is administered; and
2. The end-of-course SOL test is passed.

The VDOE has authorized alternate pathways in history and social science. See the section below titled Locally Awarded Verified Unit of Credit for details.

Students must complete five verified units of credit for the Standard and Advanced Studies Diplomas. Students entering a Virginia public school during the 11th grade or at the beginning of the 12th grade have reduced SOL requirements.

Locally Awarded Verified Unit of Credit

Students pursuing the Standard or Advanced Studies Diploma may earn one locally awarded verified unit of credit toward the five verified credits required to graduate. Students with an IEP or 504 plan who are eligible for credit accommodations may earn all verified units of credit through the local award process.

To be eligible to earn locally awarded verified credits in English, mathematics, science, or history/social science, a student must:

- Pass the high school course;
- Score within a 375-399 scale score range on any administration of the Standards of Learning test after taking the test at least twice; and
- Demonstrate achievement in the academic content through an appeal process administered at the local level.

For history and social science, the Virginia Department of Education (VDOE) allows the substitution of a portfolio of Inquiry Design Model (IDM) learning experiences for the SOL test. The portfolio of IDMs is reviewed by a committee to determine if requirements of the verified credit were met. If yes, the student earns a Locally Awarded Verified Unit of Credit for history and social science. This alternative option is the primary option for students in World History I, World History II, and VAUS History. VDOE requires that students earn verified credit in one of these courses. If a student does not pass the IDM portfolio by the start of 11th grade, students will work on the IDM and will be offered the SOL test as well. The awarding of this verified credit locally does not count against the limit of one for other courses or reasons.

Weighted Credit

Weighted credit refers to grade point values assigned to:

- Advanced Placement courses
- Cambridge courses
- Certain career and technical education courses
- Designated prerequisite courses
- Dual enrollment courses
- IB courses
- Qualifying college courses

Earning High School Credits and Grade Point Average

Ways to Earn Credit

Traditional Classroom

The vast majority of students experience Prince William County Public Schools through the traditional classroom environment, where face-to-face collaboration leads to a deep construction of knowledge with our excellent teaching staff. The classroom environment provides the greatest potential for student interaction. It also creates the opportunity to form lifelong friendships with their classmates over an entire school year.

Virtual Courses

Virtual courses provide students with greater flexibility regarding the time, pace, path, and place of their learning. Virtual courses are facilitated by teachers who leverage digital technologies as part of instructional design to help students build understanding and apply their learning in meaningful ways. Virtual courses use a learning management system (LMS) and a variety of digital tools and practices, including instructional content, rich-media, interactions (discussion boards, messaging, video communication, etc.), data and assessment systems, and feedback systems to receive timely and rich data used to guide learning tailored to individual student needs.

Virtual Prince William

Prince William County Public Schools (PWCS) is a pioneer in online learning through our Virtual Prince William (VPW) program. VPW provides an online learning experience, with accelerated (semester-paced) courses taught by highly skilled and certified PWCS teachers. Virtual Prince William offers students the opportunity to take courses online for the completion of graduation requirements, to recover credits, and to balance academic and extracurricular

opportunities. These courses are delivered via Canvas, PWCS' learning management system, and coursework is completed outside school hours. Students and teachers communicate within the learning management system and via PWCS Office 365 email accounts.

VPW courses are both asynchronous and synchronous. Students are expected to be able to work independently and collaborate with their teachers and peers. Asynchronous instruction is designed for students to complete coursework independently at a designated pace. While students have some flexibility to choose when they complete asynchronous tasks, they must adhere to course pacing and due dates.

Courses offered in any given school year are dependent on student enrollment and the availability of qualified and appropriately endorsed instructional staff. Students interested in VPW course options should see their school counselor or contact Virtual Prince William.

For additional information, please visit the Virtual Prince William website.

Virtual Virginia

Virtual Virginia, sponsored by the Virginia Department of Education, provides online courses to students across the commonwealth. Students have the opportunity to enroll in courses outside of their regular school day or take advantage of courses that are not currently available in their school.

Virtual Virginia courses utilize both asynchronous and synchronous approaches to instruction, through which students will work independently and collaborate with their teachers and peers. Asynchronous instruction is designed for students to complete coursework independently at a designated pace. Examples of asynchronous instruction may include reading content, viewing media, completing assignments, taking a quiz/assessment, or working on a project. Students have the flexibility to choose when they complete asynchronous tasks, but they must adhere to the course pacing and due dates.

An essential component of Virtual Virginia instruction is regular interaction between teachers and their students, including email and phone communications and synchronous instructional sessions via video web conferencing. Students can attend daily synchronous instructional sessions led by their teacher. Students will also have the opportunity for daily group and 1-to-1 instruction.

Virtual Virginia courses meet or exceed rigorous curriculum standards, including the Virginia Standards of Learning (SOL) and the College Board Audit Certification for Advanced Placement (AP) courses. All Virtual Virginia courses are staffed by highly qualified Virginia-licensed instructors with virtual office hours posted within the courses. These virtual office hours provide ample opportunities for students to contact their instructor(s) via telephone, using email, or communicating through a live web-based conferencing tool. In addition to the local mentor, students may access the services of the Virtual Virginia Help Desk for technical issues.

While some courses require tuition, students participating in the Early College Scholars program may have their AP course tuition covered by the Virginia Department of Education. Students who plan to take the AP exam are required to pay the AP exam fee.

To learn more about Virtual Virginia opportunities, please visit your school counselor.

Evening School

A limited number of core and elective courses are available in the evenings during the fall and spring semesters. These are courses required for graduation. Course availability is subject to sufficient course requests. Courses are typically 15 weeks in length and taught by certified content teachers. In-person attendance is mandatory. See your school counselor for a registration form and further information about the Evening School program.

Summer Programs

PWCS also offers select courses over the summer. Students may retake coursework if they failed the course in order to receive a passing grade. All students taking a summer school course that requires an end-of-course SOL test, must take the SOL test scheduled during summer school, unless the student has already passed the test.

Alternative Methods for Granting Standard Units of Credit

In some instances, currently enrolled students find it necessary to look for other options to earn a standard unit of credit. Students seeking to earn high school credits from educational institutions outside Prince William County Public Schools or the Virtual Virginia program must request permission to take the course. Core, career and technical education or advanced placement courses already approved and offered by one of the Virginia Department of Education Approved Multidivisional Online Providers (MOP) or Virginia Council for Private Education (VCPE) providers need school level approval. Elective courses provided through an approved MOP or VCPE course or courses not available through an approved MOP or VCPE require additional levels of approval. See your school counselor for more information about alternative options for earning standard units of credit.

Regional Advanced Academic Schools

The Governor's School @ Innovation Park - Virginia Regional Academic-Year Governor's School

The Governor's School @ Innovation Park is a science, technology, engineering, and mathematics (STEM) initiative of three school divisions, Prince William County, Manassas City, and Manassas Park, in collaboration with George Mason University. The instructional design of the program integrates strands in biology, chemistry, and physics with mathematics, concepts of engineering and technology, and with laboratory research. Learning experiences focus on real-world research with mentorship opportunities in business, industry, government, and university settings. Rising juniors are eligible to apply for the program. Interested students can access the application online on The Governor's School website. *Students must have completed Algebra 2/Trigonometry and both Biology 1 and Chemistry 1 by the end of the 10th grade to apply and enter the Biology, Chemistry, or Physics threads. Students must have additionally completed Pre-Calculus and Physics in order to be qualified to enter the Engineering thread.*

Thomas Jefferson High School for Science and Technology - Virginia Regional Academic-Year Governor's School

The Thomas Jefferson High School for Science and Technology accepts Prince William County Public Schools students into its four-year program through an application and testing process. Interested students should ask a designated middle school counselor for an information packet. *Students must complete Algebra 1 by the end of eighth grade, achieve a 3.5 GPA, be enrolled in extended level math and English classes to apply to Thomas Jefferson.* Additional information is available through the Thomas Jefferson Admissions Office at 571-423-3770 or on the TJHS Admission webpage.

Nontraditional Education

Independence Nontraditional School

Independence Nontraditional School offers students in grades K-12 a comprehensive instructional program that merges leadership, career, and social skills necessary for success in the 21st century with existing Prince William County Public Schools curricula.

Students can expect a rigorous curriculum that promotes the development of academic resilience, social responsibility, and self-respect. The innovative education environment provides flexible learning opportunities to support student success. Day and evening programs are offered. Age-appropriate interventions that address effective and affective development, second language acquisition, and special needs are provided in an inclusive manner.

Students are recommended for placement by school administrators, parents/guardians, or the Student Hearings Department. A nontraditional education plan for each student designed collaboratively by Independence Nontraditional staff, parents/guardians, and the student ensures each student meets his/her educational and graduation goals. Multiple instructional options support seamless student transitions to additional academic, extracurricular, and service-learning opportunities.

Individual Student Alternative Education Plan

The Individual Student Alternative Education Plan (ISAEP) is a program offered through the Virginia Department of Education, which provides students between the ages of 16-17 years old who are at risk of dropping out of school, an opportunity to work toward a General Educational Development (GED) certificate while developing a vocational or career skill. Students must be referred to the program by the school counseling office, with the permission of the parents/guardians, and must meet the eligibility criteria to be admitted to the program. The ISAEP will only be considered for students after all measures to maintain students in a traditional diploma program have been exhausted. Contact the school counseling office for more information regarding the program.

Adult Education

The adult education program provides educational opportunities for adults, 18 and over, who wish to acquire competencies necessary for further education, employment, or personal enrichment. Classes are provided to residents in Prince William County, Manassas City and Manassas Park. Adult Education offers courses in English language acquisition, high school completion (which includes GED and the National External Diploma Program - NEDP), bridging, Microsoft Office Specialist, Entrepreneurship and Small Business, Guest Service Gold, Community Engagement, Customer Services and Sales, job readiness, and computer workshops. The Adult Learning Center is also a testing center and delivers over 140 tests through Pearson VUE.

Grade Point Average

Grade-Point Values

All courses taught for credit in Prince William County Public Schools are assigned grade-point values as follows:

Course Percentage	Letter Grade	Quality Points Standard Course	Grading Scale	Quality Points Weighted at .50	Quality Points Weighted at 1.0
90-100	A	4.0	3.5 - 4.0	4.5	5
87-89	B+	3.4	3.3 - 3.49	3.9	4.4
80-86	B	3.0	2.5 - 3.29	3.5	4.0
77-79	C+	2.4	2.3 - 2.49	2.9	3.4
70-76	C	2.0	1.5 - 2.29	2.5	3.0
67-69	D+	1.4	1.3 - 1.49	1.4	1.4
60-66	D	1.0	.50 - 1.29	1.0	1.0
0-59	F	0	0 -.49	0	0

High school course yearlong grades are calculated based on the Quality Point average for each of the semesters plus the final exam.

- Semester 1 – Quality Point average of 1st and 2nd quarters

- Semester 2 – Quality Point average of 3rd and 4th quarters

- Exam – Quality Point equivalent of exam
    - Yearlong grade - 22.5% for each quarter, 10% exam

Example-Standard Course:

Term	Course Percentage	Grade	Quality Points	
Quarter 1	78	C+	2.4	
Quarter 2	80	B	3.0	
Semester 1			5.4/2 = 2.7	Grade: B
Quarter 3	62	D	1.0	
Quarter 4	92	A	4.0	
Semester 2			5.0/2 = 2.5	Grade: B
Exam	67	D+	1.4	
Yearlong	2.4(.225) + 3.0(.225) + 1.0(.225) + 4.0(.225) + 1.4(.10) = 2.48			Grade: C+

Weighted grade points are used to encourage students to take more challenging course work with less risk to their report card grades. Students and their families should note that colleges and universities routinely remove weighted credits to better compare applicants' performance in rigorous courses across school divisions where weighting practices vary.

Expunging a Grade for a High School Credit Taken in Middle School

When students successfully complete courses identified as 9th, 10th, 11th, or 12th grade courses prior to entering 9th grade, they will receive standard units of credit toward graduation. Such courses will be used in computing the student's high school GPA.

The Regulations Establishing Standards of Accrediting Public Schools in Virginia provide families with the option of requesting that grades be expunged from a student's transcript for any high school credit-bearing course taken in middle school. Requests to have a high school credit-bearing course grade removed from a student's transcript must be submitted using the form available in the counseling office or on the school division website to the appropriate principal before the deadline established by the school division. Families who elect to have a grade removed from the transcript should be aware that the decision to have the grade removed is binding and that no grade or associated credit will be awarded for the course once the request has been granted.

Learn more on the [Request to Expunge High School Courses Taken in Middle School](#) webpage.

Schedule Changes

Students are encouraged to stretch and reach to take advanced levels of course offerings when possible. Should a student request to drop an advanced course, the following steps will be taken prior to approval:

- The teacher will talk with the student to determine why they wish to drop the course and ways in which a student may improve their performance in the class.
- The teacher will notify the parent(s) of the request to drop the course and discuss ways in which the student may improve their performance.
- The student's counselor will work with the student to identify supports that could be put into place (e.g., tutoring during flex, tutoring before/after school, etc.).
- The principal or designee will approve or deny the request.

Each high school sets their own schoolwide schedule change procedures and guidelines. Students must comply with the schedule change process established at their school. Should a student elect to change a class, the following rules will apply:

- Students who drop a year-long course before the end of the first quarter or before the end of the first four weeks for a semester-based course, shall not have the attempt recorded on their transcript.
- Students who drop a year-long course after the end of the first quarter or after the end of the first four weeks for semester-based course, shall receive no credit and a notation shall be made on the student's transcript indicating withdraw failing or withdraw passing.
- Students who drop a year-long course after the end of the first semester or after the end of the first quarter for semester-based courses, shall receive no credit and a failing grade for the course.
- The principal (or designee) may, in extenuating circumstances relating to a student's health or well-being, make an exception to the regulation governing the procedures for dropping a course.
- If a student moves from one level to another level of the same course, the grades earned in the initial course will transfer to the second course. This rule applies even in those cases where the student is moving from an advanced level course to a lower-level course within the same subject (e.g., Advanced English 9 to English 9).

Earning College Credit While in High School

Dual Enrollment Opportunities for Students

What is Dual Enrollment?

Dual Enrollment is an enrichment opportunity that allows high school/home instruction students to earn college credits for courses taken through a sponsoring college/university while still being enrolled in high school. As a dual-enrolled student, you are enrolled in both high school (or home instructed) and the sponsoring college/university.

Who Can Take a Dual Enrollment Course?

High school juniors and seniors, who meet all eligibility requirements established by the sponsoring college/university, are eligible to participate in the dual enrollment courses. Freshmen and sophomores may be granted exceptions on a case-by-case basis.

Where Do I Take a Dual Enrollment Course and What is the Cost?

Dual enrollment courses through Northern Virginia Community College are taken in a PWCS school or virtually through the NOVA CCRV pathway. Eligible students earn college credit at no tuition cost; however, some courses may have fees required for textbooks or course materials. Students should contact their school counselor for more information about courses and fees that may be associated with Dual Enrollment. Each PWCS high school has a specific CCRV program pathway that aligns with its in-person dual enrollment course offerings. Students must take in-person classes at their high school if they are offered.

I am Ready to Take a Dual Enrollment Course! How Do I Get Started?

Indicate your interest in dual enrollment when you meet with your school counselor to discuss course selection prior to the start of your junior year. Your school counselor will guide you through the next steps to include completing a PWCS Dual Enrollment application and the application for the sponsoring college/university.

Methods for Earning College Credit While in High School

As described above, students may take dual enrollment courses as "contract dual enrollment" by attending their community college classes on PWCS high school campuses and receiving instruction from PWCS teachers who are authorized to teach dual enrollment courses by sponsoring college/university.

Students may also take "on campus" courses at a sponsoring college/university for dual enrollment credit for those courses identified in the division's annual list of published dual enrollment offerings.

Students wishing to take courses not included in the division's list of dual enrollment course offerings may take "college credit only" offerings with a sponsoring college/university.

In addition, students can earn college credit through no tuition cost CCRV opportunities available in partnership with NOVA.

In all cases, students must meet all eligibility requirements of the sponsoring college/university.

Students may also earn college credit by taking an Advanced Placement (AP), Cambridge (AICE), or International Baccalaureate (IB) course while in high school. Students receive college credit based on the score they receive on the external exam taken at the conclusion of the course or sequence of courses. Below, a summary of all the ways in which students may earn college credit in a PWCS school is provided.

How Can My High School Course Work Earn Me College Credit?

Type of Course	How Students Earn College Credit
Advanced Placement (AP)	- Earned exam scores of 3, 4, or 5 may qualify students for 3 or more college credits per AP course. - The awarding of college credit for courses taken in high school varies and students should research the specific school they wish to attend.
Cambridge (AICE)	- Earned exam grades of E or higher may qualify the student to earn college credit. - Earned exam grades of A or B on A level exams may qualify students for up to 6 college credits per Cambridge course. - The awarding of college credit for courses taken in high school varies and students should research the specific school they wish to attend.
International Baccalaureate (IB)	- Earned exam score of 4 or higher may qualify the student to earn college credit. - Earned exam scores of 5, 6, or 7 may qualify students for up to 9 college credits per one IB course. - The awarding of college credit for courses taken in high school varies and students should research the specific school they wish to attend.
Dual Enrollment	- Many earned credits with a "C" or better transfer to most four-year colleges - Courses may fall within a specific subject area or may be considered an elective - The awarding of college credit for courses taken in high school varies and students should research the specific school they wish to attend.

Learn more about receiving college credit for passing AP, Cambridge, and IB exams at a Virginia four-year college.

Equal Opportunity Schools

Equal Opportunity Schools (EOS) is a PWCS initiative designed to increase all students' access and opportunity to participate in rigorous academic environments such as Advanced Placement, Cambridge, and International Baccalaureate courses. PWCS utilizes EOS to target students in grades 9-12. Once students are enrolled in these courses, the EOS data analysis, outreach, and academic support models are utilized to ensure students realize success. All students have access to Trusted Adults who are familiar with each student's profile.

College and Career Ready Virginia Dual Enrollment

College and Career Ready Virginia (CCRV) is an initiative that expands access to dual enrollment courses for high school juniors and seniors. Eligible students earn college credits at no tuition cost* through a partnership between Prince William County Public Schools (PWCS) and Northern Virginia Community College (NOVA).

Benefits of CCRV
- **Get a jump-start on college** – 11th and 12th grade students can complete up to 32 college credits before they graduate from high school.

- **Save money** – tuition is no-cost to students and families.*

- **Highly transferable** – NOVA has transfer agreements with all Virginia public colleges and universities.
  - *There is no tuition cost for students and families for CCRV courses; however, some courses may have fees for required textbooks or course materials.

Uniform Certificate of General Studies (UCGS)
- Earn 32 transferable college credits.
- Ideal for high school juniors to complete the equivalent of two college semesters of college general education requirements by the time they graduate from high school.
- Learn more about UCGS.

Passport Program
- Earn 15 transferable college credits.

- Ideal for high school seniors to get a jump-start on college general education requirements.

- Learn more about the Passport Program.

CCRV and High School Course Credit Information
These courses taken through CCRV provide both high school and college credit. Upon successful completion of a NOVA course, students will earn the corresponding high school credit. All dual enrollment courses count as weighted high school credits.

- Each high school has a designated CCRV pathway with specific course offerings. To learn more about your school's pathway, visit the NOVA CCRV pathways.

- Per NOVA policy, if a dual enrollment course is offered in person at a student's high school, the student is not permitted to take the online equivalent.

- There are specific eligibility requirements and enrollment steps for CCRV participation. To learn more, visit the PWCS CCRV website or speak with your school counselor.

- Students may only take up to three courses through NOVA CCRV online per semester.

To learn more about the high school credit that will be earned upon successful completion of a NOVA course, see the chart below.

NOVA Course	College Credits	High School Course	High School Credits
ENG 111 College Composition I	3	SOL English College Composition 11 DE or English College Composition 12 DE	1 English credit
ENG 112 College Composition II	3		
ENG 255 World Literature	3	Survey of World Literature 12 DE	1 English credit
ART 100 Art Appreciation	3	Art Appreciation DE 100	1 elective credit
PSY 200 Principles of Psychology	3	Psychology I DE 200	1 elective credit
ENV 121 General Environmental Science I	4	General Environmental Science I DE 121	1 elective credit
MTH 154 Quantitative Reasoning	3	Quantitative Reasoning DE 154	1 elective credit
MTH 161 Precalculus I	3	Precalculus I DE 161	1 elective credit
HIS 121 United States History to 1877	3	US & VA History DE	1 history and social science credit
HIS 122 United States History Since 1865	3		
ITE 152 Introduction to Digital and Information Literacy and Computer Applications	3	Computer Information Systems DE	1 elective credit

English Learners

English Learner (EL) students have the right to participate meaningfully and equally in educational programs Under Title VI of the Civil Rights Act of 1964 (Title VI) and the Equal Educational Opportunities Act of 1974 (EEOA). Student schedules provide equitable participation in advanced or accelerated courses and gifted and talented or special education services. English Language Development (ELD) services in the student's schedule should not inhibit EL participation in programs available to all students.

EL students are provided with English Language Development (ELD) instruction and access to core content classes and grade-level curricula. ELs are scheduled in ELD courses based on their English Language Proficiency (ELP) level and take the same required core courses as their non-EL peers, including electives and physical education.

EL students with identified disabilities require services under the Individuals with Disabilities Education Act (IDEA) or Section 504 of the Rehabilitation Act of 1973. They must be provided both the English Language Development services and disability-related services to which they are entitled under Federal law.

Questions about English Learner courses should be discussed with the student's EL case manager and their IEP case manager, as applicable.

Set Yourself Up for Success

PWCS Ready to Launch - Pacing for Success

- Students completing the courses and other graduation requirements outlined below will be "Ready to Launch" their thriving future by pursuing postsecondary education at institutions of their choice to include Northern Virginia Community College and four-year universities.
- Students can opt to take a standard level or advanced level (AP, Cambridge AICE, IB, DE) of any required course depending on the program available at their school.
- Students must complete all requirements for their chosen diploma to include earning verified units of credit for courses which have a Standard of Learning (SOL) test attached.
- Students are encouraged to research admission requirements for highly selective colleges and universities during their 9th grade year.

Subject	Grade 9	Grade 10	Grade 11	Grade 12
English	English 9	English 10	English 11	English 12
Math	Algebra 1 or higher	Geometry or higher	Algebra Functions and Data Analysis, Algebra 2, or higher	Algebra 2 or higher *Four years of math recommended for college-bound students (Algebra 2 or higher)
Science	Earth Science 1, Environmental Science, or Biology 1	Biology 1 or Chemistry 1	Chemistry 1 or Physics 1	Higher level science (AP, IB, etc.)
History and Social Science	World History 1	World History 2	U.S. and Virginia History	U.S. and Virginia Government
World Language	Level 1 or higher	Level 2 or higher	Level 3 or higher *Recommended for highly selective colleges	Higher level language (AP, IB etc.) *Recommended for highly selective colleges
Health and Physical Education	Health and Physical Education 1	Health and Physical Education 2		
Electives	Visual and Performing Arts or Career and Technical Education (1 credit) Sequential Elective (2 credits - Standard Diploma Only) for students who enter 9th grade prior to 2018-19. Required for all students who enter the 9th grade in 2018-19 and beyond. Other Electives (2 or more credits depending on diploma type)			
Additional Graduation Requirements	- CTE Credentialing Exam **or** one Advanced Course **or** High-Quality Work-Based Learning experience, as established by VDOE Board guidance on work-based learning - Economics and Personal Finance - First Aid, CPR, and AED Training - Virtual Course			

See your school counselor for more information about your high school course plan and your postsecondary education plans!

Academic and Career Planning Tools

Academic and career planning is a process for all students to reflect on their interests, values, and future goals to formulate an evolving plan in support of their future goals and success as contributing citizens. This plan is revisited with each student every year. Additional information and resources are available on the [College and Career Readiness](#) website.

Academic Career Plan Portfolio - ACPP (kindergarten through 5th grade)

The Academic and Career Plan Portfolio (ACPP) begins in the elementary school years. Students explore different occupations associated with career clusters based on selected areas aligning with personal interests, values such as

dependability & respect, and skills supporting decision making about future goals and interest. Learn more about [Virginia Education Wizard](). Elementary students learn how to set goals and better understand their own interests and values. They complete career artifacts each year while exploring future career opportunities.

Academic and Career Plan - ACP (6th through 12th grade)

Middle and high school students each have a personal learning plan and course of study that aligns with the student's academic and career goals. Students utilize Naviance, a personalized platform that includes individual self-discovery assessments, goal setting, career and college planning, financial literacy, and academic course planning. Students access Naviance through the single sign-on, Clever, and their Office 365 credentials. Learn more at [PWCS Naviance]().

Student Vision Profile - (6th through 12th grade)

The Student Vision Profile is a document that contains valuable information about planning for life after high school and making the most of their PWCS experience. The Student Vision Profile is designed to help both students and families engage in the postsecondary planning process. It is a useful guide to support student college and career readiness by including self-discovery, career exploration, and post-high school planning. Each year, your parent/guardian will receive a student vision profile that is customized with information about you and your interests. This document is an excellent tool for you to use to reflect on your after high school plan and to discuss your life choices with members of your family. Learn more at [Student Vision Profile]().

Career and Technical Education Industry-Recognized Credentials

Career and Technical Education (CTE) Industry-Recognized Credentials

Industry-recognized credentials (IRCs) are valuable for high school students because they validate a students' knowledge and skills, making graduates more employable and competitive in the job market. They can also provide a head start on college, offer a clear path to specific careers, and increase earning potential.

PWCS offers IRCs at no cost to the student or family.

The chart below represents the IRCs currently aligned with CTE coursework. Credentials are subject to change based on the Virginia Department of Education approved credential list.

Course Name	PWCS Course Code	Industry Credentials
Accounting	632020	Workplace Readiness Skills for the Commonwealth Examination
Advanced Design, Multimedia, and Web Technology	663120	Adobe Certified Professional Examinations
Advanced Accounting	632166	Intuit Quickbooks Certified User (QBCU) Certification Test/ Intuit Bookkeeping Professional (TBD)
Advanced Computer Information Systems	661366	Microsoft Office Specialist (MOS) Examinations: Expert Level; Microsoft Office Specialist (MOS) Examinations: Associate Level
Advanced Cybersecurity Systems Technology	862930	A+ Certification Examination
Advanced Fashion Marketing	814566	Customer Service and Sales Certification Assessment (NRF)
Advanced Game Design and Development	840166	Unity Certified User Examinations
Advanced Programming	664166	IT Specialist Certifications
Air Force JROTC 2	791630	Workplace Readiness Skills for the Commonwealth Examination
Air Force JROTC 3	791830	JROTC Leadership and Employability Skills
Air Force JROTC 4	791930	Armed Services Vocational Aptitude Battery Examination
Architectural Drawing/Design/CAD	843720	Autodesk Certified User Examinations
Army JROTC 2	791632	Workplace Readiness Skills for the Commonwealth Examination
Army JROTC 3	791832	JROTC Leadership and Employability Skills
Army JROTC 4	791932	Armed Services Vocational Aptitude Battery Examination
Automotive Technology 2	850720	ASE Entry-Level Certification Tests
Automotive Technology 3	850820	ASE Entry-Level Certification Tests
Aviation Maintenance Technology 2	872930	Workplace Readiness Skills for the Commonwealth Examination
Building Trades 2	851620	Building Construction Occupations Assessment (NOCTI)
Business Law	613120	Workplace Readiness Skills for the Commonwealth Examination
Business Management	613520	Workplace Readiness Skills for the Commonwealth Examination
Cabinetmaking 2	860530	Workplace Readiness Skills for the Commonwealth Examination
Civil Engineering & Architecture (PLTW)	843066	PLTW End of Course (EOC) Assessment and Autodesk Certified User: Revit Architecture
Computer Information Systems	661220	Microsoft Office Specialist (MOS) Examinations: Associate Level
Computer Integrated Manufacturing (PLTW)	844220	PLTW End of Course (EOC) Assessment and Autodesk Certified User: Inventor
Computer Networking Hardware Operations 4	854520	Cisco Certified Networking Associate (CCNA) Examination
Cosmetology 2	874620	Virginia Cosmetology Examination
Criminal Justice 2	870330	Criminal Justice Assessment (NOCTI)
Culinary Arts 1	827520	ServSafe Food Protection Manager Certification

Course Name	PWCS Course Code	Industry Credentials
Culinary Arts 2	827620	ServSafe Food Protection Manager Certification
Cybersecurity Network Systems DE	863087	Security+ Certification Examination
Cybersecurity Operations	630420	Tech+ Certification Examination
Cybersecurity Systems Technology	862820	Tech+ Certification Examination
Design, Multimedia & Web Technology	663020	Adobe Certified Professional Examinations
Digital Electronics (PLTW)	844020	PLTW End of Course (EOC) Assessment
Early Childhood, Education, and Services 1	828520	ParaPro Assessment
Early Childhood, Education, and Services 2	828620	*TBD*
Economics and Personal Finance	612020	W!SE Financial Literacy Certification Test
Electricity 2	853420	Workplace Readiness Skills for the Commonwealth Examination
Emergency Medical Technician 2	833420	Emergency Medical Technician Examination
Engineering Analysis and Applications 2	845120	Pre-Engineering/Engineering Technology Assessment (NOCTI)
Engineering Drawing/Design/CAD	843620	Autodesk Certified User Examinations
Entrepreneurship	909320	Intuit Entrepreneurship and Small Business (ESB) Examination
Environmental Sustainability (PLTW)	891166	PLTW End of Course (EOC) Assessment
Fashion Marketing	814020	Workplace Readiness Skills for the Commonwealth Examination
Firefighting	870530	Firefighter I Certification Exam
Firefighting 2	870630	Firefighter II Certification Exam
Human Body Systems (PLTW)	838020	PLTW End of Course (EOC) Assessment
IB Business Management (SL)	613550	Workplace Readiness Skills for the Commonwealth Examination
IB Personal & Professional Skills (SL)	909852	Workplace Readiness Skills for the Commonwealth Examination
Intro to Engineering Design (PLTW)	843920	PLTW End of Course (EOC) Assessment
Introduction to Culinary Arts	825020	Workplace Readiness Skills for the Commonwealth Examination
Introduction to Early Childhood Education	823430	Workplace Readiness Skills for the Commonwealth Examination
IT Adv Database Design and Mgt PL/SQL DE	666285	Oracle Certified Foundations Associate Examinations
IT Web Technologies	663030	Adobe Certified Professional Examinations
IT Web Technologies DE	663088	Adobe Certified Professional Examinations
Landscaping 1	803620	Workplace Readiness Skills for the Commonwealth Examination
Landscaping 2	803920	Certified Turfgrass Professional
Marine Corps JROTC 2	791631	Workplace Readiness Skills for the Commonwealth Examination
Marine Corps JROTC 3	791831	JROTC Leadership and Employability Skills
Marine Corps JROTC 4	791931	Armed Services Vocational Aptitude Battery Examination
Marketing	812020	Workplace Readiness Skills for the Commonwealth Examination
Mechatronics 1 DE	855482	*TBD*
Mechatronics 2 DE	855582	*TBD*
Medical Coding and Billing 2	838920	Certified Billing and Coding Specialist (CBCS)
Medical Interventions (PLTW)	838120	PLTW End of Course (EOC) Assessment
Medical Terminology	838320	*TBD*
Navy JROTC 2	791633	Workplace Readiness Skills for the Commonwealth Examination
Navy JROTC 3	791833	JROTC Leadership and Employability Skills
Navy JROTC 4	791933	Armed Services Vocational Aptitude Battery Examination
Opportunities in Global Trade	813520	Workplace Readiness Skills for the Commonwealth Examination
Pharmacy Technician 2	830620	Examination for Certification of Pharmacy Technicians (ExCPT)

Course Name	PWCS Course Code	Industry Credentials
PLTW Capstone	844320	Workplace Readiness Skills for the Commonwealth Examination
Plumbing 2	855220	Workplace Readiness Skills for the Commonwealth Examination
Practical Nursing 2	835830	EKG Technician Certification (ETC) Examination
Principles of Biomedical Sciences (PLTW)	837920	PLTW End of Course (EOC) Assessment
Principles of Engineering (PLTW)	844166	PLTW End of Course (EOC) Assessment
Programming 1	664020	IC3 Digital Literacy Certification Examinations
Software Engineering Essentials (PLTW)	847320	PLTW End of Course (EOC) Assessment
Software Engineering (PLTW)	847066	PLTW End of Course (EOC) Assessment
Sports, Entertainment, and Event Management	817766	**TBD**
Sports, Entertainment, and Event Marketing	817520	Workplace Readiness Skills for the Commonwealth Examination
Sports Medicine 2	831720	**TBD**
Strategic Marketing	813066	Workplace Readiness Skills for the Commonwealth Examination
Television & Media Production 2	868920	Adobe Certified Professional Examinations
Travel and Tourism Marketing	813920	Workplace Readiness Skills for the Commonwealth Examination
Turfgrass Management	805120	Workplace Readiness Skills for the Commonwealth Examination
Video and Media Technology	849720	Workplace Readiness Skills for the Commonwealth Examination
Virginia Teachers for Tomorrow 1	906220	ParaPro Assessment
Virginia Teachers for Tomorrow 2	907220	Praxis Core Academic Skills for Educators Tests
Welding 1	867230	SENSE Training Program Certification Examination (Level 1, Entry-Level Welder)
Welding 2	867320	Flux Core Arc Welding (FCAW) Examination
Welding 3	867420	Gas Tungsten Arc Welding (GTAW) Examination

Participating in Extracurricular Activities

Eligibility to Participate

The following applies to interscholastic athletics, marching band, and drill team.

- A student must pass five subjects for new credit and earn a "C" or better in two subjects at the end of the first semester, and at the end of the school year to remain eligible for participation.
- The initial determination of eligibility at the beginning of a new semester is made on the first instructional day of the semester.
- Student assistant electives (e.g., lab assistants and office assistants) shall not be counted toward meeting the standards of eligibility.

Eligibility for Students who Transfer to Another School for a Specialty Program

Students who are granted approval to transfer to a school outside their established attendance area for a Specialty Program shall be eligible to participate in Virginia High School League activities when entering the school as a first-time 9th-grade student, or as a 10th-grade student entering a specialty program for the first time. Any further transferring without a corresponding change of residence will result in a 365-day period of ineligibility.

Only the Superintendent of Schools (or designee) may grant a waiver to the VHSL transfer rule based on a decision made by the school division that requires the transfer of the student, but not for athletic and/or activity purposes. (VHSL Handbook.)

Virginia High School League Participation

The Virginia High School League rules specify that in order to participate in high school athletics, drama, forensics, debate, scholastic bowl, and any academic or athletic activities involved in the competition between/among schools, a student must have passed five subjects for new credit during the preceding semester and must be enrolled in a minimum of five subjects for new credit during the current semester. In addition to meeting Virginia High School League regulations, students will be required to meet PWCS eligibility standards (requirement) each semester. End of the year grades from the previous school year will determine eligibility for the first semester of the next year.

NCAA Eligibility

Students planning to participate in intercollegiate athletics at an NCAA Division I or Division II institution must have their academic and amateurism status certified by the NCAA Eligibility Center. The NCAA rules are complex, students and caregivers should ask school counselors for assistance. It is important to let the counselor know if a student plans to seek an athletic scholarship to ensure the course selection process matches NCAA requirements. It is also important to track grade point average as it impacts NCAA athletic scholarship opportunities. More detailed information is available on the NCAA website.

Realize Your Vision with The Student Vision Profile

Student Vision Profile - High School

The Student Vision Profile is a document that contains valuable information about planning for life after high school and making the most of their PWCS experience. The Student Vision Profile is designed to help both students and families engage in the postsecondary planning process. It is a useful guide to support student college and career readiness by including self-discovery, career exploration, and post-high school planning. Each year, you and your parent/guardian will receive a student vision profile that is customized with information about you and your interests. This document is an excellent tool for you to use to reflect on your after high school plan and to discuss your life choices with members of your family. Learn more on the PWCS Student Vision profile information page and in this course catalog.

High School Programs

Career Pathways

Prince William County Public Schools (PWCS) offers a wide variety of rigorous and engaging Career and Technical Education (CTE) courses and programs designed to provide students with authentic, career-focused academic and technical instruction, leadership and networking opportunities, validate knowledge and skills with industry credentials recognized by postsecondary institutions and business/industry, and opportunities to engage in work-based learning (WBL) experiences.

CTE programs prepare students for a variety of high-wage, high-skill and high-demand careers with equitable access to multiple post-secondary options, including postsecondary education enrollment in a two- or four-year college or university, enlisting in military service, and / or gainful employment.

CTE courses and programs are organized by **career clusters** and **career pathways** to align with student interests and regional business and industry. High school students in PWCS can access CTE courses and programs in two ways:

1. **Career Pathways**: Career Pathways are suggested course sequences **available at base schools**. Students express interest during the course selection process and work with school counselors to enroll in elective courses.
2. **Specialty Programs**: Some CTE courses and programs are only available at select locations. All CTE programs are interest-based programs, but a Specialty Program **requires an application**. Students will either transfer to another school or will be transported to another school for one or more courses. Visit the Specialty Programs website to learn more about the application and timeline.

Career Clusters

A career cluster is a **group of careers** that share similar features or common themes. CTE courses in PWCS offer students access to 16 career clusters.

Career Pathways

A career pathway is a **coordinated sequence of high school courses** that leads to a postsecondary career pathway. Students select a program of study, or career pathway, based on academic and career interests. PWCS CTE career pathways also include opportunities to earn relevant industry credentials, which may provide students with increased employment opportunities and/or college credit.

Note: Career Pathways are designed to allow students to meet the sequential elective requirement for graduation as the first 2 courses in each career pathway are sequential. To find out which courses are available at your high school, click on the course name within the Career Pathway.

The courses listed in each career cluster and pathway may be available to multiple grade levels.

Specialty Programs

Prince William County Public Schools (PWCS) is pleased to provide students a wide range of high school program opportunities that focus on career exploration, subject area concentration, and college/university preparation.

Specialty and Career and Technical Education (CTE) Programs provide students with opportunities to earn certifications, licenses, or other professional credentials in an area of study. Students can choose from programs tailored to their strengths and interests as they prepare for postsecondary experiences, whether they plan to enter the workforce directly, seek additional training, or enroll in a postsecondary institution.

Students may apply for the specialty program at their base high school, apply to transfer to another high school for a specialty program, or apply to participate in a transport program while remaining at their base school for their academic coursework.

Transfer Programs

Students living within the boundaries of the specialty program school may ride their regular bus to school. Students who reside outside the program school boundaries may utilize the network of express bus stops.

Students participating in Specialty Programs outside of their zoned school receive express bus stops. Out-of-boundary Specialty Program students are students who live outside the host school's boundaries but within the specialty school's boundaries.

Express bus stops will be established at express bus stops where six or more students have selected the stop. If your Specialty Program Coordinator has not contacted you by June regarding the express bus stops established for the following school year, you should contact the Specialty Program Coordinator.

Transportation requests, including the selection of a specific express stop, must be returned to the school with the specialty program application and again for every year the student is enrolled in the program.

Parents have the responsibility to provide transportation to and from express bus stops.

Transport Programs

Students attend all core and non-program classes and activities at their base school. A PWCS bus transports students between their base school and their program school for all CTE program classes daily, returning in time to ride their regular bus home.

Career and Technical Education (CTE)

Architecture & Construction

Degree Type
Career Pathways

Architecture & Construction Career Cluster

The Architecture & Construction Career Cluster is focused on careers in designing, planning, managing, building and maintaining the built environment.

Schools
Brentsville District High School,
Colgan High School,
Freedom High School,
Gainesville High School,
Gar-Field High School,
Hylton High School,
Osbourn Park High School,
Patriot High School,
Potomac High School,
Unity Reed High School,
Woodbridge High School

Construction Pathway

Construction Pathway: Employees in construction literally build our future! These are the people who build and remodel houses, apartments, industrial buildings, warehouses, office buildings, churches, schools and recreational facilities. This pathway also includes the builders of highways, streets, bridges, tunnels and airports as well as power plants, chemical plants, refineries and mills.

Title	Credits
Production Systems	1
Construction Technology	1

Design / Pre-Construction Pathway

Design/Pre-Construction Pathway: People with careers in design/pre-construction create our future! They turn a concept into a set of plans. Their plans guide other construction professionals as they continue the building process.

Title	Credits
Technical Drawing and Design	1
Architectural Drawing and Design	1

Arts, A/V Technology & Communications

Degree Type
Career Pathways

Arts, A/V Technology & Communications Career Cluster

The Arts, A/V Technology and Communications Career Cluster focuses on careers in designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services. Careers in this career cluster require a creative aptitude, a strong background in computer and technology applications, a strong academic foundation, and a proficiency in oral and written communication.

Check with your counselor to see which pathways are offered at your school.

Schools
Battlefield High School,
Brentsville District High School,
Colgan High School,
Forest Park High School,
Freedom High School,
Gainesville High School,
Gar-Field High School,
Hylton High School,
Osbourn Park High School,
Patriot High School,
Potomac High School,
Unity Reed High School,
Woodbridge High School

Journalism & Broadcasting Pathway

Journalism and Broadcasting Pathway: News analysts, reporters and correspondents gather information, prepare stories and make broadcasts that inform us about local, state, national and international events; present points of view on current issues; and report on the actions of public officials, corporate executives, special interest groups and others who exercise power. Broadcast and sound technicians install, test, repair, set up and operate the electronic equipment used to record and transmit radio and television programs, cable programs and motion pictures. Chief engineers, broadcast field supervisors and trans

Title	Credits
Communication Systems	1
Video and Media Technology	1
Graphic Communications Systems	1
Career Strategies	1

Visual Arts Pathway

Visual Arts Pathway: Visual artists create art to communicate ideas, thoughts or feelings. They use a variety of methods—painting, sculpting or illustrating—and an assortment of materials, including oils, watercolors, acrylics, pastels, pencils, pen and ink, photography, plaster, clay and computers. Their works may be realistic, stylized or abstract and may depict objects, people, nature or events. Visual artists are generally categorized in two groups. Fine artists create art to satisfy their own need for self-expression. Illustrators and graphic designers, on the other hand, put their artistic skills at the service of commercial clients, such as major corporations; retail stores; and advertising, design and publishing firms.

Title	Credits
Information Technology (IT) Fundamentals	1
Design, Multimedia, and Web Technologies	1
Advanced Design, Multimedia, and Web Technologies	1
Career Strategies	1
Total Credits	4

Business Management & Administration

Degree Type
Career Pathways

Business Management & Administration Career Cluster

The Business Management and Administration Career Cluster is focused on careers in planning, organizing, directing and evaluating business functions essential to efficient and productive business operations.

Check with your counselor to see which pathways are offered at your school.

Schools
Battlefield High School,
Brentsville District High School,
Colgan High School,
Forest Park High School,
Freedom High School,
Gainesville High School,
Gar-Field High School,
Hylton High School,
Osbourn Park High School,
Patriot High School,
Potomac High School,
Unity Reed High School,

Woodbridge High School

Administrative Support Pathway

Administrative Support: Administrative Support facilitate business operations through a variety of administrative and clerical duties including information and communication management, data processing and collection, and project tracking.

Title	Credits
Office Specialist 1 - Preparation	1
Office Specialist 2 - Preparation	1

General Management Pathway

General Management: General Management focuses on careers that plan, organize, direct, and evaluate all or part of a business organization through the allocation and use of financial, human, and material resources.

Title	Credits	
Principles of Business and Marketing	1	
Business Law	1	
Business Management	1	
	Total Credits	3

Education & Training, Early Childhood Education

Degree Type
Career Pathways

Education & Training Career Cluster

The Education & Training Career Cluster is focused on planning, managing and providing education and training services, and related learning support services.

Check with your counselor to see which sequences are offered at your school.

Schools
Battlefield High School,
Brentsville District High School,
Colgan High School,
Forest Park High School,
Freedom High School,
Gainesville High School,
Gar-Field High School,
Hylton High School,
Osbourn Park High School,
Patriot High School,
Potomac High School,
Unity Reed High School,
Woodbridge High School

Teaching & Training Pathway

Teaching & Training Pathway: In addition to being knowledgeable in their subject, teachers and trainers must have the ability to communicate, inspire trust and confidence, motivate learners, as well as understand their education and emotional needs. Teachers must be able to recognize and respond to individual differences in diverse learners and employ different teaching/training methods that will result in higher learner achievement.

Early Childhood Education Sequence

Title	Credits
Child Development and Parenting	1
Introduction to Early Childhood Education	1
Early Childhood, Education, and Services 1	2
Early Childhood, Education, and Services 2	2
Total Credits	6

Education & Training, Virginia Teachers for Tomorrow

Degree Type
Career Pathways

Education & Training Career Cluster

The Education & Training Career Cluster is focused on planning, managing and providing education and training services, and related learning support services.

Check with your counselor to see which pathways are offered at your school.

Schools
Battlefield High School,
Brentsville District High School,
Colgan High School,
Forest Park High School,
Freedom High School,
Gainesville High School,
Gar-Field High School,
Hylton High School,
Osbourn Park High School,
Patriot High School,
Potomac High School,
Unity Reed High School,
Woodbridge High School

Virginia Teachers for Tomorrow (VTfT)

Virginia Teachers for Tomorrow program is dual enrolled with Northern Virginia Community College (NVCC). Students successfully completing the 2-year high school program will receive 14 of the 20 college credits in the Education: Teaching Professional Career Studies Certificate with an option to finish the final 3 – 6 credits in the summer/fall after graduation to become immediately employable.

The Teaching Professional Career Studies Certificate represents the first 20 credits of the 60-credit Associate's Degree in Education. Students with the Career Studies Certificate may continue to finish the Associate Degree in Education within approximately 3 semesters of course work at NVCC.

The Education, A.S. program is aligned with the Transfer Virginia common curriculum. Students may choose to transfer to a four-year university program to finish a full teacher licensure program.

Grade	PWCS Courses	PWCS Credits	Northern Virginia Community College (NVCC) Courses	NVCC Credits
9	Child Development and Parenting	1		
10	Introduction to Early Childhood Education	1		
11	Virginia Teachers for Tomorrow 1 DE	1	EDU 200, Foundations of Education, EDU 207, Human Growth and Development, *and* SDV 101, Orientation to Teaching	3 3 1
12	Virginia Teachers for Tomorrow 2 DE	1	EDU 204, Teaching in a Diverse Society, EDU 206, Classroom and Behavioral Management, *and* EDU 290, Coordinated Internship	3 3 1
	Total Credits	**4**		**14**

Finance - Accounting

Degree Type
Career Pathways

Finance Career Cluster

The Finance Career Cluster is focused on planning, services for financial and investment planning, banking, insurance, and business financial management.

Check with your counselor to see if the pathway is offered at your school.

Schools
Brentsville District High School,
Colgan High School,
Forest Park High School,
Freedom High School,
Gainesville High School,
Gar-Field High School,
Hylton High School,
Osbourn Park High School,
Patriot High School,
Potomac High School,
Unity Reed High School,
Woodbridge High School

Accounting Pathway

Accounting Pathway: Accounting encompasses careers that record, classify, summarize, analyze, and communicate a business's financial information/business transactions for use in management decision-making. Accounting includes such activities as bookkeeping, systems design, analysis, and interpretation of accounting information.

Title	Credits
Principles of Business and Marketing	1
Accounting	1
Advanced Accounting	1
Career Strategies	1
Entrepreneurship	1
Entrepreneurship DE	1

Hospitality & Tourism

Degree Type
Career Pathways

Hospitality & Tourism Career Cluster

The Hospitality & Tourism Career Cluster is focused on management, marketing and operations of restaurants and other food services, lodging, attractions, recreation events and travel related services.

Check with your counselor to see which pathways are offered at your school.

Schools
Battlefield High School,
Brentsville District High School,
Colgan High School,
Forest Park High School,
Freedom High School,
Gainesville High School,
Gar-Field High School,
Hylton High School,
Osbourn Park High School,
Patriot High School,
Potomac High School,
Unity Reed High School,
Woodbridge High School

Recreation, Amusements & Attractions Pathway

Recreation, Amusements & Attractions Pathway: Employees looking for exciting and diverse work situations are best suited for the Recreation, Amusements and Attractions pathway. The work is often demanding but never boring. Good customer service skills are essential for success. Employees must also understand what makes each operation unique. Technical skills are location-specific, and training is handled on the job.

Title	Credits
Principles of Business and Marketing	1
Sports, Entertainment, and Event Marketing	1
Sports, Entertainment, and Event Management	1
Strategic Marketing	1

Restaurants & Food / Beverage Services Pathway

Employees working in the Restaurant and Food/Beverage Services pathway perform a variety of tasks to maintain operations and promote guest services in eating and drinking establishments.

Title	Credits
Nutrition and Wellness	1
Introduction to Culinary Arts	1

Travel & Tourism Pathway

Title	Credits
Principles of Business and Marketing	1
Travel and Tourism Marketing	1
Marketing	1
Strategic Marketing	1
	Total Credits 2-4

Human Services

Degree Type
Career Pathways

Human Services Career Cluster

The Human Services Career Cluster is focused on preparing individuals for employment in careers that relate to families and human needs such as counseling and mental health services, family and community services, personal care and consumer services.

Check with your counselor to see which pathways are offered at your school.

Schools
Battlefield High School,
Brentsville District High School,
Colgan High School,
Forest Park High School,
Freedom High School,
Gainesville High School,
Gar-Field High School,
Hylton High School,
Independence Nontraditional High School,
Osbourn Park High School,
Patriot High School,
Potomac High School,
Unity Reed High School,
Woodbridge High School

Family & Community Services Pathway

Employees with careers in family and community services help the homeless, housebound, and infirm cope with circumstances of daily living; counsel troubled and emotionally disturbed individuals; train or retrain the unemployed or underemployed; care for the elderly and the physically and mentally disabled; help the needy obtain financial assistance; and solicit contributions for various social services organizations.

Title	Credits
Nutrition and Wellness	1
Life Planning	1
Individual Development	1
Family Relations	1

Consumer Services Pathway

People with careers in consumer sciences assist individuals with decisions and problems relating to finance, real estate, insurance and consumer goods.

Title	Credits
Independent Living	1
Life Planning	1
Career Strategies	1

Counseling & Mental Health Services Pathway

People working in counseling and mental health services assist people with personal, family, educational, mental health, and career decisions and problems.

Title	Credits
Independent Living	1
Life Planning	1
Individual Development	1
Family Relations	1

Early Childhood Development & Services Pathway

People with careers in early childhood development and services nurture and teach children. They provide services in childcare centers, nursery schools, preschools, public schools, private households, family childcare homes, and before- and after-school programs.

If you are looking for a more focused Early Childhood Education program, please see the Education & Training Career Cluster - Early Childhood Education.

Title	Credits	
Child Development and Parenting	1	
Life Planning	1	
Individual Development	1	
Family Relations	1	
	Total Credits	3-4

Information Technology

Degree Type
Career Pathways

Information Technology Career Cluster

The Information Technology Career Cluster is focused on building linkages in information technology occupations for entry level, technical and professional careers related to the design, development, support and management of hardware, software, multimedia and systems integration services.

Check with your counselor to see which pathways are offered at your school.

Schools
Battlefield High School,
Brentsville District High School,
Colgan High School,
Forest Park High School,
Freedom High School,
Gainesville High School,
Gar-Field High School,
Hylton High School,
Independence Nontraditional High School,
Osbourn Park High School,
Patriot High School,
Potomac High School,
Unity Reed High School,
Woodbridge High School

Information Support & Services Pathway

Careers in Information Support and Services involve IT deployment, including implementing computer systems and software, providing technical assistance and managing information systems. Successful IT deployment implementation of computer systems and software, provision of technical assistance, creation of technical documentation and management of information systems is critical to the success of most 21st century organizations. People with expertise in Information Support and Services are in high demand for a variety of positions in organizations of all sizes and types, doing work such as integrating multiple databases at a global investment company, enabling employees to share information between the New York, Paris and Hong Kong offices and improving service to customers.

Title	Credits
Digital Applications	1
Computer Information Systems	1
Advanced Computer Information Systems	1

Programming and Software Development Pathway

Careers in Programming and Software Development involve the design development implementation and maintenance of computer systems and software, requiring knowledge of computer operating systems, programming languages and software development. People with expertise in programming and software development work with cutting-edge technologies to develop tomorrow's products for use by businesses and consumers. While many of the career opportunities in this area are in software companies, large organizations of other types such as Financial Services and Business also offer many opportunities. People with expertise in programming and software development are in high demand, doing work such as creating the software that launches and runs NASA space shuttles.

Title	Credits
Programming	1
Advanced Programming	1
Game Design and Development	1
Advanced Game Design and Development	1

Web & Digital Communications Pathway

Careers in Web and Digital Communications involve creating, designing and producing interactive multimedia products and services, including development of digitally-generated or computer-enhanced media used in business, training, entertainment, communications and marketing. Organizations of all types and sizes use digital media to communicate with existing and potential customers, to track transactions, and to collaborate with colleagues. Web and digital communications experts can find employment opportunities in organizations of all sizes and types, doing work such as creating business auction websites that allow people around the world to buy and sell items in real-time.

Title	Credits
Information Technology (IT) Fundamentals	1
Design, Multimedia, and Web Technologies	1
Advanced Design, Multimedia, and Web Technologies	1
Career Strategies	1
	Total Credits 11

Law, Public Safety, Corrections & Security - Criminal Justice

Degree Type
Career Pathways

Law, Public Safety, Corrections & Security Career Cluster

The Law, Public Safety, corrections & Security Career Cluster is focused on planning, managing, and providing legal, public safety and protective services and homeland security, including professional and technical support services.

Schools
Battlefield High School,
Brentsville District High School,
Colgan High School,
Freedom High School,
Gainesville High School,
Gar-Field High School,
Hylton High School,
Potomac High School

Law Enforcement Services Pathway - Criminal Justice

Law Enforcement Services Pathway: People depend on police officers and detectives to protect their lives and property. Law enforcement officers have duties that range from controlling traffic to preventing and investigating crimes. They maintain order; enforce laws and ordinances; issue traffic summonses; investigate accidents; present evidence in court; serve legal documents for the court system; and apprehend, arrest and process prisoners

Title	Credits
Principles of Business and Marketing	1
Business Law	1
Criminal Justice 1	1
Criminal Justice 2	2
	Total Credits 5

Manufacturing, Manufacturing Production Process Development

Degree Type
Career Pathways

Manufacturing Career Cluster

The Manufacturing Career Cluster is focused on planning, managing and performing the processing of materials into intermediate or final products and related professional and technical support activities such as production planning and control, maintenance and manufacturing, and process engineering.

Check with your counselor to see if this pathway is offered at your school.

Schools
Battlefield High School,
Brentsville District High School,
Colgan High School,
Forest Park High School,
Freedom High School,
Gainesville High School,
Gar-Field High School,
Hylton High School,
Osbourn Park High School,
Patriot High School,
Potomac High School,
Unity Reed High School,
Woodbridge High School

Manufacturing Production Process Development

Employees in manufacturing production process development are responsible for product design and design of the manufacturing process. They work with customers to ensure the manufacturing process produces a product that meets or exceeds customer expectations, and monitor the materials used to manufacture the product.

Title	Credits
Introduction to Engineering Design (PLTW)	1
Computer Integrated Manufacturing (PLTW)	1
Principles of Engineering (PLTW)	1
PLTW Capstone	1
Total Credits	4

Marketing

Degree Type
Career Pathways

Marketing Career Cluster

The Marketing Career Cluster is focused on planning, managing and performing marketing activities to reach organizational objectives.

Check with your counselor to see which pathways are offered at your school.

Schools
Battlefield High School,
Brentsville District High School,
Colgan High School,
Forest Park High School,
Freedom High School,
Gainesville High School,
Gar-Field High School,
Hylton High School,
Osbourn Park High School,

Patriot High School,
Potomac High School,
Unity Reed High School,
Woodbridge High School

Marketing Management Pathway

People with careers in marketing management formulate policies and direct the operations of businesses and corporations, nonprofit institutions and other organizations. In small firms, the owner or chief executive officer may assume all advertising, promotions, marketing, sales and public relations responsibilities. In large firms, which may offer numerous products and services nationally or even worldwide, an executive vice president directs overall advertising, promotions, marketing, sales and public relations policies.

Title	Credits
Principles of Business and Marketing	1
Fashion Marketing or Sports and Entertainment Marketing	1
Marketing	1
Strategic Marketing	1

Merchandising Pathway

Employees in buying and merchandising positions get the product into the hands of the customer. This process includes forecasting, planning, buying, displaying, selling and providing customer service.

Title	Credits
Principles of Business and Marketing	1
Fashion Marketing	1
Advanced Fashion Marketing	1
Strategic Marketing	1

Marketing Communications

Marketing communications employees plan, coordinate and implement marketing strategies advertising promotion and public relations activities Because of the importance and high visibility of their jobs, these individuals often are prime candidates for advancement.

Title	Credits
Principles of Business and Marketing	1
Fashion Marketing or Sports and Entertainment Marketing	1
Strategic Marketing	1
	Total Credits 4

Science, Technology, Engineering & Mathematics

Degree Type
Career Pathways

Science, Technology, Engineering & Mathematics Career Cluster

The Science, Technology, Engineering & Mathematics (STEM) Career Cluster is focused on planning, managing and providing scientific research and professional and technical services (e.g., physical science, social science, engineering) including laboratory and testing services, and research and development services.

Please check with your counselor to see which pathways and course sequences are offered at your school.

Schools
Battlefield High School,

Brentsville District High School,
Colgan High School,
Forest Park High School,
Freedom High School,
Gainesville High School,
Gar-Field High School,
Hylton High School,
Osbourn Park High School,
Patriot High School,
Potomac High School,
Unity Reed High School,
Woodbridge High School

Engineering and Technology Pathway

Engineering and Technology Pathway: For a future in the Engineering and Technology pathway, students should study and apply principles from advanced mathematics, life sciences, physical science, earth and space science, and technology. In addition, future engineers and technologists should learn certain processes in mathematics, science and technology. In Grades 9-12, all future engineers and technologists should study mathematics each year, learning important mathematical concepts and processes defined by the National Council of Teachers of Mathematics in Principles and Standards for School Mathematics. With such knowledge and skills, students will be able to demonstrate the following competencies: 1.) Apply mathematics, science and technology concepts to solve problems quantitatively in engineering projects involving design, development or production in various technologies; and 2.) Recognize the core concepts of technology and their relationships with engineering, science and math, and other subjects. All future engineers and technologists should learn important science concepts and processes with an understanding of physics, chemistry and biology as a minimal set. These concepts and processes are defined by the National Research Council in the National Science Education Standards and by the American Association for the Advancement of Science in Benchmarks for Science Literacy. Additionally, learners should become proficient in the areas of technology defined by the Standards for Technological Literacy.

Drawing and Design Sequence

Title	Credits
Technical Drawing and Design	1
Engineering Drawing and Design	1
Engineering Explorations 1	1
Engineering Analysis and Applications 2	1

Engineering PLTW Sequence

Title	Credits
Introduction to Engineering Design (PLTW)	1
Principles of Engineering (PLTW)	1
Digital Electronics or Civil Engineering and Architecture	
PLTW Capstone	1

Software Engineering PLTW Sequence

Title	Credits
Software Engineering Essentials (PLTW)	1
Software Engineering (PLTW)	1

Science & Mathematics Pathway

Title	Credits
Technology Foundations	1
Sustainability and Renewable Technologies	1

	Total Credits	2-4

Hospitality & Tourism - Culinary Arts

Degree Type
Specialty Programs

Culinary Arts Pathway

Culinary Arts prepares students to practice the managerial, production, and service skills used in food establishments and related food industry occupations such as chef/cook, baker/pastry chef, and hospitality worker. Students plan, select, store, purchase, prepare and serve food and food products; study basic nutrition, sanitation, and food safety; learn the use and care of commercial equipment; and practice the operation of institutional food establishments. In addition to refining these skills, students will practice serving and dining room management throughout the two-year program. Students engage in real-world experiences by working cooperatively with local business owners and various food establishments in the community. Courses are scheduled in a two-period/double block each year beginning in the 11th grade.

Students in grades 9 through 11 who are interested in the Culinary Arts Program are encouraged to take the Nutrition and Wellness and Introduction to Culinary Arts courses at their base school.

Program Type
Transport
Schools
Gar-Field High School,
Patriot High School,
Potomac High School

Culinary Arts Program Sequencing

Grade 11

Title	Credits
Culinary Arts 1	2

Grade 12

Title	Credits
Culinary Arts 2	2
	Total Credits	4

Information Technology - Cybersecurity

Degree Type
Specialty Programs

Cybersecurity Pathway

Students explore both theory and hands-on practice in the following areas: critical infrastructure security systems and devices; intelligent computing and controlling devices and systems security; business information technology network security systems and techniques; industrial/utility industrial control systems networks and devices security; medical network and data system security; and ethical hacking roles and tools.

Program Type
Transfer
Schools
Potomac High School

Cybersecurity Program Sequencing

Grade 9

Students may take Information Technology (IT) Fundamentals **OR** Cybersecurity Fundamentals (not both).

Title	Credits
Information Technology (IT) Fundamentals	1
Cybersecurity Fundamentals	1

Grade 10

Title	Credits
Cybersecurity Operations	1

Grade 11

Title	Credits
Cybersecurity Systems Technology	1

Grade 12

Title	Credits
Advanced Cybersecurity Systems Technology	2
Total Credits	5

Manufacturing - Welding

Degree Type
Specialty Programs

Welding Pathway

Welding students learn welding processes to braze, solder, and fuse metal parts according to diagrams, blueprints, or written specifications. Students learn the industry's emerging technologies, along with shielded metal arc welding (SMAW), flux-cored arc welding (FACW), and operating a computer numerical control (CNC) cutting table. Select courses require double-block scheduling. Some courses may be available for dual enrollment credit through Northern Virginia Community College.

Program Type
Transfer
Schools
Potomac High School

Welding Program Sequencing

Grade 9

Title	Credits
Production Systems	1

Grade 10

Title	Credits
Welding 1	1

Grade 11

Title	Credits
Welding 2	2

Grade 12

Title	Credits
Welding 3	2
	Total Credits 6

Manufacturing - Welding (Dual Enrollment)

Degree Type
Specialty Programs

Manufacturing Career Cluster

The Manufacturing Career Cluster is focused on planning, managing, and performing the processing of materials into intermediate or final products and related professional and technical support activities such as production planning and control, maintenance and manufacturing, and process engineering.

Program Type
Transfer
Schools
Potomac High School

Welding Dual Enrollment

This curriculum is designed for individuals wishing to obtain fundamental skills for immediate entry-level positions in the welding trade as welding apprentices or welding laboratory assistants.

PWCS students will graduate with 15 of 18 college credits in the Welding: Basic Techniques Career Studies Certificate (C.S.C.).

Grade	PWCS Courses	PWCS Credits	Northern Virginia Community College (NVCC) Courses	NVCC Credits
9	Production Systems	1		
10	Welding 1 DE	1	WEL120, Introduction to Welding, *and* WEL 121, Arc Welding	2 2
11	Welding 2 DE	2	WEL 122, Welding II (Electric Arc), *and* WEL 150, Welding Drawing and Interpretation	3 2
12	Welding 3 DE	2	WEL 130, Inert Gas Welding, *and* WEL 160, Semi-automatic Welding Processes	3 3
	Total Credits	**6**		**15**

Military Science (JROTC)

Government & Public Administration - Military Science

Degree Type
Career Pathways

Government & Public Administration Career Cluster

The Government & Public Administration Career Cluster is focused on planning and performing government functions at the local, state, and federal levels, including governance, national security, foreign service, planning, revenue and taxation, and regulations.

Military Science - JROTC

The Junior Reserve Officers' Training Corps (JROTC) program prepares high school students for leadership roles while making them aware of their rights, responsibilities, and privileges as American citizens. JROTC programs provide instruction and rewarding opportunities that will benefit the student, community, and nation by teaching young adults self-discipline, self-confidence, and leadership skills. JROTC programs are conducted at accredited secondary schools by instructors who are retired Air Force, Army, Marine Corps, and Navy officers and enlisted personnel.

Check with your counselor to see which JROTC branch is offered at your school.

Schools
Battlefield High School,
Forest Park High School,
Freedom High School,
Gar-Field High School,
Hylton High School,
Osbourn Park High School,
Potomac High School,
Unity Reed High School,
Woodbridge High School

National Security Pathway

National Security Pathway: Maintaining a strong national security encompasses such diverse activities as running a hospital, commanding a tank, programming computers, operating a nuclear reactor, or repairing and maintaining a helicopter. The military provides training and work experience in these fields and many others for more than 2.5 million people who serve in the active Army, Navy, Marine Corps, Air Force, and Coast Guard, their Reserve components, and the Air and Army National Guard.

Air Force JROTC

Title	Credits
Air Force JROTC 1	1
Air Force JROTC 2	1
Air Force JROTC 3	1
Air Force JROTC 4	1

Army JROTC

Title	Credits
Army JROTC 1	1
Army JROTC 2	1
Army JROTC 3	1
Army JROTC 4	1

Marine Corps JROTC

Title	Credits
Marine Corps JROTC 1	1
Marine Corps JROTC 2	1
Marine Corps JROTC 3	1
Marine Corps JROTC 4	1

Navy JROTC

Title	Credits
Navy JROTC 1	1
Navy JROTC 2	1
Navy JROTC 3	1
Navy JROTC 4	1
Total Credits	4

Courses

Advanced Placement

AP Computer Science A

The focus of this course is to provide students with a conceptual background in computer science. The major emphasis is on programming methodology, algorithms, and non-dynamic data structure in the JAVA language. This course prepares a student for advanced placement in computer science by means of the Advanced Placement Examination Level A in Computer Science of the College Entrance Board. Students are expected to take the accompanying AP Exam, which may qualify them for advanced standing in college and/or college credit.
Credits 1
Grades
10, 11, 12
Course Designation
Advanced Placement (AP),
Weighted (1.0W)
Schools
Battlefield High School
Colgan High School
Forest Park High School
Gainesville High School
Gar-Field High School
Osbourn Park High School
Patriot High School
Potomac High School
Woodbridge High School
Prerequisites
Geometry
Notes
AP Computer Science A may be used for a math, science, or CTE standard credit to satisfy graduation. For a CTE standard credit, a student must (i) successfully complete a CTE program sequence in programming or related programming sequence and earn a score of three or higher on the AP Computer Science A examination.

AP Computer Science Principles

The AP Computer Science Principles course is designed to be equivalent to a first-semester introductory college computing course. In this course, students will develop computational thinking skills vital for success across all disciplines, such as using computational tools to analyze and study data and working with large data sets to analyze, visualize, and draw conclusions from trends. The course engages students in the creative aspects of the field by allowing them to develop computational artifacts based on their interests. Students will also develop effective communication and collaboration skills by working individually and collaboratively to solve problems, and will discuss and write about the impacts these solutions could have on their community, society, and world. This course may not be used for a math credit. This course is equivalent to the Software Engineering (PLTW) course. Therefore, students who have taken the Software Engineering (PLTW) course should not enroll in this AP Computer Science course as additional credit will not be granted. Students are expected to take the accompanying AP Exam, which may qualify them for advanced standing in college and/or college credit.
Credits 1
Grades
9, 10, 11, 12
Course Designation
Advanced Placement (AP),
Weighted (1.0W)
Schools
Brentsville District High School
Colgan High School
Forest Park High School
Gainesville High School
Gar-Field High School
Hylton High School
Osbourn Park High School
Patriot High School
Potomac High School
Prerequisites
Algebra 1

Career and Technical Education (CTE)

Navy JROTC 1

This course introduces students to the Navy Junior Reserve Officer Training Corps program, the importance of citizenship, the elements of leadership, the U.S. government, and the value of scholarship in attaining life goals. Additional instruction includes: the principles of health and first aid, geography, orienteering, map reading skills, survival skills, financial skills, and overview of the U.S. Navy, naval ships and aircraft. The importance and promotion of a healthy lifestyle including physical fitness, proper diet, controlling stress, and drug awareness are pursued at the fundamental level.

Students electing to use JROTC 1 in 9th grade as a substitution for their physical education graduation requirement must enroll in the full-year health course in tenth grade. The health course will include ninth and tenth grade health, CPR, and Family Life Education. In-person courses will include Driver Education; however, if a school does not have the minimum enrollment to support an in-person health course, students will be enrolled in a virtual course.

Credits 1
Grades
9, 10, 11
Schools
Osbourn Park High School
Potomac High School
Requirements
Student must be able to participate in physical education program, dress in regulation uniform and meet and maintain the personal grooming standards.

Navy JROTC 2

This course builds on the general introduction provided in Navy JROTC 1, to further develop the traits of citizenship and leadership, introduce cadets to the technical areas of naval science, the role of the U.S. Navy in maritime history, and the vital importance of the world's oceans to the national security of the United States. An introduction to maritime history including the American Revolution, the American Civil War, the rise of the United States to world power status, World Wars 1 and 2, the Cold War era, the 1990s, and conflict in the new millennium is provided. Additional instruction in the nautical sciences will include an introduction to maritime geography, oceanography, meteorology, astronomy, and the physical sciences.
Credits 1
Grades
10, 11, 12
Schools
Osbourn Park High School
Potomac High School
Requirements
Student must be able to participate in physical education program, dress in regulation uniform and meet and maintain the personal grooming standards.
Prerequisites
Navy JROTC 1

Navy JROTC 3

This course broadens a student's understanding of the principles of military leadership, citizenship, discipline, the concept and significance of teamwork, the intrinsic value of good order and discipline in the accomplishment of objectives, and the importance of sea power and national security. Students gain a more in-depth knowledge of naval ships, aircraft, and an introduction to marine navigation and seamanship. It includes instruction in sea power and national security, naval operations and support functions, military law, and international law and the sea. It provides an introduction to ship construction and damage control, shipboard organization and watch standing, and naval weaponry.
Credits 1
Grades
11, 12
Schools
Osbourn Park High School
Potomac High School
Requirements
Student must be able to participate in physical education program, dress in regulation uniform and meet and maintain the personal grooming standards.
Prerequisites
Navy JROTC 2

Navy JROTC 4

This course prepares junior cadets for the real world through training in leadership and ethics. Seniors will be placed in positions of leadership under supervision and will analyze their performance throughout the year. Classroom activities include seminars, reading assignments, presentations, and practical work with junior cadets. Students also investigate topics in cyber technology and space exploration.
Credits 1
Grades
12
Schools
Osbourn Park High School
Potomac High School
Requirements
Student must be able to participate in physical education program, dress in regulation uniform and meet and maintain the personal grooming standards.
Prerequisites
Navy JROTC 3

High School Career and Technical Education

Cybersecurity Operations

Cybersecurity Operations is designed to teach computer and network administration and security. Students learn cybersecurity concepts, including the practice of protecting systems, networks, and programs from digital attacks. Cybersecurity is defined as the steps and processes taken to protect networks, devices, programs, and data from unauthorized access that can result in theft or damage. Students learn to establish, implement, and maintain security networks. Contextual instruction and student participation in co-curricular career and technical student organization (CTSO) activities will develop leadership, interpersonal, and career skills.

This course connects to the following career pathways:
Information Technology - Cybersecurity
Information Technology - CASIIT, Cybersecurity
Credits 1
Length
Year
Grades
10, 11, 12
Schools
Colgan High School
Potomac High School
Prerequisites
Cybersecurity Fundamentals OR

Information Technology (IT) Fundamentals, recommended

Business and Information Technology

Accounting

Accounting students explore the intricacies of the accounting cycle for both service and merchandising businesses. They will analyze transactions, master journal entries, and create essential financial statements. Students will get hands-on experience with payroll records and learn to manage cash control systems while emphasizing the importance of business ethics and professional conduct. Contextual instruction and student participation in co-curricular career and technical student organization (CTSO) activities will develop leadership, interpersonal, and career skills.

This course connects to the following career pathways:
Finance - Accounting
Credits 1
Grades
10, 11, 12
Schools
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
Principles of Business and Marketing, recommended

Advanced Accounting

Advanced Accounting encourages students to embark on a journey through the complex world of financial problem-solving and decision-making. Students explore advanced accounting principles and techniques that empower them to tackle real business challenges. Set in a technology-driven environment, students harness accounting and spreadsheet software to analyze and interpret vital financial data, covering everything from inventory and fixed assets to accounts payable and receivable, and the intricacies of partnerships and corporations. They engage with authentic workplace scenarios that mirror the latest industry trends, sharpening their analytical skills while reinforcing the importance of business ethics. Contextual instruction and student participation in co-curricular career and technical student organization (CTSO) activities will develop leadership, interpersonal, and career skills.

This course connects to the following career pathways:
Finance - Accounting
Credits 1
Grades
11, 12
Course Designation
Weighted (0.5W)
Schools
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
Accounting

Advanced Computer Information Systems

Students will apply computer information technology and problem-solving skills to real-life situations through integrated software applications, such as word processing, spreadsheets, databases, and multimedia presentations. Students will work individually and in groups to explore website development, programming, and emerging technologies. Students will maintain, manage, and troubleshoot systems; explore legal and ethical issues; prepare for industry certifications; and develop employability skills. Contextual instruction and student participation in co-curricular career and technical student organization (CTSO) activities will develop leadership, interpersonal, and career skills.

This course connects to the following career pathways:
Information Technology
Credits 1
Grades
10, 11, 12
Course Designation
Weighted (0.5W)
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
Computer Information Systems

Advanced Design, Multimedia, and Web Technologies

Students acquire advanced skills in design, multimedia, and web development by applying project management principles to create professional quality digital media projects. Work-based learning experiences allow students to apply layout and design techniques in real-world situations. Students create portfolios that include a résumé, certifications earned, and a variety of print, multimedia, and website projects produced in the course. Contextual instruction and student participation in co-curricular career and technical student organization (CTSO) activities will develop leadership, interpersonal, and career skills

This course connects to the following career pathways:
Information Technology
Arts, A/V Technology & Communications
Credits 1
Grades
11, 12
Course Designation
Weighted (0.5W)
Schools
Brentsville District High School
Colgan High School
Forest Park High School
Gainesville High School
Gar-Field High School
Osbourn Park High School
Potomac High School
Unity Reed High School
Prerequisites
Design, Multimedia, and Web Technologies

Advanced Programming

This course is designed for students who have a solid foundation in programming and are ready to deepen their understanding of related concepts and practices. Students will write programs of increasing complexity to potentially solve real-world problems of personal interest and professional relevance. The course focuses on mastering advanced programming techniques, object-oriented programming (OOP), algorithm optimization, data structures, and software development methodologies. Students will explore real-world applications by working on collaborative projects, coding challenges, and hands-on labs. By the end of the course, students will have developed the skills necessary to design and implement efficient, scalable software solutions and will be prepared for further studies in the high-demand fields of technology. Contextual instruction and student participation in co-curricular career and technical student organization (CTSO) activities will develop leadership, interpersonal, and career skills.

**Check with your counselor to see if this course is offered as Dual Enrollment at your school.

This course connects to the following career pathways:
Information Technology
Information Technology - Cybersecurity
Credits 1
Grades
11, 12
Course Designation
Weighted (0.5W)
Schools
Battlefield High School
Colgan High School
Freedom High School
Gar-Field High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
Programming

Computer Information Systems

Students will work individually and in groups to explore computer concepts, operating systems, networks, telecommunications, emerging technologies, and career opportunities related to the information technology field. Students will apply problem-solving skills to real-life situations through word processing, spreadsheets, databases, multimedia presentations, and integrated software activities. Contextual instruction and student participation in co-curricular career and technical student organization (CTSO) activities will develop leadership, interpersonal, and career skills.

This course connects to the following career pathways:
Information Technology
Credits 1
Grades
9, 10, 11
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
None

Design, Multimedia, and Web Technologies

Students apply creativity and technology to create visual design, multimedia projects, and web projects, using industry-standard software. Work-based learning experiences allow students to apply layout and design techniques in real-world situations. Students create portfolios that include a résumé, certifications earned, and a variety of projects produced in the course. Contextual instruction and student participation in co-curricular career and technical student organization (CTSO) activities will develop leadership, interpersonal, and career skills.

This course connects to the following career pathways:
Information Technology
Arts, A/V Technology & Communications
Credits 1
Grades
10, 11, 12
Schools
Brentsville District High School
Colgan High School
Forest Park High School
Gainesville High School
Gar-Field High School
Osbourn Park High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
None
Notes
Information Technology (IT) Fundamentals, recommended

Digital Applications

This course is designed for secondary school students to develop real-life, outcome-driven approach skills for digital citizenship, basic computer operations, keyboarding, application software (word processing, spreadsheets, multimedia applications, databases), and career exploration. This course promotes skills that can be applied across the curriculum and offers preparation relevant to 21st century skills and postsecondary education. Students who successfully complete this course may be eligible for a rigorous and relevant industry certification examination. Contextual instruction and student participation in co-curricular career and technical student organization (CTSO) activities will develop leadership, interpersonal, and career skills.

This course connects to the following career pathways:

- Information Technology

Credits 1
Grades
9, 10, 11
Schools
Brentsville District High School
Colgan High School
Freedom High School
Gainesville High School
Gar-Field High School
Osbourn Park High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
None

Economics and Personal Finance

Students learn how economies and markets operate and how the U.S. economy is interconnected with the global economy. Additionally, students learn how to navigate financial decision making and to make informed decisions relating to career exploration, budgeting, banking, credit, insurance, spending, financing postsecondary education, taxes, saving and investing, buying/leasing a vehicle, and living independently. Students also learn the importance of investing in themselves to gain valuable knowledge and skills. Development of financial literacy skills and an understanding of economic principles will provide the basis for responsible citizenship, more effective participation in the workforce, and career success.

The course incorporates all economics and financial literacy objectives included in the Code of Virginia §22.1-200-03B.
Credits 1
Grades
10, 11, 12
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Independence Nontraditional High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
None

Information Technology (IT) Fundamentals

Information Technology Fundamentals introduces the essential technical and professional skills required for students to pursue programs leading to professional careers and information technology certifications. The course introduces skills related to digital technology, digital applications, maintenance/upgrading/troubleshooting, and networking fundamentals. Students also explore ethical issues related to computers and internet technology, and examine webpage and game design. Contextual instruction and student participation in co-curricular career and technical student organization (CTSO) activities will develop leadership, interpersonal, and career skills.

This course connects to the following career pathways:
Information Technology
Arts, A/V Technology & Communications
Credits 1
Grades
9, 10
Schools
Forest Park High School
Potomac High School
Prerequisites
None

Principles of Business and Marketing

This dynamic course provides students with a foundational understanding of business and marketing concepts. Students will develop career skills and examine economics; social, environmental, and ethical responsibilities; and current trends in the field as they prepare to be responsible consumers and leaders in business and marketing roles. Contextual instruction and student participation in co-curricular career and technical student organization (CTSO) activities will develop leadership, interpersonal, and career skills.

This course connects to the following career pathways:
Business Management & Administration
Finance - Accounting
Hospitality & Tourism
Law, Public Safety, Corrections & Security - Criminal Justice
Marketing
Credits 1
Grades
9, 10, 11
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Hylton High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
None

Programming

Students will develop critical thinking and problem-solving skills by writing programs and exploring programming concepts, using algorithmic procedures, implementing programming procedures in one or more languages, and mastering programming fundamentals. Students will also develop interactive multimedia applications, including apps or games. Concepts in this course shed light on a wide range of career opportunities in the tech industry as students will learn valuable computational thinking skills that help them understand the modern digital world. Contextual instruction and student participation in co-curricular career and technical student organization (CTSO) activities will develop leadership, interpersonal, and career skills.

This course connects to the following career pathways:
Information Technology
Information Technology - Cybersecurity
Credits 1
Grades
10, 11, 12
Schools
Battlefield High School
Colgan High School
Forest Park High School
Freedom High School
Gar-Field High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
None

Family and Consumer Sciences

Child Development and Parenting

Students enrolled in Child Development and Parenting learn about parenting roles and responsibilities and parenting practices that maximize human growth and development. They focus on ensuring a healthy start for parent and child, balancing work and family, and understanding support systems that provide services for families. Contextual instruction and student participation in co-curricular career and technical student organization (CTSO) activities will develop leadership, interpersonal, and career skills.

This course is included in the following career pathways:
Education & Training
Human Services
Credits 1
Grades
9, 10, 11
Schools
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Independence Nontraditional High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
None

Culinary Arts 1

Culinary Arts 1 provides students with a foundational understanding of the food service industry and opportunities to build technical skills in food preparation and service. Students examine basic rules of kitchen safety and sanitation, purchasing and receiving, nutrition, and menu development. The curriculum incorporates culinary applications of math, science, and technology. Contextual instruction and student participation in co-curricular career and technical student organization (CTSO) activities will develop leadership, interpersonal, and career skills.

This is a **double-blocked** course. This is a **transport** specialty program located at select schools.

This course connects to the following career pathways:
Hospitality & Tourism - Culinary Arts
Credits 2
Grades
11, 12
Schools
Gar-Field High School
Patriot High School
Potomac High School
Requirements
Students entering grade 11 are eligible to submit interest via the Specialty Program process and timeline.
Prerequisites
Introduction to Culinary Arts, recommended

Culinary Arts 2

Culinary Arts 2 students progress to hands-on mastery of advanced culinary skills. They build on skills acquired in Culinary Arts 1 to gain a comprehensive knowledge of the food service industry, including kitchen safety and sanitation, nutritional principles, and advanced food-preparation techniques. Students may earn a food service certification as part of this course. Contextual instruction and student participation in co-curricular career and technical student organization (CTSO) activities will develop leadership, interpersonal, and career skills.

This is a **double-blocked** course. This is a **transport** specialty program located at select schools.

This course connects to the following career pathways:
Hospitality & Tourism - Culinary Arts
Credits 2
Grades
12
Schools
Gar-Field High School
Patriot High School
Potomac High School
Prerequisites
Culinary Arts 1

Introduction to Culinary Arts

In Introduction to Culinary Arts, students investigate food safety and sanitation, culinary preparation foundations, basic culinary skills, diverse cuisines, service styles, basic nutrition, and the economics of food. Students also explore postsecondary education options and career opportunities within the food service industry. Contextual instruction and student participation in co-curricular career and technical student organization (CTSO) activities will develop leadership, interpersonal, and career skills.

This course connects to the following career pathways:
Hospitality & Tourism
Credits 1
Grades
10, 11, 12
Schools
Brentsville District High School
Patriot High School
Potomac High School
Unity Reed High School
Prerequisites
Nutrition and Wellness, recommended

Life Planning

Life Planning equips students with life skills. Creating and maintaining healthy work and family relationships, planning for a meaningful career, practicing responsible citizenship, exploring personal health and wellness, and developing a life-management plan are emphasized through relevant life applications. Contextual instruction and student participation in co-curricular career and technical student organization (CTSO) activities will develop leadership, interpersonal, and career skills.

This course is included in the following career pathway(s):

- Human Services
Credits 1
Grades
10, 11, 12
Schools
Battlefield High School
Colgan High School
Gar-Field High School
Independence Nontraditional High School
Osbourn Park High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
Independent Living, recommended

Nutrition and Wellness

Students investigate the principles of nutrition and wellness, use science and technology in food management, ensure food safety, plan menus, prepare food, and explore careers. Students prepare for careers by using critical thinking and practical problem-solving skills as well as other workplace readiness skills. Contextual instruction and student participation in co-curricular career and technical student organization (CTSO) activities will develop leadership, interpersonal, and career skills.

This course is included in the following career pathway(s):
Human Services
Hospitality & Tourism
Credits 1
Grades
9, 10, 11
Schools
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Independence Nontraditional High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
None

Virginia Teachers for Tomorrow 1 DE

This course introduces students to the teaching profession and the foundations of education, including historical, philosophical, social, legal, and ethical aspects. Students explore child and adolescent development, learning how physical, cognitive, and social stages influence classroom environments. Students will participate in classroom observations in K–12 settings. The course also supports college and career readiness through activities focused on study skills, academic planning, and resources for success in post-secondary education. Students gain insight into teaching as a career while building skills for future education and professional growth. Contextual instruction and student participation in co-curricular career and technical student organization (CTSO) activities will develop leadership, interpersonal, and career skills.

This course is included in the following career pathway(s):
Education & Training
Credits 1
Grades
11, 12
Course Designation
Dual Enrollment (DE),
Weighted (1.0W)
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
Child Development and Parenting **and/or** Introduction to Early Childhood Education, recommended
Notes
To enroll in this course, students must meet all eligibility requirements established by Northern Virginia Community College.

Virginia Teachers for Tomorrow 2 DE

This course continues to prepare future educators to teach in diverse classrooms and manage positive learning environments. Students explore culturally responsive teaching, equity, and inclusion while learning strategies for classroom and behavioral management. Students participate in internship opportunities that provide hands-on experience as teacher assistants and tutors in K–12 settings. The course emphasizes professional communication, lesson planning, and advocacy, helping students develop the skills and confidence needed for success in education careers. Contextual instruction and student participation in co-curricular career and technical student organization (CTSO) activities will develop leadership, interpersonal, and career skills. High-quality work-based learning (HQWBL) will provide experiential learning opportunities related to students' career goals and/or interests, integrated with instruction, and performed in partnership with local businesses and organizations.

This course is included in the following career pathway(s):
Education & Training
Credits 1
Grades
12
Course Designation
Dual Enrollment (DE),
Weighted (1.0W)
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gar-Field High School
Hylton High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
Virginia Teachers for Tomorrow 1 DE
Notes
To enroll in this course, students must meet all eligibility requirements established by Northern Virginia Community College.

Marketing

Advanced Fashion Marketing

Students will gain deeper knowledge of the exciting and ever-changing world of fashion, where they can apply skills and develop strategies in fashion marketing. Students will produce promotional events and explore sustainability, social responsibility, entrepreneurship, technology applications, buying, portfolio development, and careers. Contextual instruction and student participation in co-curricular career and technical student organization (CTSO) activities will develop leadership, interpersonal, and career skills.

This course connects to the following career pathways:
Marketing
Credits 1
Grades
11, 12
Course Designation
Weighted (0.5W)
Schools
Battlefield High School
Freedom High School
Hylton High School
Potomac High School
Prerequisites
Fashion Marketing

Fashion Marketing

This course leads students into the exciting and ever-changing world of fashion. Students gain knowledge of marketing as it relates to the fashion industry. From brick-and-mortar retail establishments to online retail and social media marketing, students will explore aspects such as trends, technology, the buying process, visual merchandising, the nature and history of fashion and fashion designers, and the global impact of the fashion industry on the economy. Academic skills related to the content are part of this course. Contextual instruction and student participation in co-curricular career and technical student organization (CTSO) activities will develop leadership, interpersonal, and career skills.

This course connects to the following career pathways:
Marketing
Credits 1
Grades
10, 11, 12
Schools
Battlefield High School
Colgan High School
Freedom High School
Hylton High School
Potomac High School
Unity Reed High School
Prerequisites
Introduction to Fashion Careers **OR** Principles of Business and Marketing, recommended

Sports, Entertainment, and Event Management

Students will build on prior knowledge of Sports, Entertainment, and Event Marketing. This course focuses on the principles of management and planning supported by research and by financial, economic, ethical, and legal concepts. Students will be able to plan and execute an event, establish a sports, entertainment, or recreation marketing product/business, and develop a career plan. Contextual instruction and student participation in co-curricular career and technical student organization (CTSO) activities will develop leadership, interpersonal, and career skills.

This course connects to the following career pathways:
Hospitality & Tourism
Credits 1
Grades
11, 12
Course Designation
Weighted (0.5W)
Schools
Battlefield High School
Colgan High School
Forest Park High School
Gainesville High School
Gar-Field High School
Hylton High School
Osbourn Park High School
Patriot High School
Potomac High School
Woodbridge High School
Prerequisites
Sports, Entertainment, and Event Marketing

Sports, Entertainment, and Event Marketing

This course helps students develop a thorough understanding of fundamental marketing concepts and theories as they relate to the sports, entertainment, and event industries. Students will investigate the components of customer service, branding, product development, pricing and distribution, business structures, sales processes, digital media, sponsorships and endorsements, as well as promotion needed for sports and entertainment events. The course explores career options and develops workplace readiness skills. Contextual instruction and student participation in co-curricular career and technical student organization (CTSO) activities will develop leadership, interpersonal, and career skills.

This course connects to the following career pathways:
Hospitality & Tourism
Marketing
Credits 1
Grades
10, 11, 12
Schools
Battlefield High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
Principles of Business and Marketing, recommended

Technology and Engineering Education

Digital Electronics (PLTW)

Students use computer simulations to learn about the logic of electronics as they design, test, and actually construct circuits and devices. They apply control system programming and explore sequential logic and digital circuitry fundamentals. Topics in computer circuitry are also presented.

This course connects to the following career pathways:
Science, Technology, Engineering & Mathematics (STEM)
Credits 1
Grades
10, 11, 12
Course Designation
Weighted (1.0W)
Schools
Colgan High School
Forest Park High School
Gainesville High School
Gar-Field High School
Osbourn Park High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
Introduction to Engineering Design (PLTW)

Introduction to Engineering Design (PLTW)

In this introductory Project Lead the Way (PLTW) Engineering course, students use 3D 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 connects to the following career pathways:
Manufacturing
Science, Technology, Engineering & Mathematics (STEM)
Credits 1
Grades
9, 10, 11
Course Designation
Weighted (1.0W)
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Gainesville High School
Gar-Field High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
None

PLTW Capstone

In the Project Lead the Way (PLTW) Capstone course, teams of students, guided by community mentors, work together to research, design, and construct solutions to engineering problems. Students synthesize knowledge, skills, and abilities through an authentic engineering experience. Students are expected to develop and formally present an independent-study project and a team-oriented project that are critiqued by an evaluation committee.

This course connects to the following career pathways:
Manufacturing

Credits 1
Length
Year
Grades
12
Course Designation
Weighted (1.0W)
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Gainesville High School
Gar-Field High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
Introduction to Engineering Design (PLTW)

Principles of Engineering (PLTW)

In this foundational PLTW Engineering course, 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 connects to the following career pathways:
Manufacturing
Science, Technology, Engineering & Mathematics (STEM)
Credits 1
Grades
10, 11, 12
Course Designation
Weighted (1.0W)
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Gainesville High School
Gar-Field High School
Osbourn Park High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
Introduction to Engineering Design (PLTW)

Production Systems

Students assess the relationship between production and society as they compose design portfolios, construct production prototypes, and apply automation to evaluate their solutions to technological problems.

This course connects to the following career pathways:
Architecture & Construction
Manufacturing, Mechatronics
Credits 1
Grades
9, 10, 11
Schools
Brentsville District High School
Colgan High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Independence Nontraditional High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
None

Trade and Industrial Education

Advanced Cybersecurity Systems Technology

This Advanced Cybersecurity Systems Technology course provides students with training in procedures for optimizing and troubleshooting concepts for computer systems, subsystems, and networks. Students explore basic network design and connectivity, network documentation, network limitations and weaknesses, and network security, standards, and protocols.

Students will gain a basic understanding of emerging technologies including unified communications, mobile, cloud, and virtualization technologies. The course prepares students for postsecondary education and training and a successful career in information technology. Upon successful completion of the course, students may qualify to take CompTIA's A+ certification exams.

This is a double-blocked course.

This course connects to the following career pathways:
Information Technology - Cybersecurity
Credits 2
Grades
11, 12
Schools
Forest Park High School
Freedom High School
Potomac High School
Prerequisites
Cybersecurity Systems Technology

Cybersecurity Systems Technology

Students enter the world of computer networking and learn to troubleshoot networks and networking devices, using system tools and diagnostic software. They develop skills in computer networking, resource sharing, and associated security risks. In addition, students explore the relationships between internal and external computer components.

This course connects to the following career pathways:
Information Technology - Cybersecurity
Credits 1
Grades
10, 11
Schools
Freedom High School
Potomac High School
Prerequisites
Cybersecurity Fundamentals, recommended

Welding 1

Welding is required by a wide variety of industries anywhere fusible materials and high heat are needed to manufacture, repair, or alter tools and products. Students in Welding 1 are taught to use manual welding, cutting, and electrical arc welding processes to fabricate and join metal parts according to diagrams, blueprints, and specifications. Students will also learn all safety-related practices and techniques, including earning the Occupational Safety and Health Administration (OSHA) 10 card.

This course connects to the following career pathways:
Manufacturing - Welding
Credits 1
Grades
10, 11
Schools
Potomac High School

Welding 1 DE

This course introduces students to the fundamentals of welding and metal fabrication. Students learn the history of welding processes, safety practices, and proper setup and operation of equipment. Hands-on training includes oxyacetylene welding and cutting, shielded metal arc welding (SMAW), and MIG welding, as well as techniques for joining metals in various positions using AC and DC power sources. Emphasis is placed on developing practical skills for industrial applications and exploring career opportunities in welding and related fields.

This course connects to the following career pathways:
Manufacturing - Welding (Dual Enrollment), Specialty Programs
Credits 1
Grades
10, 11
Course Designation
Dual Enrollment (DE),
Weighted (1.0W)
Schools
Potomac High School
Notes
To enroll in this course, students must meet all eligibility requirements established by Northern Virginia Community College.

Welding 2

This Welding 2 course teaches advanced welding students how to fine-tune their craft and to perform welds in various positions, using multiple welding processes. Welding is required by a wide variety of industries anywhere fusible materials and high heat are needed to manufacture, repair, or alter products. Professional welders are in high demand and can earn accordingly.

This is a double-blocked course.

This course connects to the following career pathways:
Manufacturing - Welding
Credits 2
Grades
11, 12
Schools
Potomac High School
Prerequisites
Welding 1

Welding 2 DE

This course continues to build upon foundational welding skills with a focus on electric arc welding and blueprint interpretation. Students learn to operate AC and DC welding equipment, select electrodes for various alloys, and apply advanced welding techniques in vertical and overhead positions. The course also covers reading and interpreting welding blueprints and symbols, along with drafting fundamentals used in the welding industry. Hands-on labs emphasize safety and precision, preparing students for careers in welding and metal fabrication. Students will also prepare for industry-recognized credentials to enhance employability in the field.

This is a double-blocked course.

This course connects to the following career pathways:
Manufacturing - Welding (Dual Enrollment), Specialty Programs
Credits 2
Grades
11, 12
Course Designation
Dual Enrollment (DE),
Weighted (1.0W)
Schools
Potomac High School
Prerequisites
Welding 1 DE
Notes
To enroll in this course, students must meet all eligibility requirements established by Northern Virginia Community College.

Welding 3

This Welding 3 capstone course teaches students the industry's emerging technologies, along with shielded metal arc welding (SMAW) and flux-cored arc welding (FCAW). Students will also learn to operate a computer numerical control (CNC) cutting table. Students are prepared to earn relevant industry credentials toward employment in production or manufacturing facilities.

This is a double-blocked course.

This course connects to the following career pathways:
Manufacturing - Welding
Credits 2
Grades
12
Schools
Potomac High School
Prerequisites
Welding 2

Welding 3 DE

In this advanced course, students build upon prior welding experience to master professional techniques such as TIG and MIG welding, along with semi-automatic processes like GMAW, FCAW, and SAW. Students will learn to set up and operate specialized equipment, select the correct gases, wires, and rods, and produce strong, precise welds in multiple positions. Safety practices are emphasized throughout all lab work. By the end of the course, students will demonstrate advanced welding skills and be prepared for industry certifications, college welding programs, or entry-level careers in manufacturing, construction, and metal fabrication.

This is a double-blocked course.

This course connects to the following career pathways:
Manufacturing - Welding (Dual Enrollment), Specialty Programs
Credits 2
Grades
12
Course Designation
Dual Enrollment (DE),
Weighted (1.0W)
Schools
Potomac High School
Prerequisites
Welding 2 DE
Notes
To enroll in this course, students must meet all eligibility requirements established by Northern Virginia Community College.

Navy JROTC

Navy JROTC 1

This course introduces students to the Navy Junior Reserve Officer Training Corps program, the importance of citizenship, the elements of leadership, the U.S. government, and the value of scholarship in attaining life goals. Additional instruction includes: the principles of health and first aid, geography, orienteering, map reading skills, survival skills, financial skills, and overview of the U.S. Navy, naval ships and aircraft. The importance and promotion of a healthy lifestyle including physical fitness, proper diet, controlling stress, and drug awareness are pursued at the fundamental level.

Students electing to use JROTC 1 in 9th grade as a substitution for their physical education graduation requirement must enroll in the full-year health course in tenth grade. The health course will include ninth and tenth grade health, CPR, and Family Life Education. In-person courses will include Driver Education; however, if a school does not have the minimum enrollment to support an in-person health course, students will be enrolled in a virtual course.
Credits 1
Grades
9, 10, 11
Schools
Osbourn Park High School
Potomac High School
Requirements
Student must be able to participate in physical education program, dress in regulation uniform and meet and maintain the personal grooming standards.

Navy JROTC 2

This course builds on the general introduction provided in Navy JROTC 1, to further develop the traits of citizenship and leadership, introduce cadets to the technical areas of naval science, the role of the U.S. Navy in maritime history, and the vital importance of the world's oceans to the national security of the United States. An introduction to maritime history including the American Revolution, the American Civil War, the rise of the United States to world power status, World Wars 1 and 2, the Cold War era, the 1990s, and conflict in the new millennium is provided. Additional instruction in the nautical sciences will include an introduction to maritime geography, oceanography, meteorology, astronomy, and the physical sciences.

Credits 1
Grades
10, 11, 12
Schools
Osbourn Park High School
Potomac High School
Requirements
Student must be able to participate in physical education program, dress in regulation uniform and meet and maintain the personal grooming standards.
Prerequisites
Navy JROTC 1

Navy JROTC 3

This course broadens a student's understanding of the principles of military leadership, citizenship, discipline, the concept and significance of teamwork, the intrinsic value of good order and discipline in the accomplishment of objectives, and the importance of sea power and national security. Students gain a more in-depth knowledge of naval ships, aircraft, and an introduction to marine navigation and seamanship. It includes instruction in sea power and national security, naval operations and support functions, military law, and international law and the sea. It provides an introduction to ship construction and damage control, shipboard organization and watch standing, and naval weaponry.

Credits 1
Grades
11, 12
Schools
Osbourn Park High School
Potomac High School
Requirements
Student must be able to participate in physical education program, dress in regulation uniform and meet and maintain the personal grooming standards.
Prerequisites
Navy JROTC 2

Navy JROTC 4

This course prepares junior cadets for the real world through training in leadership and ethics. Seniors will be placed in positions of leadership under supervision and will analyze their performance throughout the year. Classroom activities include seminars, reading assignments, presentations, and practical work with junior cadets. Students also investigate topics in cyber technology and space exploration.

Credits 1
Grades
12
Schools
Osbourn Park High School
Potomac High School
Requirements
Student must be able to participate in physical education program, dress in regulation uniform and meet and maintain the personal grooming standards.
Prerequisites
Navy JROTC 3

Student Assistant

Lab Assistant / Science Seminar

Lab Assistant/Science Seminar offers the student the opportunity to learn more science while assisting a science teacher. The instructional objectives vary according to the course in which the student is assisting and according to the program, interests, and ability of the student. This course may be taken more than once for credit with prior approval of the science department chairperson. To earn credit instructional objectives and evaluative criteria must be delineated as per Regulation 681-3, Section III.C.

Credits 0.5
Length
Year
Grades
10, 11, 12
Schools
Gar-Field High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Requirements
Approval of supervising teacher
Prerequisites
Successful completion of subject in which assisting.

Library Assistant

Students are trained to assist the library staff in maintaining the library program. Students are under the supervision of the librarian(s) but must be able to work independently to perform duties and carry out responsibilities as assigned. Basic duties may include shelving books in alpha or numeric order, assisting patrons in various capacities; circulation of books; knowledge of the computer databases; ability to evaluate websites; use of A/V equipment and duties as assigned by the librarian. This course may be taken more than once for credit

Credits 0.5
Length
Year
Grades
10, 11, 12
Schools
Colgan High School
Freedom High School
Gar-Field High School
Hylton High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Semester
36 weeks

Physical Education Assistant

This course offers opportunities for further positive learning experiences for the student who is interested in pursuing a career in Health and Physical Education. Emphasis is placed on assisting in the instructional program. This course may be taken more than once for credit.

Credits 0.5
Length
Year
Grades
11, 12
Schools
Freedom High School
Gar-Field High School
Patriot High School
Potomac High School
Requirements
Approval of the department chairperson *and* the supervising teacher.
Prerequisites
Health and Physical Education 1

High School Special Education

EMPLOY 1

Employment Opportunities for Youth (EMPLOY) 1 is a Career and Technical Education course designed for students with disabilities. The course introduces career awareness activities that help students build a foundational understanding of work and explore diverse career pathways. These activities progress into High Quality Work-Based Learning (HQWBL) experiences, allowing students to strengthen their knowledge of the workplace and apply classroom skills in real-world settings.

Credits 1
Length
Year
Grades
9, 10, 11, 12
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Independence Nontraditional High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Requirements
Any student who is receiving special education services and whose Individualized Education Program (IEP) and transition goals indicate the appropriateness of the EMPLOY curriculum.
Notes
EMPLOY courses can fulfill Sequential Elective requirement and Career and Technical Education (CTE) completer sequence elective.

EMPLOY 2

Employment Opportunities for Youth (EMPLOY) 2 is a Career and Technical Education course designed for students with disabilities. The course emphasizes career exploration, guiding students to discover personal strengths, research career options, engage in new experiences, and develop plans for achieving postsecondary goals. Instruction is delivered through participation in a School-Based Enterprise, where students build both soft and technical skills that prepare them for community-based work experiences in EMPLOY 3 or direct entry into the workforce through EMPLOY 4.

Credits 1
Length
Year
Grades
10, 11, 12
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Independence Nontraditional High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Requirements
Any student who is receiving special education services and whose Individualized Education Program (IEP) and transition goals indicate the appropriateness of the EMPLOY curriculum.
Notes
It is recommended that a student complete EMPLOY 1 before enrolling in EMPLOY 2.

EMPLOY courses can fulfill Sequential Elective requirement and Career and Technical Education (CTE) completer sequence elective.

EMPLOY 3: Internship

Employment Opportunities for Youth (EMPLOY) 3 is a course that offers students unpaid internships with local businesses aligned to their career interests and postsecondary employment goals. This two-period, back-to-back class builds on the foundations of EMPLOY 1 and EMPLOY 2, emphasizing vocational exploration and the development of transferable, marketable job skills. Through hands-on internship experiences, students strengthen their understanding of the workplace while applying and expanding the skills learned in earlier courses.

Credits 2
Length
Year
Grades
10, 11, 12
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Independence Nontraditional High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Requirements
Any student who is receiving special education services and whose Individualized Education Program (IEP) and transition goals indicate the appropriateness of the EMPLOY curriculum.
Notes
It is recommended that a student complete EMPLOY 1 and/or EMPLOY 2 before enrolling in EMPLOY 3.

EMPLOY courses can fulfill Sequential Elective requirement and Career and Technical Education (CTE) completer sequence elective.

EMPLOY 4

Employment Opportunities for Youth (EMPLOY) 4 is a course that allows students to earn credit by demonstrating Virginia's 21st Century Workplace Readiness Skills through a minimum of 396 hours in competitive employment. The course emphasizes applying self-awareness, employability, self-advocacy, and life management skills to secure and maintain meaningful work. Over the school year, students gain real-world experience while meeting the 396-hour employment requirement.

Credits 1
Length
Year
Grades
10, 11, 12
Schools
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Independence Nontraditional High School
Osbourn Park High School
Potomac High School
Unity Reed High School
Woodbridge High School
Requirements
Any student who is receiving special education services and whose Individualized Education Program (IEP) and transition goals indicate the appropriateness of the EMPLOY curriculum.
Notes
It is recommended that a student complete EMPLOY 1 and/or EMPLOY 2 before enrolling in EMPLOY 4.

EMPLOY courses can fulfill Sequential Elective requirement and Career and Technical Education (CTE) completer sequence elective.

Explore

PWCS Explore partners with local businesses to provide students ages 18–22 with meaningful internship experiences that help them identify career interests, develop workplace skills, and prepare for future employment. Interns spend the majority of their day engaged in hands-on, work-based learning activities designed to foster career exploration and skill development. In addition to gaining practical, marketable job skills, students learn to meet the demands of competitive work environments while building essential 21st-century soft skills such as responsibility, confidence, teamwork, positive work habits, and self-management.

Participants complete three unpaid internships, each lasting 10–12 weeks. While enrolled in the program, students remain registered at their home high school but attend their internship at the designated Explore business site rather than on the high school campus. Program participation is contingent upon acceptance through an application process.

Credits 1
Length
Year
Grade: 12 Postgraduate
Schools
Battlefield High School
Brentsville District High School
Gainesville High School
Potomac High School
Unity Reed High School
Requirements
Any student with a disability, aged 18 - 21, who has completed the requirements for an Applied Studies Diploma and whose IEP team has determined the need for an unpaid, community-based, High-Quality Work-Based Learning internship experience in a supported environment.
Prerequisites
None
Notes
Check with your counselor to see if this course is offered at your school.

Learning Strategies 1-2

Learning Strategies 1 and 2 are special education elective courses considered and decided upon by an IEP team that provide students who access the general curriculum with direct and explicit instruction on building study, learning and executive function skills. Students will explore a variety of research-based strategies and programs that will enable them to experience success in high school. The goal of this class is to support students in developing the habits of academic success.
Credits 1
Length
Year
Grades
9, 10, 11, 12
Schools
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Independence Nontraditional High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Requirements
Any student who is receiving special education services whose Individualized Education Program (IEP) indicates the appropriateness of the Learning Strategies course offerings.

Life Skills

Life Skills is a special education elective course considered and decided upon by an IEP team that prepares students who access the adapted curriculum to develop independence at home and in the community. Students will develop and enhance communication skills, self-advocacy skills, organizational/study techniques, and social skills. Students will learn to manage their personal care needs and household responsibilities, i.e., create to-do lists, prepare nutritious meals, and care for laundry. Students will participate in the development of individual transition plans and explore skills needed for employment/post-secondary education while learning to be contributing members of their community.
Credits 0
Length
Year
Grades
9, 10, 11, 12
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Independence Nontraditional High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Requirements
Any student who is receiving special education services and whose Individualized Education Program (IEP) indicates the appropriateness of the Life Skills course offering.
Prerequisites
None

Methods of Study 1-4

Methods of Study 1-4 are special education elective courses considered and decided upon by an IEP team that provide specialized instruction in organization and study skills to students on the general curriculum. Instruction is tailored to each student's specific areas of need as outlined through the eligibility and IEP processes. Students may also receive remediation and support of content coursework and may be provided necessary time to complete assignments and assessments to ensure progress in the general education courses.

Credits 1
Length
Year
Grades
9, 10, 11, 12
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Independence Nontraditional High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Requirements
Any student whose Individualized Education Program (IEP) indicates the appropriateness of the compensatory skills course offering.
Prerequisites
None
Notes
Students can take Methods of Study each year up to four years.

Personal Living and Finance

Personal Living and Finance is a special education elective course considered and decided upon by an IEP team that can replace Economics and Personal Finance as a graduation requirement for any student whose Individual Education Program (IEP) indicates eligibility for the credit accommodation. This course addresses the need for students to learn the skills to manage personal finances and to make sound financial decisions. This course is designed to incorporate the 21 Work Readiness Skills (WRS) identified by the Commonwealth of Virginia. Students will participate in the Work Readiness Skills assessment to earn the Board-approved workplace readiness skills credential at the end of the school year. Additionally, students in this course will participate in at least one virtual module satisfying the virtual requirement for graduation.

Credits 1
Length
Year
elective credit for Standard or Advanced Studies Diplomas
Grades
10, 11, 12
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Requirements
Any student who is receiving special education services and whose Individual Education Program (IEP) indicates the appropriateness of the Personal Living and Finance Course.
Prerequisites
None

Project SEARCH

Prince William Project SEARCH is a collaborative initiative between PWCS, DARS, and Didlake Inc. This business-led, one-year Transition-to-Work Program serves students ages 18–22 and provides full workplace immersion, combining classroom instruction, career exploration, and hands-on training through internships. The program takes place entirely at the workplace, offering a seamless experience that prepares students for employment success.

Participants complete three unpaid internships, each lasting 10–12 weeks, at Novant UVA Health Systems, Prince William Medical Center. While enrolled in the program, students remain registered at their home high school but attend their internship at the designated Explore business site rather than on the high school campus. Program participation is contingent upon acceptance through an application process.

Credits 1
Length
Year
Grades
12
Postgraduate (applied studies)
Schools
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Requirements
Any student with a disability, aged 18-21, who has completed the requirements for an Applied Studies Diploma, has an open case with the Virginia Department of Aging and Rehabilitative Services, and meets the eligibility requirements for state and local developmental disabilities follow along services may be eligible. Course participation is not determined by an IEP team decision; there is an application and selection process.
Prerequisites
None

Reading Strategies 1 - 4

Reading Strategies 1-4 are special education elective courses considered and decided upon by an IEP team. They are cumulative elective courses that enhance students' reading abilities through direct and explicit instruction in essential reading strategies. Students will engage with research-based instructional programs to develop and strengthen key reading skills, including comprehension, vocabulary, phonics, phonemic awareness, and fluency. Through a combination of interactive lessons, guided practice, and independent reading activities, students will apply various strategies to decode text, understand complex vocabulary, and enhance overall reading comprehension.
Credits 1
Length
Year
Grades
9, 10, 11, 12
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Independence Nontraditional High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Requirements
Any student who is receiving special education services and whose Individualized Educational Program (IEP) indicates the appropriateness of the Reading Improvement 1 -4 course offerings.
Prerequisites
None

Social Skills 1 - 4

Social Skills 1 - 4 are special education elective courses considered and decided upon by an IEP team that provide students with specialized instruction in the social skills they need to effectively participate in the school environment and in the community. Specific skills are identified through IEP goals and may focus on communication skills, conflict resolution, social interaction, teamwork, and self-regulation. Through practical exercises, role-playing, and real-world application, students will gain the tools needed to navigate social situations confidently and build meaningful connections.

Credits 1
Length
Year
Grades
9, 10, 11, 12
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Independence Nontraditional High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Requirements
Any student who is receiving special education services and whose Individualized Educational Program (IEP) indicates the appropriateness of the Social Skills 1 -4 course offerings.
Prerequisites
None

Transitional Work Skills

This course is intended to address the vocational needs of high school students participating in the Virginia Alternate Assessment Program. Course proficiencies can contribute in the development of the student's transition plan. Pre-vocational and vocation tasks will be the fundamental areas of instruction. The focus of this course, Transitional Work Skills, is to provide students with opportunities to develop competencies required for increased independence and to facilitate post-secondary employment. This course will be open to any student who is receiving special education services at the high school level whose Individualized Education Program (IEP) indicates the need for vocational skills, to include students with disabilities who are English learners.

Credits 1
Length
Year
Grades
9, 10, 11, 12
Schools
Battlefield High School
Gainesville High School
Hylton High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Requirements
Any student whose Individualized Educational Program (IEP) indicates the appropriateness of Transitional Work Skills is eligible for this course.
Prerequisites
None

English

English 9

English 9 introduces students to a broad range of literary and nonfiction texts, fostering foundational skills in reading comprehension, writing, speaking, listening, and research. Aligned with the 2024 Virginia Standards of Learning, the course emphasizes literary analysis, narrative and expository writing, vocabulary development, and grammar in context. Students will explore themes across cultures and genres, engage in collaborative discussions, and begin developing research and multimodal communication skills. This course prepares students for continued growth in literacy and critical thinking throughout high school.

Credits 1
Grades
9
Course Designation
Virtual Prince William (VPW)
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Independence Nontraditional High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
None

English 10

This course builds upon foundational literacy skills to deepen students' abilities in reading, writing, speaking, listening, and research. Aligned with the 2024 Virginia Standards of Learning, English 10 emphasizes critical analysis of literary and nonfiction texts from diverse cultures and time periods. Students will refine their writing through narrative, analytical, and argumentative compositions, with a focus on organization, style, and grammar. Vocabulary development and language conventions are integrated throughout the curriculum. Learners will engage in multimodal communication and collaborative discussions, strengthening their ability to present ideas clearly and effectively. Research skills are expanded through inquiry-based projects that require evaluation and synthesis of credible sources. This course prepares students for advanced literacy demands in academic and real-world contexts.

Credits 1
Grades
10
Course Designation
Virtual Prince William (VPW)
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Independence Nontraditional High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
English 9

English 11

English 11 focuses on American literature and the development of advanced literacy skills aligned with the 2024 Virginia Standards of Learning. Students will read and analyze texts from a range of historical periods and cultural perspectives, exploring themes central to the American experience. Special emphasis is placed on the contributions of diverse cultures to American literary voices and themes, highlighting how these perspectives shape and enrich the national narrative. Writing instruction emphasizes analytical, persuasive, and research-based compositions, with continued attention to grammar, usage, and vocabulary. Students will refine their ability to communicate effectively through speaking, listening, and multimodal presentations. Research skills are strengthened through inquiry projects that require evaluation of sources and synthesis of ideas. This course supports students in preparing for the English 11 Standards of Learning assessment and future academic writing demands.

Credits 1
Grades
11
Course Designation
Virtual Prince William (VPW)
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Independence Nontraditional High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
English 10

English 12

English 12 centers on British and world literature, guiding students in the exploration of global themes, historical contexts, and literary traditions. Aligned with the 2024 Virginia Standards of Learning, the course emphasizes critical reading, literary analysis, and effective writing across genres. Students will produce narrative, analytical, and argumentative texts, with continued development of grammar, vocabulary, and style. Research and presentation skills are refined through inquiry-based projects and multimodal communication. Class discussions and collaborative tasks support students in articulating ideas and engaging with diverse perspectives. English 12 prepares students for postsecondary literacy demands and civic participation.

Credits 1
Grades
12
Course Designation
Virtual Prince William (VPW)
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Independence Nontraditional High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
English 11

English - Electives

Photo Journalism - Yearbook

Yearbook is a hands-on course in publication design and production, where students collaborate to create the high school yearbook from concept to completion. Students learn and apply skills in layout design, photography, writing, editing, and desktop publishing. They participate in every stage of production, including planning the ladder diagram, organizing content, designing pages, and distributing the final publication. Emphasis is placed on teamwork, time management, and attention to detail. This course offers students a unique opportunity to document the school year while developing real-world communication and media skills. Yearbook may be taken more than once for credit.

Credits 1
Grades
9, 10, 11, 12
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Requirements
Yearbook staff assignment

English - Cambridge Programme

AICE English Language and Composition (AS)

AICE English Language and Composition is an Advanced language and composition course which meets all the objectives for English 11 and employs an international curriculum. Focusing on reading and writing from a wide variety of genres, styles, and contexts, students respond in critical and detailed analysis through directed writing, oral presentations, and group discussion. Students meet the requirements for an Advanced International Certificate of Education Diploma and Advanced Placement English Language and Composition credit with possible college credit through successful completion of external assessments.

Credits 1
Grades
11
Course Designation
Advanced Subsidiary Level (AS),
Cambridge,
Weighted (1.0W)
Schools
Brentsville District High School
Potomac High School
Requirements
Student interest in Advanced study and teacher recommendation
Prerequisites
IGCSE English 10 *or* a grade of B or better in English 10

AICE English Literature (AS Level)

Students in AICE English Literature, while meeting all the objectives for English 12, follow an accelerated, international curriculum. They read a wide variety of texts from a broad range of cultures and literary periods. Students write both personal and formal literary responses to literature, practicing their skills of logical, critical analysis. Oral skills are honed in group and individual presentations and discussions. Students meet the requirements of an Advanced International Certificate of Education Diploma and Advanced Placement English Literature and Composition credit with possible college credit through successful completion of external assessments.

Credits 1
Grades
12
Course Designation
Advanced Subsidiary Level (AS),
Cambridge,
Weighted (1.0W)
Schools
Brentsville District High School
Potomac High School
Requirements
Student interest in Advanced study and teacher recommendation
Prerequisites
AICE English Language and Composition (AS) *or* a grade of B or better in English 11

IGCSE English 9

Students study a variety of literature to develop an awareness of the relationship between life and literary experience while completing all objectives of grade 9. Writing frequently for varied purposes, students develop critical thinking skills in analyzing and evaluating. Modified Oxford debates help develop oral skills. Vocabulary is increased through a study of Greek and Latin roots. Several independent research projects, large and small group participation, required outside reading, and a study of persuasion in the media are all part of this course.

Credits 1
Grades
9
Course Designation
Cambridge,
Weighted (0.5W)
Schools
Brentsville District High School
Potomac High School
Requirements
Successful completion of Grade 8 and interest in Advanced study
Prerequisites
None

IGCSE English 10

Students analyze a variety of genres to understand the structural elements and the relationship of those elements to the meaning of the work and its literary tradition. Through frequent personal and literary writing, students study the principal essay forms of narrative, descriptive, expository, persuasive, and documented essays. Students increase vocabulary, evaluate critically, write and speak persuasively and responsibly, as well as present dramatic material effectively. Assessment will include an external student examination.

Credits 1
Grades
10
Course Designation
Cambridge,
Weighted (0.5W)
Schools
Brentsville District High School
Potomac High School
Requirements
Student interest in Advanced study and teacher recommendation
Prerequisites
IGCSE English 9 *or* a grade of B or better in English 9

General Cross-Curricular

Leadership Development 1, 2, & 3

Students will learn about the aspects of leadership by looking at historical and modern examples. Planning and implementing school activities will allow the students the practical application of leadership theory. Through the practice of planning, coordinating, and implementing school wide activities, students will be exposed to a wide variety of leadership experiences. Each student enrolled in the course is assigned a position in which they are responsible for specific tasks that support the student body.
Credits 1
Grades
9, 10, 11, 12
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Requirements
Application and interview
Prerequisites
None

Physical Education Electives

Personal Fitness 1 (Principles of Weight Training)

Personal Fitness 1 (formerly Principles of Weight Training and Conditioning) focuses on fitness, strength training, and physical conditioning. Students will learn how and why weight training and conditioning improve muscle development, core strength, injury prevention, and athletic performance. The course emphasizes mastering movement skills used in strength training, conditioning, and fitness-based activities. Students will also explore the five health-related components of fitness including cardiorespiratory fitness, muscular strength and endurance, flexibility, and body composition. Students will assess their own fitness needs, set personal goals, and design and implement a fitness and conditioning program that supports lifelong health. Instruction includes discussion of lifestyle-related health risks and the impact of nutrition on wellness. This course may be taken more than once for credit.
Credits 1
Grades
11, 12
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
Health and Physical Education 1

Unified Physical Education Recreational Activities

Unified Physical Education Recreational Activities places emphasis on the opportunity for students of all abilities to participate together through ongoing educational and physical activities. Additionally, the course supports the development of student leadership skills and empowers students to foster an inclusive environment in a variety of recreational movement activities. Student learning outcomes emphasize motor skills, anatomical basis of movement, fitness planning, social and emotional development, and energy balance to support healthy living. This course may be taken more than once for credit.

Credits 1
Grades
9, 10, 11, 12
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Requirements
Students electing to use Unified PE as a substitution for their physical education graduation requirement must enroll in the full-year health course in tenth grade. The health course will include ninth and tenth grade health, CPR, and Family Life Education. In-person courses will include Driver Education, however, if a school does not have the minimum enrollment to support an in-person health course, students will be enrolled in a virtual course.
Prerequisites
Health and Physical Education 1 *and* Health and Physical Education 2 *and/or* recommendation from the department chairperson *or* the supervising teacher

Health and Physical Education Required Courses

Health and Physical Education 1

Students will participate in classroom instruction and in individual and team activities designed to develop knowledge, skills, and habits necessary to maintain personal fitness for a lifetime. Fifty percent of the course focuses on classroom instruction in fitness, nutrition, body systems, physical health, mental wellness/social emotional skills, First Aid, CPR and use of AED, violence prevention, community and environmental health, disease prevention and health promotion, substance abuse prevention, and family life education.

Credits 1
Grades
9, 10, 11, 12
Course Designation
Virtual Prince William (VPW)
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Independence Nontraditional High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
None

Math

Advanced Algebra 1

Success in Algebra 1 is widely considered to be a determining factor in success in upper-level mathematics coursework. The skills in Advanced Algebra 1 build on algebraic thinking which students have experienced in kindergarten through middle school. Algebra 1 content includes arithmetic concepts, proportional reasoning, and functions. Graphing technologies will be used to assist in teaching and learning. Advanced Algebra 1 provides instruction on all the Algebra 1 Standards and the following content from Algebra 2: absolute value equations and inequalities, simplifying and performing operations on radical expressions that include variables, and polynomial expressions with two variables. At the end of the year, students will take the Algebra 1 Standards of Learning test.

Credits 1
Grades
9
Course Designation
Weighted (0.5W)
Schools
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Hylton High School
Osbourn Park High School
Patriot High School
Potomac High School
Woodbridge High School

Precalculus with Trigonometry for AB

Precalculus with Trigonometry for AB is a one year preparatory course for AP Calculus AB. The course content is comprised of the Algebra of real numbers and complex numbers, polynomial, piecewise, step, exponential, and logarithmic functions, applications of composition and inverse functions, limits and continuity of functions, matrices, discrete mathematics, and trigonometry, including the unit circle. Students who successfully complete Precalculus with Trigonometry for AB are eligible to enroll in AP Calculus AB. Students intending to pursue AP Calculus BC should complete either AP Precalculus for BC or Precalculus with Trigonometry for BC as the prerequisite course in their sequence.

Credits 1
Grades
10, 11, 12
Course Designation
Virtual Prince William (VPW),
Weighted (1.0W)
Schools
Colgan High School
Forest Park High School
Freedom High School
Hylton High School
Osbourn Park High School
Patriot High School
Potomac High School
Prerequisites
Algebra 2

Math - Advanced Placement

AP Statistics

The Advanced Placement Statistics course introduces students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students are exposed to four broad conceptual themes: selecting methods for collecting or analyzing data, describing patterns, trends, associations, and relationships in data, using probability and simulation to describe probability distributions and define uncertainty in statistical inference, and using statistical reasoning to draw appropriate conclusions and justify claims. Students are expected to take the accompanying AP Exam, which may qualify them for advanced standing in college and/or college credit. Students who successfully complete the course and the AP Statistics examination may receive credit for a one semester introductory college statistics course.

Credits 1
Grades
11, 12
Course Designation
Advanced Placement (AP),
Weighted (1.0W)
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
Algebra 2

Math - Cambridge Programme

AICE Mathematics 1 (AS Level)

AICE Mathematics 1 is designed to provide accelerated students a strong foundation in Pre-Calculus and beginning calculus concepts. They will develop an understanding of Advanced mathematical principles and an appreciation of mathematics as a logical and coherent subject. The international curriculum includes essential Pre-Calculus topics and an introduction to differentiation and integration. Students will acquire the mathematical background necessary for further study at the AICE Mathematics 2 level. College credit is available at some universities for exemplary performance on associated exams.

Credits 1
Grades
11, 12
Course Designation
Advanced Subsidiary Level (AS),
Cambridge,
Weighted (1.0W)
Schools
Brentsville District High School
Potomac High School
Requirements
Teacher recommendation
Prerequisites
IGCSE Advanced Algebra 2 *or* Precalculus with Trigonometry for AB

AICE Mathematics 2 (A Level)

AICE Mathematics 2 (A Level) extends the knowledge base built in AICE Mathematics 1. The course follows a rigorous, international curriculum to include Advanced Placement Calculus BC topics. Further concepts and skills in mathematics are taught including the study of concepts, techniques and applications of calculus. Students will increase their ability to analyze problems logically, identify and interpret relevant factors and, where necessary, select an appropriate mathematical method to solve a problem. They will be prepared to sit for the external examination leading to an Advanced International Certificate of Education Diploma. College credit is available at most universities for exemplary performance on Cambridge exams.

Credits 1
Grades
12
Course Designation
Advanced Level (A),
Cambridge,
Weighted (1.0W)
Schools
Brentsville District High School
Potomac High School
Requirements
Teacher recommendation
Prerequisites
AICE Mathematics 1 (AS Level)

IGCSE Advanced Algebra 2

IGCSE Advanced Algebra 2 is an accelerated course that integrates select Pre-Calculus concepts to prepare students for AICE Mathematics 1. Students are expected to master Algebraic mechanics and understand the underlying theory and apply the concepts to real-world situations. The study of the trigonometric circular functions will continue from IGCSE Geometry and prepare students for further study of this topic in the Pre-Calculus course, AICE Mathematics 1. Assessment includes an external student examination and course work evaluations by the teacher. This course has an associated Standards of Learning (SOL) test. Students will participate in the SOL test only when they have not yet earned sufficient credit for graduation and/or satisfied federal testing requirements. Algebra 2 is required for the Advanced Studies Diploma.

Credits 1
Grades
10, 11
Course Designation
Cambridge,
Weighted (0.5W)
Schools
Brentsville District High School
Potomac High School
Requirements
Teacher recommendation
Prerequisites
Advanced Algebra 1
IGCSE Geometry

IGCSE Geometry

IGCSE Geometry includes all objectives in the PWCS Geometry curriculum and the Virginia Standards of Learning with a strong relation to Algebraic concepts. Emphasis will be placed on recognizing, analyzing, and interpreting geometric terms, shapes, and properties. Additional topics in trigonometry, vectors, and transformations are included. Alternative activities such as projects, investigations, oral and written communication, and cooperative learning activities are a regular part of this course. This course has an associated Standards of Learning (SOL) test. Students will participate in these tests only when they have not yet earned sufficient credit for graduation and/or satisfied federal testing requirements.
Credits 1
Grades
9, 10
Course Designation
Cambridge,
Weighted (0.5W)
Schools
Brentsville District High School
Potomac High School
Prerequisites
Algebra 1

Math - Computer Electives

Advanced Computer Mathematics

Advanced Computer Mathematics has a focus on proving students with a conceptual background in computer science. Students will implement the major stages of software development using a high-level language. This Advanced course covers all topics in the regular Computer Mathematics class as well as others.
Credits 1
Grades
9, 10, 11, 12
Course Designation
Weighted (0.5W)
Schools
Battlefield High School
Forest Park High School
Gar-Field High School
Patriot High School
Potomac High School
Prerequisites
Algebra 1
Notes
Advanced Computer Math may count as the third math course for graduation in addition to Algebra and Geometry, only if the student also completes a career and technical concentration.

Math - Electives

AP Computer Science A

The focus of this course is to provide students with a conceptual background in computer science. The major emphasis is on programming methodology, algorithms, and non-dynamic data structure in the JAVA language. This course prepares a student for advanced placement in computer science by means of the Advanced Placement Examination Level A in Computer Science of the College Entrance Board. Students are expected to take the accompanying AP Exam, which may qualify them for advanced standing in college and/or college credit.
Credits 1
Grades
10, 11, 12
Course Designation
Advanced Placement (AP),
Weighted (1.0W)
Schools
Battlefield High School
Colgan High School
Forest Park High School
Gainesville High School
Gar-Field High School
Osbourn Park High School
Patriot High School
Potomac High School
Woodbridge High School
Prerequisites
Geometry
Notes
AP Computer Science A may be used for a math, science, or CTE standard credit to satisfy graduation. For a CTE standard credit, a student must (i) successfully complete a CTE program sequence in programming or related programming sequence and earn a score of three or higher on the AP Computer Science A examination.

AP Computer Science Principles

The AP Computer Science Principles course is designed to be equivalent to a first-semester introductory college computing course. In this course, students will develop computational thinking skills vital for success across all disciplines, such as using computational tools to analyze and study data and working with large data sets to analyze, visualize, and draw conclusions from trends. The course engages students in the creative aspects of the field by allowing them to develop computational artifacts based on their interests. Students will also develop effective communication and collaboration skills by working individually and collaboratively to solve problems, and will discuss and write about the impacts these solutions could have on their community, society, and world. This course may not be used for a math credit. This course is equivalent to the Software Engineering (PLTW) course. Therefore, students who have taken the Software Engineering (PLTW) course should not enroll in this AP Computer Science course as additional credit will not be granted. Students are expected to take the accompanying AP Exam, which may qualify them for advanced standing in college and/or college credit.

Credits 1
Grades
9, 10, 11, 12
Course Designation
Advanced Placement (AP),
Weighted (1.0W)
Schools
Brentsville District High School
Colgan High School
Forest Park High School
Gainesville High School
Gar-Field High School
Hylton High School
Osbourn Park High School
Patriot High School
Potomac High School
Prerequisites
Algebra 1

Data Science

The Data Science Standards of Learning provide an introduction to the learning principles associated with analyzing big data. Through the use of open source technology tools, students will identify and explore problems that involve the use of relational database concepts and data-intensive computing to find solutions and make generalizations. Students will engage in a data science problem-solving structure to interact with large data sets as a means to formulate problems, collect and clean data, visualize data, model using data, and communicate effectively about data formulated solutions.

Credits 1
Grades
10, 11, 12
Schools
Colgan High School
Forest Park High School
Gainesville High School
Gar-Field High School
Hylton High School
Patriot High School
Potomac High School
Woodbridge High School
Prerequisites
Algebra, Functions, and Data Analysis *or* Algebra 2

Statistics

This full-year course is an introduction to statistics that emphasizes working with data, graphs, and statistical ideas. Students are expected to develop and present professional quality statistical analyses. Technology tools will be used when appropriate to support instruction, especially to allow students to explore graphical, numerical, and symbolic relationships.

Credits 1
Grades
10, 11, 12
Course Designation
Virtual Prince William (VPW)
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Prerequisites
Algebra 2

Math - Standard

Algebra, Functions, and Data Analysis

This course is designed for students who have completed Algebra 1 but would benefit from time to further develop algebraic concepts prior to taking Algebra 2. Students will study functions and their behaviors, data analysis, probability, and experimental design. Data will be generated by practical applications arising from science, business, and finance.
Credits 1
Grades
10, 11, 12
Course Designation
Virtual Prince William (VPW)
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Independence Nontraditional High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
Algebra 1
Notes
A student may not receive credit for this course after receiving credit for Algebra 2.

Algebra 1

Success in Algebra 1 is widely considered to be a determining factor in success in upper-level mathematics coursework. The skills in Advanced Algebra 1 build on algebraic thinking which students have experienced in kindergarten through middle school. Algebra 1 content includes arithmetic concepts, proportional reasoning, and functions. Graphing utilities (calculators, computers, and other technology tools) will be used to assist in teaching and learning. At the end of the year, students will take the Algebra 1 Standards of Learning test.
Credits 1
Grades
9
Course Designation
Virtual Prince William (VPW)
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Independence Nontraditional High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
Math 7 Extended *or* Math 8 (Pre-Algebra)

Algebra 1, Parts 1 and 2

Algebra 1, in two parts, is offered for students with significant needs requiring additional support in mathematics content knowledge. This course takes an interactive, hands-on approach to developing Algebra concepts. Using graphing technology, the data cycle, and real-world applications as a foundation, this two-part series emphasizes meaningful connections between Algebra and other mathematical domains, including arithmetic, geometry, and statistics. Algebra 1, Part 1 and Algebra 1, Part 2 are each year-long classes. Schools may double block the courses so that they meet every day for a full block of time over the school year. Schools may also allow students to take Part 1 in the 9th grade year and Part 2 in the 10th grade. The options available at each school are determined after student course selections and based on student needs. This course has an associated Standards of Learning (SOL) test to be taken at the conclusion of Algebra 1, Part 2.

Credits 1
Elective Credit for Part 1 and 1 Math Credit for Part 2 when student has passed both parts
Grades
9, 10
Schools
Battlefield High School
Brentsville District High School
Forest Park High School
Freedom High School
Gar-Field High School
Hylton High School
Independence Nontraditional High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
Math 8 (Pre-Algebra)
Notes
Students with disabilities eligible for credit accommodations receive two math credits for completing both courses.

Algebra 2

All students preparing for postsecondary and Advanced technical studies are expected to achieve the Algebra 2 standards. Emphasis will be placed on practical applications and modeling throughout the course of study. Technology tools will be used to assist in teaching and learning. This course has an associated Standards of Learning (SOL) test. Students will participate in these tests only when they have not yet earned sufficient credit for graduation and/or satisfied federal testing requirements. Algebra 2 is required for Advanced Studies Diploma.

Credits 1
Grades
9, 10, 11, 12
Course Designation
Virtual Prince William (VPW)
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Independence Nontraditional High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
Algebra 1

Algebra 3 with Trigonometry

Algebra 3 with Trigonometry extends both Algebra and Trigonometry topics. Emphasis is on functions and their inverses, equations and inequalities, graph theory, matrices, sequences and series, conic sections, and logarithms. Trigonometry topics include triangular and circular definitions of the trig functions, trig identities, and solutions of trig equations. This course does not meet the prerequisite for Calculus AB or BC.

Credits 1
Grades
11, 12
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Gainesville High School
Hylton High School
Osbourn Park High School
Patriot High School
Potomac High School
Woodbridge High School
Prerequisites
Algebra 2

Geometry

This course includes emphasis on two- and three-dimensional reasoning skills, coordinate and transformational geometry, and the use of geometric models to solve problems. A variety of real-world applications and general problem-solving techniques, including Algebra skills, are used to implement these standards. Technology tools will be used. This course has an associated Standards of Learning (SOL) test. Students will participate in these tests only when they have not yet earned sufficient credit for graduation and/or satisfied federal testing requirements.

Credits 1
Grades
9, 10, 11
Course Designation
Virtual Prince William (VPW)
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Independence Nontraditional High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
Algebra 1 *or* Algebra 1, Parts 1 and 2

History and Social Science - Advanced Placement

AP Government and Politics: U.S.

This college-level course in U.S. political science includes topics such as: Constitutional underpinnings of U.S. government, political beliefs and behaviors, political parties, interest groups, and mass media, institutions of national government, public policy, and civil rights and liberties. Analytical writing will be required, both in essays developed within the framework of the class and in papers developed as a result of research assignments. Students are expected to take the accompanying AP Exam, which may qualify them for advanced standing in college and/or college credit.

Credits 1
Grades
12
Course Designation
Advanced Placement (AP),
Weighted (1.0W)
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Hylton High School
Osbourn Park High School
Patriot High School
Potomac High School
Woodbridge High School
Prerequisites
None
Notes
Prior completion of AP U.S. History or U.S. and Virginia History is recommended.

History and Social Science - Cambridge Programme

AICE Thinking Skills (AS/A Level)

AICE Thinking Skills is designed to develop general thinking processes and skills. Developing and improving these skills will strengthen the study of all subject areas, will help to ensure success in postsecondary studies, and will enhance job performance. Content includes applied arithmetic, evaluating evidence, evaluating and presenting an argument, elements of reasoning, and evaluation of reasoning. Successful completion of the end of course exam may be used toward an AICE certificate or an AICE diploma.
Credits 1
Grades
11, 12
Course Designation
Advanced Level (A),
Cambridge,
Weighted (1.0W)
Schools
Brentsville District High School
Potomac High School
Requirements
Teacher recommendation
Prerequisites
At least one Cambridge course

AICE U.S. History (AS Level)

This Advanced study of American history follows an international curriculum which focuses on key developments that transformed the United States from an isolated, agrarian society to the world's leading superpower. Students will demonstrate an understanding of the complexity of issues, will interpret source materials as historical evidence, and will demonstrate facility in their use. On external examinations, students will answer compulsory source-based questions and respond to a choice of essay questions. They will be prepared to qualify for the Advanced International Certificate of Education Diploma. This course has an associated Standards of Learning (SOL) test. Students will participate in these tests only when they have not yet earned sufficient credit for graduation and/or satisfied federal testing requirements.

Credits 1
Grades
11
Course Designation
Advanced Subsidiary Level (AS),
Cambridge,
Weighted (1.0W)
Schools
Potomac High School
Prerequisites
World History and Geography from 1500; Advanced Middle Years Programme - World History and Geography to 1500 *or* Pre-AICE World History and Geography to 1500; English 10 *or* IGCSE English 10

AICE World History (AS Level)

This college-level course examines the nature and use of historical evidence, causes and consequences, continuity and change, and similarities and differences related to human activity of the past. Topics include: Discovery and Exploration, Rise of Nation-States, Reformation, Wars of Religion, Absolutism, The Scientific Revolution, the Enlightenment, The French Revolution, Development of Modern Nation States, Liberalism, Nationalism, Industrial Revolution, Imperialism and World War 1 and its aftermath, International Relations Since 1919, Russia: 1881-1939, the Rise of Fascism, Causes of World War 2 and the Final Peace Settlement, The Cold War, and World Issues. This course is required for those enrolled in the Cambridge Programme. Students will sit for AICE examinations. This course has an associated Standards of Learning (SOL) test. Students will participate in these tests only when they have not yet earned sufficient credit for graduation and/or satisfied federal testing requirements.

Credits 1
Grades
10
Course Designation
Advanced Subsidiary Level (AS),
Cambridge,
Weighted (1.0W)
Schools
Brentsville District High School
Potomac High School
Requirements
Teacher recommendation
Prerequisites
Pre-AICE World History and Geography to 1500
Notes
A pass advance on the World History 1 SOL test is recommended.

Pre-AICE World History and Geography to 1500

This pre-collegiate course explores the nature and use of historical evidence, causes and consequences, continuity and change, and similarities and differences related to human activity of the past. Topics include: Early Man through Rome, The Late Roman Empire, The Rise of Islam, Feudalism and the Early Middle Ages, Crusading and the Crusader States to 1204, Carolingians and Charlemagne, Early Religions and Trade Routes, The Rise of New Monarchies, The Ottoman Empire, European Social and Economic Development, and The Renaissance. This course has an associated Standards of Learning (SOL) test. Students will participate in these tests only when they have not yet earned sufficient credit for graduation and/or satisfied federal testing requirements.

Credits 1
Grades
9
Course Designation
Cambridge,
Weighted (0.5W)
Schools
Brentsville District High School
Potomac High School
Prerequisites
None
Notes
A pass advance on the Civics and Economics SOL test is recommended.

History and Social Science - Electives

AICE Economics (AS/A Level)

Cambridge International AS and A Level Economics will explain and analyze economic issues and arguments, evaluate economic information, and organize, present, and communicate ideas and judgments clearly. The course covers a range of basic economic ideas, including an introduction to the price system and government intervention, international trade and exchange rates, the measurement of employment and inflation, and the causes and consequences of inflation. Students also study the theory of the firm, market failure, macroeconomic theory and policy, and economic growth and development.

Credits 1
Grades
10, 11, 12
Course Designation
Advanced Level (A),
Advanced Subsidiary Level (AS),
Cambridge,
Weighted (1.0W)
Schools
Potomac High School
Prerequisites
Algebra 1
Notes
This course fulfills the Economics and Personal Finance graduation requirement.

AICE Global Perspectives

The focus of AICE Global Perspectives is on developing the ability to think, speak, and write critically about a range of global issues where there is always more than one point of view. Students will become aware of global themes and issues, viewed from personal, local, national and international perspectives, and of the connections between them. This cross-curricular program challenges students to work in groups, to present seminars, to create projects, and to publish essays. Students who sign up for AICE Global Perspectives must be self-motivated and have the ability to establish and meet deadlines. This course is recommended for juniors but is also available to seniors. The course culminates in an external assessment that provides the possibility of college credit.
Credits 1
Grades
11, 12
Course Designation
Cambridge,
Weighted (1.0W)
Schools
Brentsville District High School
Potomac High School
Prerequisites
None

AICE Psychology

This college-level course is designed to help students develop an appreciation of the various fields of psychology including: cognitive, social, physiological, and developmental psychology as well as the psychology of individual differences. The course also investigates the relationship of psychology to education, health, organizations, the environment and abnormality. This elective course of study prepares students for the Cambridge examination in Psychology and counts toward the Advanced International Certificate of Education (AICE) Diploma. The course culminates in an external assessment that provides the possibility of college credit.
Credits 1
Grades
12
Course Designation
Weighted (1.0W),
Cambridge
Schools
Brentsville District High School
Potomac High School
Prerequisites
None

African American History

The African American History course is designed to provide students with a broad overview of the African American experience and explore ancient Africa moving through modern times. The course, supported by a local division curriculum and five online modules, address the introduction of Africans to the Americas and the African American experience between 1619 and the present. In addition, the course will highlight the social, cultural and political contributions of African Americans to American society.
Credits 1
Grades
11, 12
Schools
Colgan High School
Forest Park High School
Gar-Field High School
Hylton High School
Potomac High School
Prerequisites
World History and Geography from 1500

Psychology 1

Psychology will introduce the students to the study of individual human behavior. Students explore subjects studied by behavioral scientists and apply psychological concepts to everyday human problems and life. Topics will include the scientific methods used in psychology, human growth and development, the study of personality, and mental health and behavioral disorders.
Credits 1
Grades
12
Schools
Battlefield High School
Forest Park High School
Hylton High School
Independence Nontraditional High School
Patriot High School
Potomac High School
Woodbridge High School
Prerequisites
None

History and Social Science - Standard

U.S. and Virginia Government

The American system of national, state, and local government, including the role of the United States in global affairs, is analyzed. Basic constitutional principles, rights and responsibilities of citizenship, political beliefs and ideologies, as well as free market economic principles, and the organization and operation of our political institutions are studied. Democratic beliefs and the importance of participation in the democratic process are emphasized.

Credits 1
Grades
12
Course Designation
Virtual Prince William (VPW)
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Independence Nontraditional High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
None

U.S. and Virginia History

The study of the nation's history provides the intellectual foundations for responsible citizenship. The origins of American ideals and institutions are examined. A study of major events, issues, and personalities of the past provides a perspective for understanding contemporary issues and problems. The role of Virginia in the development of the United States is included. Topics included for study: Exploration and Colonization, European Economic Influences and Slavery in the Americas, the American Revolution, the Constitution and Early National Period, Civil War and Reconstruction, the Progressive Era, U.S. as Emerging World Power, World War 2, the Cold War, Civil Rights Movement, and the Contemporary U.S. This course has an associated Standards of Learning (SOL) test. Students will participate in these tests only when they have not yet earned sufficient credit for graduation and/or satisfied federal testing requirements.

Credits 1
Grades
11
Course Designation
Virtual Prince William (VPW)
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Independence Nontraditional High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
None

World History and Geography from 1500

This is a survey of world history from 1500 to the present with a concentration on modern developments in western civilization. Course topics include: the Reformation, the Age of Discovery, Absolutism, the Scientific and Industrial Revolutions, the Enlightenment, the development of nation-states, nationalism, and the Age of Imperialism, 20th Century conflicts, independence movements, world religions, and the contemporary world. This course has an associated Standards of Learning (SOL) test. Students will participate in these tests only when they have not yet earned sufficient credit for graduation and/or satisfied federal testing requirements.

Credits 1
Grades
10
Course Designation
Virtual Prince William (VPW)
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
None

World History and Geography to 1500

This is a survey of world history to 1500 with a concentration on developing historical thinking skills and geographical analysis. Course topics include: early development of humankind from the Paleolithic Era to the agricultural revolution, ancient river valley civilizations, early civilizations in Persia, India, and China, influence of Greece and Rome in the development of Western civilization, the Byzantine Empire and Russia, early Islamic civilization, Western Europe in the Middle Ages, Empires of the Eastern Hemisphere, major civilizations of the Western Hemisphere (Mayan, Aztec, Incan), late medieval developments, and the Renaissance in Europe. This course has an associated Standards of Learning (SOL) test. Students will participate in these tests only when they have not yet earned sufficient credit for graduation and/or satisfied federal testing requirements.

Credits 1
Grades
9
Course Designation
Virtual Prince William (VPW)
Schools
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Independence Nontraditional High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
None

Science - Cambridge Programme

AICE Biology (A Level)

This course is a second year of the AICE Level Biology curriculum that incorporates lab experience as an integral component of its study. The curriculum involves a detailed examination of major biological themes, along with one of four optional units: mammalian physiology; microbiology and biotechnology; growth, development, and reproduction; and applications of genetics in a more comprehensive manner. Students will sit for external exams that contribute to the Advanced International Certificate of Education Diploma and present a possibility for students to receive college credit for an introductory biology course.
Credits 1
Grades
11, 12
Course Designation
Advanced Level (A),
Cambridge,
Weighted (1.0W)
Schools
Potomac High School
Prerequisites
AICE Biology (AS Level)
Notes
This course may utilize animal dissection techniques as an instructional strategy. Students who conscientiously object to these exercises will participate in division-approved activities that provide comparable learning experiences.

AICE Chemistry (AS Level)

AICE Chemistry is an accelerated and rigorous course that encompasses the AP Chemistry curriculum and enriched AICE topics. This course is lab-oriented, with a curriculum designed to give students a foundation in chemistry concepts as well as the opportunity to utilize principles of experimental design in laboratory inquiry and on a required independent student project. The expanded curriculum enables students to pursue Advanced studies of analytic separation techniques, biochemistry, and spectroscopy. Students will be prepared to sit for external examinations in theory and practical assessments leading to an Advanced International Certificate of Education Diploma and an AP qualification.
Credits 1
Grades
11, 12
Course Designation
Advanced Subsidiary Level (AS),
Cambridge,
Weighted (1.0W)
Schools
Brentsville District High School
Potomac High School
Prerequisites
Chemistry 1 **or** IGCSE Chemistry

Algebra 2 **or** IGCSE Advanced Algebra 2

AICE Environmental Management (AS Level)

This accelerated Cambridge course has a strong human dimension and is concerned with both local and global issues. The curriculum encompasses the four traditional subdivisions of the global environment, including the lithosphere, hydrosphere, biosphere, and atmosphere. The course develops in students a strong understanding of the Earth's natural systems and the effects of human activity on these systems. Students are challenged to think about important environmental issues and to look to themselves for possible solutions. An important component of the practical assessment is an Individual Research Report based on issues for the course of studies. Students will take the Earth Science 1 Standards of Learning assessment only if they have not yet earned credit for graduation. Students will be prepared to sit for an external examination leading to the AICE Diploma and an Advanced Placement qualification.

Credits 1
Grades
11, 12
Course Designation
Advanced Subsidiary Level (AS),
Cambridge,
Weighted (1.0W)
Schools
Brentsville District High School
Potomac High School
Prerequisites
Biology 1 **or** IGCSE Biology

Chemistry 1 **or** IGCSE Chemistry

 Algebra 2 **or** IGCSE Advanced Algebra 2

AICE Physics (AS Level)

AICE Physics is an accelerated and rigorous course that encompasses the AP Physics curriculum and enriched AICE program topics. This course focuses on the Advanced study of topics in general physics, Newtonian mechanics, matter, oscillations and waves, electricity and magnetism, and modern physics. The inquiry-based approach emphasizing principles of experimental design, scientific problem solving, and research skills requires students to use principles and concepts that are taught and to apply them in a logical, reasoned, and deductive manner to their work. Independent research is a required part of the program. Students will be prepared to sit for external examinations in theory and practical applications leading to an Advanced International Certificate of Education Diploma and an AP qualification.

Credits 1
Grades
11, 12
Course Designation
Advanced Subsidiary Level (AS),
Cambridge,
Weighted (1.0W)
Schools
Brentsville District High School
Potomac High School
Prerequisites
IGCSE Physics *or* Physics 1

IGCSE Chemistry *or* Chemistry 1

IGCSE Biology

This laboratory-based course includes a curriculum designed to give students a foundation in biological concepts as well as the opportunity to utilize principles of experimental design in laboratory inquiry and on a required independent student project. IGCSE Biology includes, but is not limited to, characteristics and classification of living organisms; organization and maintenance of organisms; reproduction, inheritance, and the continuity of life; and the relationships of organisms to one another and to their environment. This course has an associated Standards of Learning (SOL) test. Students will participate in this test to satisfy federal testing requirements.

Credits 1
Grades
9, 10
Course Designation
Cambridge,
Weighted (0.5W)
Schools
Brentsville District High School
Potomac High School
Prerequisites
None
Notes
This course may utilize animal dissection techniques as an instructional strategy. Students who conscientiously object to these exercises will participate in division-approved activities that provide comparable learning experiences.

IGCSE Physics

This course offers a combination of theoretical and practical studies such as mechanics that analyze motions and forces; study of energy with applications to work and power; thermodynamics; properties of waves (light and sound); electricity and magnetism; and atomic physics leading to an understanding of the basic principles of physics. Investigations will be student designed and tested emphasizing principles of experimental design, inquiry-based discovery, and scientific problem solving. Independent research is a required part of the program. IGCSE Algebra 2 must have been successfully completed or the student must take IGSCE Advanced Algebra 2 concurrently. Assessment measures will include external student examination and course evaluations by the teacher.

Credits 1
Grades
10, 11
Course Designation
Cambridge,
Weighted (0.5W)
Schools
Brentsville District High School
Potomac High School
Prerequisites
IGCSE Geometry **or** Geometry
Corequisites
Algebra 2 **or** IGSCE Advanced Algebra 2

Science - Electives

Advanced Chemistry 1

Advanced Chemistry 1 is designed to give students a foundation in chemical concepts as well as the opportunity to apply principles of experimental design in laboratory settings and on a required student project. Advanced Chemistry includes the same major areas of study as Chemistry 1, but with enrichment and extensions to each curriculum objective.

This course has an associated Standards of Learning (SOL) test. Students will participate in this test only if they have not yet earned a verified science credit for graduation.
Credits 1
Grades
10, 11, 12
Course Designation
Weighted (0.5W)
Schools
Battlefield High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Hylton High School
Osbourn Park High School
Patriot High School
Potomac High School
Woodbridge High School
Prerequisites
Algebra 1
or Advanced Algebra 1

One laboratory science

Advanced Earth Science 1

Advanced Earth Science 1 is a lab-based course designed to give students a foundation in earth science concepts and as well as the opportunity to apply principles of experimental design in laboratory settings and on a required student project. Advanced Earth Science includes the same major areas of study as Earth Science 1 but with enrichment and extensions to each curriculum objective. This course has an associated Standards of Learning (SOL) test. Students will participate in this test only when they have not yet earned a verified credit for graduation.
Credits 1
Grades
9, 10, 11, 12
Course Designation
Weighted (0.5W)
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Hylton High School
Patriot High School
Potomac High School
Woodbridge High School
Prerequisites
None

Biology 2: Ecology

Ecology is an academically rigorous, in-depth, second-year study of biological and ecological principles governing higher levels of organization (populations, communities, ecosystems). Concepts that will be covered include adaptation and natural selection; the physical environment and climate; population ecology, growth models, and life history patterns; communities, competition, parasitism, mutualism, and human interactions; ecosystem productivity, energy flow, nutrient cycling, and biogeochemical cycles; and biogeography, biodiversity, and global environmental change. The science of ecology is dedicated to an understanding of the relationships between organisms and their environment and is often at the center of public policy disputes related to the environment; therefore, students will learn how ecological research is becoming increasingly important and prominent throughout the world. Student participation in outdoor field activities is expected.

Credits 1

Grades

11, 12

Schools

Freedom High School

Gar-Field High School

Osbourn Park High School

Potomac High School

Unity Reed High School

Prerequisites

Biology 1 **or** Advanced Biology 1

Earth Science 1 *or* Chemistry 1

Earth Science 2: Astronomy

Astronomy is a second level Earth Science course designed to be a more in-depth, mathematical treatment of the astronomical concepts presented in the introductory Earth Science 1 course. Topics such as the universe, universal laws, galaxies, stellar evolution, the solar system and its motion, and the exploration of space will be discussed.

Credits 1

Grades

11, 12

Course Designation

Virtual Prince William (VPW)

Schools

Battlefield High School

Brentsville District High School

Colgan High School

Forest Park High School

Freedom High School

Gainesville High School

Gar-Field High School

Hylton High School

Osbourn Park High School

Patriot High School

Potomac High School

Unity Reed High School

Woodbridge High School

Prerequisites

Environmental Science *or* Earth Science 1

Notes

Course work in Chemistry 1 or Advanced Chemistry 1 is recommended.

Earth Science 2: Oceanography

Oceanography is a second level Earth Science course designed to be a more in-depth treatment of the oceanography concepts presented in the introductory Earth Science 1 course. It is a broad survey course dealing mainly with physical oceanography and covering such topics as the geology and geography of ocean basins; physical properties of sea water; marine chemistry; salinity and density; circulation of the oceans, waves and tides; and oceanographic instruments, tools, and methods. Emphasis is also placed on ocean policy and ocean ecology.

Credits 1
Grades
11, 12
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
Environmental Science *or* Earth Science 1 or Advanced Earth Science 1

Biology 1 **or** Advanced Biology 1
Notes
Course work in Chemistry 1 or Advanced Chemistry 1 is recommended.

Science - Standard

Biology 1

Biology 1 is a laboratory-based course that includes the study of ecology, taxonomy, cellular chemistry, genetics, microbiology, and physiology. These areas are developed within a framework of principal biological theories with an emphasis on critical thinking. This course has an associated Standards of Learning test. Students will participate in this test to satisfy federal testing requirements.

Credits 1
Grades
9, 10, 11, 12
Course Designation
Virtual Prince William (VPW)
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Independence Nontraditional High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
None
Notes
The Virginia Standards of Learning (SOL) for Biology 1 do not require animal dissections. If a teacher uses this technique as an instructional strategy, students who object to these exercises will be provided with comparable alternative learning experiences.

Chemistry 1

Chemistry 1 emphasizes the qualitative and quantitative study of substances and the changes that occur in them. Students will investigate using various lab techniques and develop mathematical and problem-solving skills. A survey of concepts includes atomic structure, chemical bonding, formulas and equations, stoichiometry and other nomenclature based on molar relationships, phases of matter and the kinetic molecular theory, and the acid-base theory through Science and Engineering Practices (SEP). This course is intended for college preparatory and general education purposes. This course has an associated Standards of Learning (SOL) test. Students will participate in this test only if they have not yet earned a verified science credit for graduation.

Credits 1

Grades

10, 11, 12

Course Designation

Virtual Prince William (VPW)

Schools

Battlefield High School

Brentsville District High School

Colgan High School

Forest Park High School

Freedom High School

Gainesville High School

Gar-Field High School

Hylton High School

Independence Nontraditional High School

Osbourn Park High School

Patriot High School

Potomac High School

Unity Reed High School

Woodbridge High School

Prerequisites

Algebra 1

or Advanced Algebra 1

One year of laboratory science

Earth Science 1

Earth Science 1 is a laboratory-based course that provides students with an opportunity to explore the various physical phenomena that affect the earth. This course helps students become more aware of their surroundings through the study of astronomy, meteorology, oceanography, physical geology, and environmental resources. This course has an associated Standards of Learning (SOL) test. Students will participate in this test only if they have not yet earned a verified science credit for graduation.

Credits 1

Grades

9, 10, 11, 12

Course Designation

Virtual Prince William (VPW)

Schools

Battlefield High School

Brentsville District High School

Forest Park High School

Freedom High School

Gainesville High School

Gar-Field High School

Hylton High School

Independence Nontraditional High School

Osbourn Park High School

Patriot High School

Potomac High School

Unity Reed High School

Woodbridge High School

Prerequisites

None

Environmental Science

This course is a laboratory-based course that provides students with an opportunity to build knowledge in Earth Science and Biology through the lens of environmental literacy and citizenship. This course develops skills through Scientific and Engineering Practices while addressing socio-scientific issues related to humans' impact on the environment, resource conservation, and legal and civic responsibility. This course may be counted toward high school graduation as either an Earth Science 1, Biology 1, or an elective science discipline credit. The Environmental Science course does not have an associated Standards of Learning (SOL) test.

Credits 1
Grades
9, 10, 11, 12
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Independence Nontraditional High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
None

Physics 1

Physics 1 is a standard first-year course that covers all topics required by the Virginia Standards of Learning (SOL) for physics. This course is lab-based. Students will engage with Scientific and Engineering Practices (SEP) to investigate Newtonian mechanics; wave phenomena; electricity and magnetism; thermodynamics; optical systems; and selected topics in modern physics. Students who desire to continue their study of physics upon completion of this course could enroll in AP Physics 1, AP Physics 2, or AP Physics C: Mechanics.

Credits 1
Grades
10, 11, 12
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
Geometry
or Advanced Geometry
Corequisites
Algebra 2 or higher

Band

Accelerated Band

The high school band program offers various courses to develop the student's musical skills. Students learn technical and ensemble skills through the study of related literature. Some after-school rehearsals and performances are required of all students as an integral part of these courses. This course may be taken more than once for credit.
Credits 1
Grades
9, 10, 11, 12
Schools
Forest Park High School
Gainesville High School
Potomac High School
Unity Reed High School
Woodbridge High School
Requirements
Audition *or* permission of the instructor
Prerequisites
None

Beginning Percussion

The high school band program offers various courses to develop the student's musical skills. Students learn technical and ensemble skills through the study of related literature. Some after-school rehearsals and performances are required of all students as an integral part of these courses. This course may be taken more than once for credit.
Credits 1
Grades
9, 10, 11, 12
Schools
Battlefield High School
Brentsville District High School
Patriot High School
Potomac High School
Prerequisites
None

Concert Band

The high school band program offers various courses to develop the student's musical skills. Students learn technical and ensemble skills through the study of related literature. Some after-school rehearsals and performances are required of all students as an integral part of these courses. This course may be taken more than once for credit.
Credits 1
Grades
9, 10, 11, 12
Schools
Battlefield High School
Gar-Field High School
Osbourn Park High School
Potomac High School
Unity Reed High School
Requirements
Audition *or* permission of the instructor
Prerequisites
None

Intermediate Band

The high school band program offers various courses to develop the student's musical skills. Students learn technical and ensemble skills through the study of related literature. Some after-school rehearsals and performances are required of all students as an integral part of these courses. This course may be taken more than once for credit.
Credits 1
Grades
9, 10, 11, 12
Schools
Battlefield High School
Forest Park High School
Freedom High School
Gar-Field High School
Hylton High School
Patriot High School
Potomac High School
Woodbridge High School
Requirements
Audition *or* permission of the instructor
Prerequisites
None

Intermediate Brass

The high school band program offers various courses to develop the student's musical skills. Students learn technical and ensemble skills through the study of related literature. Some after-school rehearsals and performances are required of all students as an integral part of these courses. This course may be taken more than once for credit.

Credits 1
Grades
9, 10, 11, 12
Schools
Gainesville High School
Potomac High School
Unity Reed High School
Requirements
Audition *or* permission of the instructor
Prerequisites
None

Intermediate Percussion

The high school band program offers various courses to develop the student's musical skills. Students learn technical and ensemble skills through the study of related literature. Some after-school rehearsals and performances are required of all students as an integral part of these courses. This course may be taken more than once for credit.

Credits 1
Grades
9, 10, 11, 12
Schools
Battlefield High School
Brentsville District High School
Forest Park High School
Gainesville High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Requirements
Audition *or* permission of the instructor
Prerequisites
None

Intermediate Woodwind

The high school band program offers various courses to develop the student's musical skills. Students learn technical and ensemble skills through the study of related literature. Some after-school rehearsals and performances are required of all students as an integral part of these courses. This course may be taken more than once for credit.

Credits 1
Grades
9, 10, 11, 12
Schools
Gainesville High School
Potomac High School
Unity Reed High School
Requirements
Audition *or* permission of the instructor
Prerequisites
None

Marching Band

Marching band is offered at all schools as part of the high school band program and is an offering for students who are also enrolled in another band class offering. After-school rehearsals and performances are required of all students as an integral part of this course. Marching Band will require extensive practice, rehearsal, and performance outside of school. This course may be taken more than once for credit.

Credits 0.5
Grades
9, 10, 11, 12
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School

Choir

Accelerated Choir

The high school choral program offers various courses to develop a student's musical skills based on their level of ability. Students learn a variety of vocal skills through the study of related choral literature. Students in this class develop technical facility and proficient musicianship through a variety of performance experiences. Through group performances, solos, and ensembles, the student is exposed to standard choral repertoire encompassing various styles and periods of music. Some after-school rehearsals and performances are required of all students as a part of this course. This course may be taken more than once for credit.

Credits 1

Grades
9, 10, 11, 12

Schools
Brentsville District High School
Gainesville High School
Hylton High School
Potomac High School
Woodbridge High School

Requirements
Audition *or* permission of the instructor

Prerequisites
None

Advanced Choir

The high school choral program offers various courses to develop a student's musical skills based on their level of ability. Students learn a variety of vocal skills through the study of related choral literature. Students in this class develop technical facility and proficient musicianship through a variety of performance experiences. Through group performances, solos, and ensembles, the student is exposed to standard choral repertoire encompassing various styles and periods of music. Some after-school rehearsals and performances are required of all students as a part of this course. Advanced Choir will require extensive practice, rehearsal, and performance outside of school. This course may be taken more than once for credit.

Credits 1

Grades
9, 10, 11, 12

Course Designation
Weighted (0.5W)

Schools
Battlefield High School
Brentsville District High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School

Requirements
Audition *or* permission of the instructor

Prerequisites
None

Beginning Bass Choir

The high school choral program offers various courses to develop a student's musical skills based on their level of ability. Students learn a variety of vocal skills through the study of related choral literature. Students in this class develop technical facility and proficient musicianship through a variety of performance experiences. Through group performances, solos, and ensembles, the student is exposed to standard choral repertoire encompassing various styles and periods of music. Some after-school rehearsals and performances are required of all students as a part of this course. This course may be taken more than once for credit.
Credits 1
Grades
9, 10, 11, 12
Schools
Osbourn Park High School
Patriot High School
Potomac High School
Requirements
Audition *or* permission of the instructor
Prerequisites
None

Beginning Choir

The high school choral program offers various courses to develop a student's musical skills based on their level of ability. Students learn a variety of vocal skills through the study of related choral literature. Students in this class develop technical facility and proficient musicianship through a variety of performance experiences. Through group performances, solos, and ensembles, the student is exposed to standard choral repertoire encompassing various styles and periods of music. Some after-school rehearsals and performances are required of all students as a part of this course. This course may be taken more than once for credit.
Credits 1
Grades
9, 10, 11, 12
Schools
Battlefield High School
Freedom High School
Potomac High School
Woodbridge High School
Prerequisites
None

Concert Choir

The high school choral program offers various courses to develop a student's musical skills based on their level of ability. Students learn a variety of vocal skills through the study of related choral literature. Students in this class develop technical facility and proficient musicianship through a variety of performance experiences. Through group performances, solos, and ensembles, the student is exposed to standard choral repertoire encompassing various styles and periods of music. Some after-school rehearsals and performances are required of all students as a part of this course. This course may be taken more than once for credit.
Credits 1
Grades
9, 10, 11, 12
Schools
Forest Park High School
Gar-Field High School
Hylton High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Requirements
Audition *or* permission of the instructor
Prerequisites
None

Intermediate Choir

The high school choral program offers various courses to develop a student's musical skills based on their level of ability. Students learn a variety of vocal skills through the study of related choral literature. Students in this class develop technical facility and proficient musicianship through a variety of performance experiences. Through group performances, solos, and ensembles, the student is exposed to standard choral repertoire encompassing various styles and periods of music. Some after-school rehearsals and performances are required of all students as a part of this course. This course may be taken more than once for credit.
Credits 1
Grades
9, 10, 11, 12
Schools
Freedom High School
Hylton High School
Potomac High School
Woodbridge High School
Requirements
Audition *or* permission of the instructor
Prerequisites
None

Intermediate Treble Choir

The high school choral program offers various courses to develop a student's musical skills based on their level of ability. Students learn a variety of vocal skills through the study of related choral literature. Students in this class develop technical facility and proficient musicianship through a variety of performance experiences. Through group performances, solos, and ensembles, the student is exposed to standard choral repertoire encompassing various styles and periods of music. Some after-school rehearsals and performances are required of all students as a part of this course. This course may be taken more than once for credit.

Credits 1
Grades
9, 10, 11, 12
Schools
Battlefield High School
Brentsville District High School
Gainesville High School
Potomac High School
Unity Reed High School
Woodbridge High School
Requirements
Audition *or* permission of the instructor
Prerequisites
None

High School Music

Guitar 1

Students will be taught the necessary music fundamentals required to successfully play these instruments. Music technique and application including, scales, music literacy, dynamics, rhythmic skills and improvisation will be emphasized. All students will learn the beginning level technical and ensemble skills necessary for performance. Students enrolling in the guitar class will be required to furnish their own textbook and acoustic (non-electric) guitar. Some limited performance opportunities may be provided in these classes. This course may be taken more than once for credit.

Credits 1
Grades
9, 10, 11, 12
Schools
Freedom High School
Gar-Field High School
Osbourn Park High School
Potomac High School
Woodbridge High School
Prerequisites
None

Guitar 2

Students will be taught the necessary music fundamentals required to successfully play these instruments. Music technique and application including, scales, music literacy, dynamics, rhythmic skills and improvisation will be emphasized. All students will learn the beginning level technical and ensemble skills necessary for performance. Students enrolling in the guitar class will be required to furnish their own textbook and acoustic (non-electric) guitar. Some limited performance opportunities may be provided in these classes. This course may be taken more than once for credit.

Credits 1
Grades
9, 10, 11, 12
Schools
Freedom High School
Osbourn Park High School
Potomac High School
Woodbridge High School
Prerequisites
Guitar 1
or permission of the instructor.

Music - Cambridge Programme

IGCSE Music Studies

IGCSE Music Studies will provide students with a basis for an informed appreciation of music and a foundation for further study at an Advanced level. Students will develop a perceptive, critical response to the main historical periods and styles of Western music. Students will also recognize and understand the music from a variety of non-Western traditions, thus forming an appreciation of similarities and differences among cultures. Students will acquire basic musical skills, knowledge, and understanding of world music through listening, performing, and composing activities. Successful completion of the end of course exam will result in an IGCSE or an International Certificate in Education (ICE) certificate.
Credits 1
Grades
10, 11, 12
Course Designation
Cambridge,
Weighted (0.5W)
Schools
Potomac High School
Prerequisites
One year of music studies at the high school level, advanced music ensemble *or* private instruction

Orchestra

Accelerated Orchestra

Students who enroll in the high school orchestra develop technical and ensemble skills through the study of orchestral literature. Students receive fundamental training in the proper playing of an orchestral instrument, and perform and study literature commensurate with their level of ability. Members of this class form the representative string performing group for the school. Some after-school rehearsals and performances are required of all students as a part of these courses. This course may be taken more than once for credit.
Credits 1
Grades
9, 10, 11, 12
Schools
Battlefield High School
Gainesville High School
Hylton High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Requirements
Audition *or* permission of the instructor
Prerequisites
None

Advanced Orchestra

Students who enroll in the high school orchestra develop technical and ensemble skills through the study of orchestral literature. Students receive fundamental training in the proper playing of an orchestral instrument, and perform and study literature commensurate with their level of ability. Members of this class form the representative string performing group for the school. Some after-school rehearsals and performances are required of all students as a part of these courses. Advanced Orchestra will require extensive practice, rehearsal, and performance outside of school. This course may be taken more than once for credit.
Credits 1
Grades
9, 10, 11, 12
Course Designation
Weighted (0.5W)
Schools
Battlefield High School
Brentsville District High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Requirements
Audition *or* permission of the instructor
Prerequisites
None

Beginning Orchestra

Students who enroll in the high school orchestra develop technical and ensemble skills through the study of orchestral literature. Students receive fundamental training in the proper playing of an orchestral instrument, and perform and study literature commensurate with their level of ability. Members of this class form the representative string performing group for the school. Some after-school rehearsals and performances are required of all students as a part of these courses. This course may be taken more than once for credit.
Credits 1
Grades
9, 10, 11, 12
Schools
Battlefield High School
Freedom High School
Gar-Field High School
Hylton High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
None

Concert Orchestra

Students who enroll in the high school orchestra develop technical and ensemble skills through the study of orchestral literature. Students receive fundamental training in the proper playing of an orchestral instrument, and perform and study literature commensurate with their level of ability. Members of this class form the representative string performing group for the school. Some after-school rehearsals and performances are required of all students as a part of these courses. This course may be taken more than once for credit.
Credits 1
Grades
9, 10, 11, 12
Schools
Battlefield High School
Forest Park High School
Gainesville High School
Hylton High School
Osbourn Park High School
Potomac High School
Unity Reed High School
Woodbridge High School
Requirements
Audition *or* permission of the instructor
Prerequisites
None

Intermediate Orchestra

Students who enroll in the high school orchestra develop technical and ensemble skills through the study of orchestral literature. Students receive fundamental training in the proper playing of an orchestral instrument, and perform and study literature commensurate with their level of ability. Members of this class form the representative string performing group for the school. Some after-school rehearsals and performances are required of all students as a part of these courses. This course may be taken more than once for credit.

Credits 1
Grades
9, 10, 11, 12
Schools
Battlefield High School
Brentsville District High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Requirements
Audition *or* permission of the instructor
Prerequisites
None

High School Theatre Arts

Film Studies

This yearlong course seeks to encourage an enjoyment and deeper understanding of different types of film (narrative cinema, documentary, and abstract film) through a critical understanding of how films work artistically, technically, and socially. Through film theory and film production, students will apply a range of critical approaches as well as receiving instruction in video and film production.

Credits 1
Grades
9, 10, 11, 12
Schools
Colgan High School
Forest Park High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
None

Theatre Arts 1: Introduction to Theatre

In this course, students survey the theatre arts. They will have opportunities to experience and appreciate dramatic literature and to participate in the creative processes of performance and production with emphasis in skill development and theatrical opportunities. Students will be encouraged to determine and investigate personal areas of interest in theatre arts.

Credits 1
Grades
9, 10, 11, 12
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Gainesville High School
Gar-Field High School
Hylton High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
None

Theatre Arts 2: An Exploration of Performance in Theatre

Students have Advanced opportunities for reinforcement, refinement and expansion of the acting skills learned in Theatre 1: Introduction to Theatre
Credits 1
Grades
10, 11, 12
Schools
Battlefield High School
Brentsville District High School
Forest Park High School
Gainesville High School
Gar-Field High School
Hylton High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
Theatre Arts 1: Introduction to Theatre

Theatre Arts 3: Dramatic Literature and Theatrical Design

Students extensively examine dramatic literature, stage and scene design, costume design, theatre history, and performance.
Credits 1
Grades
11, 12
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Gainesville High School
Gar-Field High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
Theatre Arts 2: An Exploration of Performance in Theatre

Theatre Arts 4: Advanced Theatre

Students refine the concepts learned and skills acquired in Theatre 3 and apply them to writing, performing, and directing while showcasing their collaborative and analytical skills.
Credits 1
Grades
12
Course Designation
Weighted (0.5W)
Schools
Battlefield High School
Brentsville District High School
Gainesville High School
Osbourn Park High School
Patriot High School
Potomac High School
Woodbridge High School
Prerequisites
Theatre Arts 3: Dramatic Literature and Theatrical Design

Visual Arts - Advanced Placement

AP Studio Art 3D Design

The Advanced Placement studio courses are intended for highly motivated students committed to serious study in art. To enroll, students must have completed Studio Art 1 and 2. The Studio Art 3D Design course addresses a broad range of sculptural media, skills, and techniques and is comprised of two sections: Sustained Investigation (15 digital images) and Selected Works (Images of 5 works, 2 views each, for a total of 10 images). The digital images are submitted for AP Examination review and the student may qualify for advanced standing in college and/or college credit.
Credits 1
Grades
10, 11, 12
Course Designation
Advanced Placement (AP),
Weighted (1.0W)
Schools
Colgan High School
Gainesville High School
Hylton High School
Osbourn Park High School
Potomac High School
Prerequisites
Studio Art 2
Notes
Recommend completion of Portfolio Prep prior to AP Art

AP Studio Art Drawing

The Advanced Placement studio courses are intended for the highly motivated students committed to serious study in art. To enroll, students must have completed Art 1 and 2. The Studio Art Drawing Portfolio addresses a broad range of drawing media, skills, and techniques and is comprised of two sections: Sustained Investigation (15 digital images) and Selected Works (5 digital images of 5 original artworks). The digital images are submitted for AP Examination review and the student may qualify for advanced standing in college and/or college credit.

Credits 1
Grades
10, 11, 12
Course Designation
Advanced Placement (AP),
Weighted (1.0W)
Schools
Battlefield High School
Colgan High School
Forest Park High School
Gainesville High School
Hylton High School
Osbourn Park High School
Potomac High School
Woodbridge High School
Prerequisites
Studio Art 2
Notes
Recommend completion of Portfolio Prep prior to AP Art

Visual Arts - Cambridge Programme

IGCSE Art and Design

IGCSE Art and Design stimulates and develops a student's observational skills, imagination, conceptual thinking, and analytical ability. It increases the student's awareness of artistic contributions of a variety of cultures and their understanding of the role of visual arts in history. The course enriches the student's own appreciation of the many visual forms of personal expression and encourages their efforts to visually represent the world that they observe. Course content includes drawing, painting, graphics, photography, textiles, and 3D studies. Successful completion of the end of course exam will result in an IGCSE or an ICE certificate.

Credits 1
Grades
10, 11, 12
Course Designation
Cambridge,
Weighted (0.5W)
Schools
Brentsville District High School
Potomac High School
Prerequisites
Studio Art 1

Visual Arts - Electives

3D Sculpture 1

3D Sculpture 1 is a hands-on course that allows students to develop technique and knowledge of three-dimensional processes along with creative problem-solving skills. Through the study of the elements of art and principles of design, students will learn to use and arrange three-dimensional media in an expressive way. Students will explore the history of sculpture from representational to non-objective styles.
Credits 1
Grades
9, 10, 11, 12
Schools
Battlefield High School
Gainesville High School
Hylton High School
Osbourn Park High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
None

Art Portfolio Preparation

The Art Portfolio Preparation studio is intended for students committed to serious study in visual art. The studio component focuses on the student's individual artistic talents. The portfolio, compiled by the student, will demonstrate a variety of experiences in formal, technical, and expressive means. This course is highly recommended for juniors considering AP Studio Art their senior year.
Credits 1
Grades
10, 11, 12
Schools
Battlefield High School
Colgan High School
Forest Park High School
Gainesville High School
Gar-Field High School
Hylton High School
Osbourn Park High School
Patriot High School
Potomac High School
Woodbridge High School
Prerequisites
Studio Art 2

Digital Art 1

This course places emphasis on the production of artistic digital imagery, rather than commercial/web graphics. Students will use photographic software to examine and alter images for computer graphic and fine art applications. The study of aesthetics and the history of art will be included in the course. Students will use a variety of media within this course such as natural art media, scanned images and digital photography. Students will be required to produce digital portfolios.
Credits 1
Grades
10, 11, 12
Schools
Brentsville District High School
Freedom High School
Gainesville High School
Gar-Field High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
Studio Art 1

Photography 1

Student must provide a 35mm SLR film camera (for schools with darkrooms) or a digital camera. A fee may be charged for consumable materials needed to complement the provided materials.

The course is an introduction to photography as an art medium. Light, design, lens, camera, film, and darkroom techniques are explored. The history of photography and related career opportunities provide a broad overview of the continually growing technical and artistic field of photography. Student self-expression as a means of creative communication is emphasized throughout the course. A student portfolio is maintained for assessment and exhibition.
Credits 1
Grades
10, 11, 12
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
Studio Art 1

Photography 2

Student must provide a 35mm SLR film camera (for schools with darkrooms) or a digital camera. A fee may be charged for consumable materials needed to complement the provided materials.

Students will expand on their photography skills through the use of 35mm cameras. Emphasis will be placed on the study of personal expression and development of creativity. Advanced camera skills and darkroom techniques will be studied through a variety of assignments. The history of photography will be offered through the study of major photographers, photographic imagery, the use of photography for artistic communication, and the major themes used by photographers. Ethical issues concerning photographic imagery will be explored. Students will produce a portfolio containing both 35mm and digital photographs reflecting a series of works organized around a compelling visual concept or concentration.
Credits 1
Grades
11, 12
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
Photography 1

Studio Art 1

First-year art students are enrolled in this introductory course. Studio Art 1 includes both 2D and 3D art production as well as visual literacy experiences. The course content focuses on the elements of art and an introduction to the principles of design. Students will use creative processes to communicate ideas and personal life experiences.
Credits 1
Grades
9, 10
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
None
Notes
IB is at Gar-Field High School and Unity Reed High School.

Studio Art 2

Students will focus on the principles of design with reinforcement of the elements of art. In this course, students examine the importance of process, content, concepts, and skills involved in the development of original works of art and design. Students will demonstrate proficiency and craftsmanship in a variety of media.
Credits 1
Grades
10, 11, 12
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
Studio Art 1
 or 3D Sculpture 1

Studio Art 3

Studio Art 3 emphasizes critical thinking skills that enable students to organize, investigate, and analyze visual arts content and concepts. Students increasingly focus on historical and cultural studies, critical evaluation, and creative problem solving through art production. Students will provide evidence of original ideas while demonstrating accomplished skill and technique with a variety of traditional and contemporary tools and media.
Credits 1
Grades
11, 12
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Osbourn Park High School
Potomac High School
Woodbridge High School
Prerequisites
Studio Art 2

Studio Art 4

Students will investigate, interpret, and analyze artworks while reflecting on their success and growth as an artist. Students will demonstrate advanced skills and techniques in art making. Students will also demonstrate mastery through a culminating portfolio that exhibits personal direction, quality, concentration, breadth of experience, and technical skills.
Credits 1
Grades
12
Schools
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Osbourn Park High School
Potomac High School
Woodbridge High School
Prerequisites
Studio Art 3

Studio Art 5

Students will focus on art production reinforcing the learning of the elements of art and the principles of design. Students will continue to maintain and expand on the development of a process art portfolio that demonstrates independent research and mastery of skills and art processes. Students will refine their artistic vision and demonstrate innovative skills and craftsmanship with both two and three-dimensional media. These courses are sequentially designed to extend and further develop personal expressive abilities. Artistic expression is explored through discipline-based art education (art production, art history, art aesthetics, and art criticism).
Credits 1
Grades
10, 11, 12
Schools
Battlefield High School
Colgan High School
Freedom High School
Gainesville High School
Osbourn Park High School
Potomac High School
Woodbridge High School
Prerequisites
Studio Art 4
Notes
Recommended that Art 5 be taken concurrently with AP Studio Art

English Language Development and EL Support

Algebra Readiness

This course is designed for English Learners at English proficiency level 1 and 2 who require support with the development of content and academic language in mathematics. The WIDA ELD Standard for the language of mathematics supports the VA Standards of Learning for mathematics. Students will focus on number, number sense, computation, estimation, patterns, functions, and algebraic concepts. Students enrolled in this course must be concurrently enrolled in Algebra 1. An elective credit is earned for successful completion. The course may not be taken more than one time during high school.
Credits 1
Grades
9
Schools
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Potomac High School
Unity Reed High School
Prerequisites
None

English Language Development for English 9

This course is designed for English Learners (ELs) at English Language Proficiency (ELP) levels 1–4 and aligns with the WIDA English Language Development Standards and Virginia Standards of Learning. The curriculum accelerates English language development by strengthening both expressive (writing, speaking, representing) and interpretive (listening, reading, viewing) communication skills. Students will engage in performance-based tasks, explore diverse literary genres, and analyze multimedia texts to build the language needed for academic success and social interaction. Instruction emphasizes meaningful use of language to understand and convey ideas, concepts, and information across content areas.

Enrollment in this course requires concurrent enrollment in English 9. Successful completion earns one world language elective credit. This course may not be repeated for credit.
Credits 1
Grades
9, 10
Schools
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Prerequisites
None

English Language Development for English 10

This course is designed for English Learners (ELs) at English Language Proficiency (ELP) levels 1–4 and aligns with the WIDA English Language Development Standards and Virginia Standards of Learning. The curriculum accelerates English language development by strengthening both expressive (writing, speaking, representing) and interpretive (listening, reading, viewing) communication skills. Students will engage in performance-based tasks, explore diverse literary genres, and analyze multimedia texts to build the language needed for academic success and social interaction. Instruction emphasizes meaningful use of language to understand and convey ideas, concepts, and information across content areas.

Enrollment in this course requires concurrent enrollment in English 10. Successful completion earns one world language elective credit. This course may not be repeated for credit.
Credits 1
Grades
9, 10, 11
Schools
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gar-Field High School
Hylton High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Prerequisites
None

English Language Development for English 11

This course is designed for English Learners (ELs) at English Language Proficiency (ELP) levels 1–4 and aligns with the WIDA English Language Development Standards and Virginia Standards of Learning. The curriculum accelerates English language development by strengthening both expressive (writing, speaking, representing) and interpretive (listening, reading, viewing) communication skills. Students will engage in performance-based tasks, explore diverse literary genres, and analyze multimedia texts to build the language needed for academic success and social interaction. Instruction emphasizes meaningful use of language to understand and convey ideas, concepts, and information across content areas.

Enrollment in this course requires concurrent enrollment in English 11. Successful completion earns one world language elective credit. This course may not be repeated for credit.
Credits 1
Grades
10, 11, 12
Schools
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gar-Field High School
Hylton High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Requirements
Concurrent enrollment in English 11
Prerequisites
None

English Language Development for English 12

This course is designed for English Learners (ELs) at English Language Proficiency (ELP) levels 1–4 and aligns with the WIDA English Language Development Standards and Virginia Standards of Learning. The curriculum accelerates English language development by strengthening both expressive (writing, speaking, representing) and interpretive (listening, reading, viewing) communication skills. Students will engage in performance-based tasks, explore diverse literary genres, and analyze multimedia texts to build the language needed for academic success and social interaction. Instruction emphasizes meaningful use of language to understand and convey ideas, concepts, and information across content areas.

Enrollment in this course requires concurrent enrollment in English 12. Successful completion earns one world language elective credit. This course may not be repeated for credit
Credits 1
Grades
12
Schools
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gar-Field High School
Hylton High School
Patriot High School
Potomac High School
Unity Reed High School
Prerequisites
None

Survey of World History

This course is designed for English Learners at English language proficiency level 1 and 2 who require support with the development of content and academic literacy in world history. The WIDA ELD Standard for the language of social studies supports the VA Standards of Learning for history and social sciences. Students read authentic non-fiction texts and share understandings both orally and in written form. Students enrolled in this course must be concurrently enrolled in World History and Geography to 1500. An elective credit is earned for successful completion. This course may not be taken more than one time during high school.

Credits 1
Grades
9
Schools
Brentsville District High School
Forest Park High School
Potomac High School
Prerequisites
None

World Languages - Cambridge Programme

AICE French 4 (AS Level), AICE Spanish 4 (AS Level)

The objectives of this course are based on an accelerated, international curriculum. Students will communicate confidently and clearly in the target language and will be able to exchange views and opinions during sustained conversations. Also, they will demonstrate a capacity to draw on the target language source material to produce a piece of composition in the target language presenting ideas in a coherent sequence. Through external examinations in speaking, listening, reading and writing students can qualify for an Advanced International Certificate of Education Diploma (AICE) and Advanced Placement credit in Language.

Credits 1
Grades
11
Course Designation
Advanced Subsidiary Level (AS),
Cambridge,
Weighted (1.0W)
Schools
Brentsville District High School
Potomac High School
Prerequisites
IGCSE French 3 for AICE French 4 (AS); IGCSE Spanish 3 for AICE Spanish 3 (AS)

AICE French 5 Literature (A Level), AICE Spanish 5 Literature (A Level)

The objectives of this course are based on an accelerated, international curriculum. The A-Level course builds on the language skills gained at IGCSE or AS Level, and is the ideal foundation for the university-level study or to improve career prospects. Students will learn how to use the language in a variety of situations. They will be expected to handle texts and other source materials, extracting information to respond to specific tasks. Through their studies, students can expect to achieve greater fluency, accuracy, and confidence in the target language. Through external examinations in speaking, reading, essay writing, and direct writing using the target language texts, students can earn an A-level credit towards the Advanced International Certificate of Education (AICE) Diploma and Advanced Placement credit.

Credits 1
Grades
12
Course Designation
Advanced Level (A),
Cambridge,
Weighted (1.0W)
Schools
Brentsville District High School
Potomac High School
Prerequisites
AICE French 4 (AS Level), AICE Spanish 4 (AS Level)

IGCSE French 3

Students continue to develop proficiency in listening, speaking, reading, and writing with increased emphasis on consistent and sustained language using more complex grammatical structures. Reading skills continue development using more challenging authentic materials. Students increase awareness and appreciation of the culture and civilization of the countries where each language is spoken. Assessment of the four skills will include an external student examination and course work evaluations by the instructor.

Credits 1
Grades
10, 11, 12
Course Designation
Cambridge,
Weighted (0.5W)
Schools
Brentsville District High School
Potomac High School
Prerequisites
French 2 *or* equivalency test

IGCSE Spanish 3

Students continue to develop proficiency in listening, speaking, reading, and writing with increased emphasis on consistent and sustained language using more complex grammatical structures. Reading skills continue development using more challenging authentic materials. Students increase awareness and appreciation of the culture and civilization of the countries where each language is spoken. Assessment of the four skills will include an external student examination and course work evaluations by the instructor.

Credits 1
Grades
10, 11, 12
Course Designation
Cambridge,
Weighted (0.5W)
Schools
Brentsville District High School
Potomac High School
Prerequisites
Spanish 2 *or* equivalency test

World Languages - Modern: Non-Roman Alphabet

Arabic 1

Arabic 1 students will examine the Arabic alphabet, the essential elements of pronunciation and the basic structure of the written form of standard modern Arabic. Students will use the language authentically, communicating in real life situations from the beginning of the course. All basic skills of the language are learned: speaking, listening, reading, and writing. Emphasis is on communication for interpersonal situations. Culture is an integral strand and goal of the entire course.

Credits 1
Grades
9, 10, 11, 12
Schools
Hylton High School
Patriot High School
Potomac High School
Prerequisites
None

Arabic 2

Arabic 2 students will continue to study the essential elements of the basic structure of the written form of standard modern Arabic. Students will continue the use of language authentically, communicating in real life situations from the beginning of the course. All fundamental skills of the language are learned: speaking, listening, reading, and writing. Emphasis is on communication for interpersonal situations in more complex situations and in various modes. Culture is an integral strand and goal of the entire course.

Credits 1
Grades
9, 10, 11, 12
Schools
Hylton High School
Potomac High School
Prerequisites
Arabic 1 *or* teacher recommendation based on existing language proficiency

Arabic 3

Arabic 3 focuses on strengthening the basic language skills of reading, writing, listening, and speaking, all in cultural context. It reinforces grammar and vocabulary in an intermediate language level through constant review and expands to challenge students as their skills develop.

Credits 1
Grades
9, 10, 11, 12
Schools
Hylton High School
Potomac High School
Prerequisites
Arabic 2 *or* teacher recommendation based on existing language proficiency

World Languages - Modern: Roman Alphabet

French 1

Students use the language authentically, communicating in real-life situations from the beginning of the course. They learn the sound system and basic grammar and vocabulary, primarily through use of the language in meaningful contexts. All basic skills of the language are learned: understanding, speaking, reading, and writing. Emphasis is on communication in interpersonal situations. Culture is an integral part of the course.
Credits 1
Grades
9, 10, 11, 12
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
None

French 2

Students continue to learn the language through its use in realistic contexts with more complex grammatical structures. Additional listening, speaking, writing, and reading skills are acquired through practice with authentic materials and in real-life situations. The study of customs and culture is an integral part of the course.
Credits 1
Grades
9, 10, 11, 12
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Osbourn Park High School
Patriot High School
Potomac High School
Woodbridge High School
Prerequisites
French 1

or teacher recommendation based on existing language proficiency.

French 3

The emphasis for study continues all four skills of communication: listening, speaking, reading, and writing. Students continue to work toward the mastery of the essential elements of grammar and the development of a sufficient vocabulary to use the language proficiently in most situations. Reading skills continue development through use of more challenging authentic materials. Students' writing skills are expected to be increasingly complex and sophisticated. Students continue to develop a global awareness.
Credits 1
Grades
9, 10, 11, 12
Schools
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Hylton High School
Osbourn Park High School
Patriot High School
Potomac High School
Woodbridge High School
Prerequisites
French 2
or teacher recommendation based on existing language proficiency.

French 4

Oral communication is practiced through conversation, group discussion, skits, dialogues, reports, and reading selections. Reading for comprehension of ideas rather than for individual word or sentence meaning is developed. Course syntax focuses on Advanced grammatical structures. Controlled writing decreases and skills for practicing free composition are developed. Vocabulary building encompasses extensive practice with idioms, synonyms, and antonyms. Students broaden their appreciation of the target language culture through the study of current and historical events and literature.
Credits 1
Grades
9, 10, 11, 12
Schools
Brentsville District High School
Freedom High School
Gar-Field High School
Hylton High School
Potomac High School
Woodbridge High School
Prerequisites
French 3 *or* Advanced French Language 3

French 5

Speaking and listening skills are practiced primarily through classroom discussion of reading materials. Analysis of the various literary forms becomes a significant part of the reading program. Both required and independent reading takes place. Writing skills are further developed through directed writing and free composition. A variety of major literary works are read and discussed in detail to include excerpts from novels, essays, poetry, short stories, and plays.
Credits 1
Grades
10, 11, 12
Schools
Brentsville District High School
Freedom High School
Gar-Field High School
Hylton High School
Potomac High School
Prerequisites
French 4 *or* Advanced French Language 4

Spanish 1

Students use the language authentically, communicating in real-life situations from the beginning of the course. They learn the sound system and basic grammar and vocabulary, primarily through use of the language in meaningful contexts. All basic skills of the language are learned: understanding, speaking, reading, and writing. Emphasis is on communication in interpersonal situations. Culture is an integral part of the course.
Credits 1
Grades
9, 10, 11, 12
Course Designation
Virtual Prince William (VPW)
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Independence Nontraditional High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School
Prerequisites
None

Spanish 2

Students continue to learn the language through its use in realistic contexts with more complex grammatical structures. Additional listening, speaking, writing, and reading skills are acquired through practice with authentic materials and in real-life situations. The study of customs and culture is an integral part of the course.
Credits 1
Grades
9, 10, 11, 12
Course Designation
Virtual Prince William (VPW)
Schools
Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Independence Nontraditional High School
Osbourn Park High School
Patriot High School
Potomac High School
Woodbridge High School
Prerequisites
Spanish 1

Spanish 3

The emphasis for study continues all four skills of communication: listening, speaking, reading, and writing. Students continue to work toward the mastery of the essential elements of grammar and the development of a sufficient vocabulary to use the language proficiently in most situations. Reading skills continue development through use of more challenging authentic materials. Students' writing skills are expected to be increasingly complex and sophisticated. Students continue to develop a global awareness.
Credits 1
Grades
9, 10, 11, 12
Course Designation
Virtual Prince William (VPW)
Schools
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Independence Nontraditional High School
Osbourn Park High School
Patriot High School
Potomac High School
Woodbridge High School
Prerequisites
Spanish 2

Spanish 4

Oral communication is practiced through conversation, group discussion, skits, dialogues, reports, and reading selections. Reading for comprehension of ideas rather than for individual word or sentence meaning is developed. Course syntax focuses on Advanced grammatical structures. Controlled writing decreases and skills for practicing free composition are developed. Vocabulary building encompasses extensive practice with idioms, synonyms, and antonyms. Students broaden their appreciation of the target language culture through the study of current and historical events and literature.
Credits 1
Grades
9, 10, 11, 12
Schools
Brentsville District High School
Freedom High School
Gar-Field High School
Hylton High School
Potomac High School
Prerequisites
Spanish 3, Advanced Spanish Language 3, *or* Spanish for Fluent Speakers 3 - Advanced Level

Spanish 5

Speaking and listening skills are practiced primarily through classroom discussion of reading materials. Analysis of the various literary forms becomes a significant part of the reading program. Both required and independent reading takes place. Writing skills are further developed through directed writing and free composition. A variety of major literary works are read and discussed in detail to include excerpts from novels, essays, poetry, short stories, and plays.

Credits 1
Grades
10, 11, 12
Schools
Brentsville District High School
Freedom High School
Gar-Field High School
Hylton High School
Potomac High School
Prerequisites
Spanish 4, Advanced Spanish Language 4, *or* Spanish for Fluent Speakers 3 - Advanced Level