



# **Arlington Public Schools HIGH SCHOOL PROGRAM OF STUDIES 2022-23**

## **COMPREHENSIVE HIGH SCHOOLS AND HIGH SCHOOL PROGRAMS**

### **WAKEFIELD HIGH SCHOOL**

1325 S. Dinwiddie Street  
Arlington, VA 22206  
(703)228-6700

### **YORKTOWN HIGH SCHOOL**

5201 N. 28th Street 22207  
Arlington, VA 22207  
(703)228-5400

### **NEW DIRECTIONS**

2121 N. Culpeper Street  
Arlington, VA 22203  
(703)228-2117

### **WASHINGTON-LIBERTY HIGH SCHOOL**

1301 N. Stafford Street  
Arlington, VA 22201  
(703)228-6200

### **CAREER CENTER/ ARLINGTON TECH PROGRAM**

816 Walter Reed Drive  
Arlington, VA 22204  
(703)228-5800

### **ARLINGTON COMMUNITY HIGH SCHOOL**

800 S. Walter Reed Dr.  
Arlington, VA 22204  
(703)228-5350

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### **HIGH SCHOOL CONTINUATION**

**LANGSTON**  
2121 N. Culpeper Street  
Arlington, VA 22203  
(703)228-5295

*El Programa de Estudios de las Escuelas Secundarias está disponible en español en todas las oficinas de consejería de las Escuelas Públicas de Arlington o en el sitio web: [www.ansva.us](http://www.ansva.us)*

**THE ARLINGTON HIGH SCHOOL PROGRAM OF STUDIES  
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January 2022

Dear Arlington Families:

Welcome to the High School Program of Studies for Arlington Public Schools! We hope you will use this document as a reference and a guide as you plan your high school sequence of courses. The Program of Studies provides students and parents both general and specific information about curricular offerings and services at the comprehensive high schools, the Career Center, and within our alternative programs. In our efforts to achieve clarity and brevity, we have written brief, objective descriptions of many of the elements of the high schools. You can obtain more information on topics by calling your high school's Counseling Services office:

Arlington Community High School	703/ 228-5350
Arlington Career Center	703/ 228-5800
Langston	703/ 228-5295
New Directions	703/ 228-2117
Wakefield High School	703/ 228-6702
Washington-Liberty High School	703/ 228-6250
Yorktown High School	703/ 228-5350

Students have many choices as they pursue their interests and expand their experiences. Students, parents, and counselor should work together to plan for the student's years of high school and to make appropriate revisions along the way. The student's long-range goals and interests as well as the requirements for graduation should guide the decision-making. The 2022-2023 Program of Studies supports that process. Additionally, collaboration with your school's Office of Counseling Services will help identify many other supports available to you child. For example, the schools provide small-group tutorial assistance in many subject areas in which students may need additional support.

At the conclusion of this booklet, you will find listings of courses offered at individual high schools. These courses reflect the unique directions that high schools have taken in meeting the specific needs of their students and in capitalizing on the strengths and interests of their staffs.

We encourage you to maintain communication with your school through orientations, Back-to-School Night, and other scheduled opportunities. You may also call and schedule an individual appointment with your child's counselor or teacher.

We hope you take advantage of the many opportunities available to you during your years in high school.

Sincerely,

Bridget Loft  
Assistant Superintendent, Chief Academic Officer



## PROGRAM PLANNING

A careful review of the Program of Studies will familiarize parents and students with curriculum offerings and school services and facilitate planning of comprehensive programs to meet both graduation and personal requirements. The Department of Counseling Services can assist in answering questions related to planning programs. Counselors will meet with students (middle school counselors will meet with rising ninth graders; high school counselors will meet with rising tenth, eleventh, and twelfth graders) during February and March to develop program plans and will schedule parent conferences upon request. Some guidelines to assist in program planning follow.

**Seven Period Day** All students must enroll in seven periods which may include courses taught at the Career Center or those taken online during the school day. In extraordinary circumstances, the student may receive a waiver to allow an abbreviated attendance schedule.

**Course Selections** Selecting a course of study is a cooperative venture which requires careful consideration by parents, teachers, counselors, and the student. When selecting a course of study, it is essential that graduation requirements and future interests are thoroughly considered. It is our intent to expand students' post high school choices which may include permanent employment immediately after high school, a career in the armed services, a business or technical school, and/or additional education at a two- or four-year college. Therefore, you will find a diverse selection of courses and opportunities from which to choose.

**Alternative Course Selections** All courses listed in the Program of Studies are available for student requests. When completing the final course schedules, courses that have fewer than 15 students may not be offered. Therefore, proper planning also includes consideration of alternative course selections. Scheduling conflicts may necessitate scheduling alternative course selections. If a course is canceled at the home school, a student may enroll in the course at another school in the county provided space is available. Transportation may need to be provided by the parent. Every effort will be made to accommodate student interests and needs when courses are canceled, or conflicts occur. In some cases, additional budget considerations may require that courses may not be offered each year and impacted students should select an alternative course. Additionally, courses with insufficient enrollment may be offered through distance or online learning.

**Preparation for Rigorous Courses** Arlington Public Schools encourages all students to enroll and succeed in advanced courses. Successful participation in advanced courses instills in students a sense of accomplishment, increased self-esteem, improved study skills, and a greater foundation for success in subsequent advanced courses and for life beyond school. It is not however, enough for students to simply desire to enroll in advanced courses. A solid foundation of knowledge and skills is imperative and is a great predictor of success in advanced courses.

Therefore, it is important that students strive to do their very best in all courses to build a solid foundation for academic success. This includes developing effective study habits, completing assignments, meeting deadlines, asking for help, or putting in extra time when it is needed, and being successful in fundamental and prerequisite courses that serve as the foundation for advanced courses. Doing one's best also includes doing more than the minimal requirements for classes by completing projects or other enriching or skill-building activities. Students and parents are encouraged to work closely with teachers and counselors to build, support, and promote these skills to maximize opportunities for enrolling in and being successful in advanced courses. All Grade 9 students in consultation with counselors and parents are required to complete a four-year plan and to update and refine that plan as they progress through high school.

Advanced courses in high school are enriched or accelerated courses, which might be labeled "intensified" or other such label or might lead to an industry certification. The following table presents three such examples of how rigorous course selections in Grade 9 or Grade 10 might impact the course options and opportunities for students in Grades 11 or 12.

Course:	Implication:
Geometry	The sequence of mathematics courses is Algebra I, Geometry, Algebra II, and beyond. A student interested in Advanced Placement science courses in Grades 11 or 12 would take Intensified Chemistry in Grade 10. (Advanced Placement courses allow students to earn college credits while in high school.) Algebra II is a co-requisite for Intensified Chemistry. Therefore, a student who did not take Geometry in Grade 9 would need to take it in summer school as New Work for Credit to enroll in Intensified Chemistry in Grade 10 and an advanced placement science class in Grade 11 or 12.
Spanish II	Taking Spanish II in Grade 9 enables a student to take Spanish III, IV, and even V in Grades 10, 11, and/or 12 or to take at least two years of another language in high school. Note that for an Advanced Studies diploma, a diploma more favorable for college admission, three years of one or two years each of two different foreign languages is required.
Industry Certification	Students who complete Automotive Technology I, II, and III with a B or better can earn associate degree credits and may take the National Institute for Automotive Service Excellence (ASE) certification exam for obtaining industry certification.

Students and parents should work closely with counselors to ensure that the four-year plan includes the prerequisites and subsequent advanced courses. Such participation improves opportunities for students by keeping post high school choices available.

### Course Changes

Students benefit from a well-planned schedule which addresses individual needs and does not require later adjustments that might disrupt the learning process. Commitments for staff, textbooks, and supplies are made based upon the courses selected, and, therefore, schedule changes are discouraged. If there are extenuating circumstances, requests for schedule changes are carefully reviewed, based on the following:

- student has successfully completed course in summer school.
- scheduling error has occurred, e.g., requested Spanish III, scheduled for French III.
- student has changed career goal, as confirmed by counselor.
- student has been scheduled for the same teacher as previous year and desires change.
- student has been scheduled for a course which is not compatible with abilities, e.g., Geometry to Principles of Geometry or vice versa.

Students may enroll in advanced courses with prerequisites even if those prerequisites have not been met by the student. The prerequisites are listed to help communicate to students and families the skills or experience may be needed to ensure a student's success in a course. Parents may still enroll their students in these courses. Parents should discuss their preferences with members of the school staff, especially with their child's counselor. The purpose of soliciting this feedback is to ensure student success and help parents be aware of the academic rigor and requirements of these courses. If a parent decides to enroll a student in a course that was not initially recommended for the student, the parent should notify the school staff of this decision before the end of the school year.

## **SPECIAL PROGRAM ARRANGEMENTS**

### **Acceleration Through School**

Learning experiences may be arranged to permit students who learn more rapidly to accelerate their progress through school. Summer school offerings, cross-grade level groupings, electives, or any combination thereof may be used to accelerate progress.

### **Acceleration Through Content**

Students are encouraged to move to advanced levels of study or to more extensive studies through individualized instruction, cross-grade level groupings, competency testing and placement, electives, and extended course offerings.

### **Concurrent Enrollment**

Concurrent enrollment in high school and High School Continuation is permitted with appropriate authorization for the purpose of accelerating and/or enriching the high school program and on a space available basis.

### **Independent Study**

Independent study allows highly able and highly motivated students to explore an area of intense interest which is not offered in the high school program of study. Independent study, including research, self-directed courses, internships, and volunteer or paid work experience, may be approved for high school credit by the high school principal under conditions specified in advance. In general, independent study is comparable to the scope of an online course. Students may apply for an Independent Study by completing the application process available through the Office of Counseling Services during the spring preceding the year in which the Independent Study will occur.

## PROFESSIONAL SCHOOL COUNSELORS

### MISSION AND VISION:

**Mission:** School counselors of Arlington Public Schools encourage equitable learning and access through advocacy and support for all students. The school counselor addresses the academic success, career self-awareness and social/emotional resiliency of all students. All students have access to a Comprehensive School Counseling.

**Vision:** All individuals who learned in the Arlington Public School system embrace the concept of the whole adult and are practiced in the skills of self-awareness, self-management, responsible decision-making, relationship building and social awareness and are fulfilled in life.

### PROVISION OF SERVICES:

School counseling programs are collaborative efforts benefiting students, parents, teachers, administrators, and the overall community. School counseling programs should be an integral part of students' daily educational environment, and school counselors should be partners in student achievement. The components of a comprehensive school counseling program are modeled on the National Model of the American School Counseling Association (ASCA.)

**Direct student services** are in-person interactions between school counselors and students and include the following:

- **School counseling core curriculum:** This curriculum consists of structured lessons designed to help students attain the desired competencies and to provide all students with the knowledge, attitudes, and skills appropriate for their developmental level. The school counseling core curriculum is delivered throughout the school's overall curriculum and is systematically presented by school counselors in collaboration with other professional educators in K-12 classroom and group activities. Arlington Public Schools uses several resources: One resource is the Committee for Children's Second Step Program. These K-8 lessons cover social-emotional, **bullying and child abuse prevention**, and academic skill building. Additionally, school counselors implement lessons that are aligned with VDOE's core SEL competencies: self-awareness, self-management, social awareness, relationship skills, and decision-making <https://www.doe.virginia.gov/support/prevention/social-emotional/index.shtml>. To learn more about and to review all curriculum resources delivered by school counselors in your student's school, please make an appointment with the School Counselor.
- **Individual student planning:** School counselors coordinate ongoing systemic activities designed to assist students in establishing personal goals and developing future plans. The academic planning process occurs at a minimum of once a year and includes meeting with students to plan their courses for the subsequent year. The purpose is three-fold; 1) to ensure graduation requirements are met, 2) to discuss the relationship of available courses to career aspirations, and 3) to encourage students to challenge themselves academically. The meeting results in an Academic and Career Plan (ACP) which is shared with families.
- **Responsive services:** Responsive services are activities designed to meet students' immediate needs and concerns. Responsive services may include counseling in individual or small-group settings or crisis response.
- **Indirect Student Services** Indirect services are provided on behalf of students as a result of the school counselors' interactions with others including referrals for additional assistance, consultation and collaboration with parents, teachers, other educators, and community organizations





## GRADUATION REQUIREMENTS

The requirements for a student to earn a diploma and graduate from a Virginia high school shall be those in effect when that student enters Grade 9 for the first time. Students shall be awarded a diploma upon graduation from a Virginia high school.

When students below Grade 9 successfully complete courses offered for credit in grades 9 through 12, credit shall be counted toward meeting the standard units required for graduation. To earn a verified unit of credit for these courses, students must meet the requirements of the Virginia Standards of Quality ([8VAC20-131-110](#)).

The following requirements shall be the only requirements for a standard or advanced studies diploma, unless a local school board has prescribed additional requirements that have been approved by the Board of Education. All additional requirements prescribed by local school boards that have been approved by the Board of Education remain in effect until such time as the local school board submits a request to the board to amend or discontinue them.

### Requirements for a Standard Diploma.

Beginning with *the ninth-grade class of 2018-19 and beyond*, students shall earn the required standard and verified units of credit.

To graduate with a Standard Diploma, a student must earn at least 22 standard units of credit by passing required courses and electives and earn at least five verified credits by passing end-of-course SOL tests or other assessments approved by the Board of Education.

Discipline Area	Standard Unit of Credit Required	Verified Credits Required
English (reading and writing)	4	2
Mathematics	3	1
Science	3	1
History & Social Sciences	3	1
Health & Physical Education	2	0
World Languages Fine Arts or Career & Technical Education	2	0
Economics & Personal Finance	1	0
Electives	4	Courses to satisfy this requirement shall include at least two sequential electives.
Total	22	5

### Additional Requirements for Graduation

- Advanced Placement, Honors, or International Baccalaureate course, or Career and Technical Education Credential – In accordance with the Standards of Quality, students shall either (1) complete an Advanced Placement, honors, or International Baccalaureate course, or (ii) earn a career and technical education credential approved by the board, except when a career and technical education credential in a particular subject area is not readily available or appropriate or does not adequately measure student competency, in which case the student shall receive satisfactory competency-based instruction in the subject area to satisfy the standard diploma requirements. The career and technical education credential, when required, could include the successful completion of an industry certification,

a state licensure examination, a national occupational competency assessment, or the Virginia Workplace Readiness Assessment.

- Virtual Course – Students shall successfully complete one virtual course, which may be a non-credit bearing course or a required elective credit-bearing course that is offered online.
- Training in emergency first aid, cardiopulmonary resuscitation (CPR), and the use of automated external defibrillators (AED) - Students shall be trained in emergency first aid, CPR, and the use of AED, including hands-on practice of the skills necessary to perform cardiopulmonary resuscitation. Students with an IEP or 504 Plan that documents that they cannot successfully complete this training shall be granted a waiver from this graduation requirement, as provided by [8vac20-131-420 B](#)
- Demonstration of the five Cs – Students shall acquire and demonstrate foundational skills in critical thinking, creative thinking, collaboration, communication, and citizenship in accordance with the Profile of a Virginia Graduate approved by the board.

## Requirements for an Advanced Studies Diploma.

Beginning with *the ninth-grade class of 2018-19 and beyond*, students shall earn the required standard and verified unit of credit.

To graduate with an Advanced Studies Diploma, a student must earn at least 26 standard units of credit by passing requires courses and electives, and at least five verified credits by passing end-of-course SOL tests or other assessments approved by the Board of Education.

Discipline Area	Standard Unit of Credit Required	Verified Credits Required
English (reading & writing)	4	2
Mathematics	4	1
Science	4	1
History & Social Sciences	4	1
World Languages	3	Three years of one language or two of two languages.
Health & Physical Education	2	
Fine Arts or Career & Technical Education	1	
Economics & Personal Finance	1	
Electives	3	Courses to satisfy this requirement shall include at least two sequential electives.
Total	26	5

### Sequential Elective Guidelines

Students must take at least two sequential electives to receive a Standard High School Diploma or Modified Standard Diploma. Sequential electives are courses in which the content increases or expands in scope and sequence as students move through the various levels of the courses. These courses may be in any discipline as long as the courses are not specifically required for graduation. Courses used to satisfy one unit of credit in a fine or practical art may be used to partially satisfy this requirement. A sequence that includes an exploratory course followed by an introductory course cannot be used to satisfy this requirement; however, an introductory course followed by another level of the same course of study can be used. Students may take the focused sequence of elective courses in consecutive years or any two years of high school. Counselors will assist students to select courses to meet this requirement.

Students competing for an Advanced Studies Diploma may not use world language courses levels 1 through 3 in order to fulfill the sequential elective component. Only world language courses 4 and 5 can count toward this requirement.

- Diplomas** Depending upon the year a student enters ninth-grade, students who demonstrate academic excellence and/or outstanding achievement may be eligible for one or more of the following awards:
- 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), or dual enrollment courses shall receive the Governor's Seal on the diploma
  - Students who complete the requirements for a Standard Diploma, Advanced Studies Diploma with an average grade of "A" shall receive a Board of Education Seal on the diploma

### **Graduation Seals of Achievement**

Students meeting specific requirements for graduation and demonstrating exemplary performance may receive diploma seals for recognition. The Virginia Department of Education makes available to Arlington Public Schools and other local school divisions the following seals:

- **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.
- **Board of Education Seal** is awarded to students who complete the requirements for a Standard Diploma or Advanced Studies Diploma with an average of "A".
- **Board of Education's Career & Technical 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 [http://www.doe.virginia.gov/instruction/career\\_technical/path\\_industry\\_certification/index.shtml](http://www.doe.virginia.gov/instruction/career_technical/path_industry_certification/index.shtml) for current approved licenses and examinations.

- **Board of Education's Advanced Mathematics & Technology Seal** is awarded to students who earn either a Standard or Advanced Studies Diploma and satisfy all of the mathematics requirements for the Advanced Studies Diploma (four units of credit including Algebra II; two verified units of credit) with a "B" average or better and either:
  - ❖ Pass an examination in a career and technical education field that confers certification from a recognized industry, or trade or professional association.
  - ❖ OR acquire a professional license in a career and technical education field from the Commonwealth of Virginia.
  - ❖ OR pass an examination approved by the board that confers college-level credit in a technology or computer science area.

The Board of Education shall approve all professional licenses and examinations used to satisfy these requirements. Visit [http://www.doe.virginia.gov/instruction/career\\_technical/path\\_industry\\_certification/index.shtml](http://www.doe.virginia.gov/instruction/career_technical/path_industry_certification/index.shtml) for current approved licenses and examinations.

- **Board of Education’s Excellence in Civics Education Seal** is awarded to students who meet each of the following four criteria:
  - ❖ Satisfy the requirement to earn a Modified Standard Diploma, a Standard Diploma, or an Advanced Studies Diploma
  - ❖ Complete Virginia & United States History and Virginia United States Government courses with a grade of “B” or higher.
  - ❖ 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 Officer Training Corps (JROTC); participating in political campaigns, government internships; Boys State, Girls State or Model General Assembly; and 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.
  - ❖ Have good attendance and no disciplinary infractions as determined by local school board policies.
  
- **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.
  - ❖ Demonstrate proficiency at the intermediate-mid level or higher in one or more languages other than English as demonstrated through an assessment from a list approved by the Superintendent of Public Instruction. American Sign Language qualifies as a language other than English.
  
- **Board of Education’s Seal for Excellence in Science & the Environment** is awarded to students who enter the ninth 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.

## College-Bound Student-Athlete NCAA Eligibility

Students' hopeful of practicing, competing, and receiving an athletic scholarship during their first year at a Division I or Division II school, must certify that they are eligible through the NCAA Eligibility Center. NCAA Eligibility Center staff members' partner with students and their families, as well as high school administrators and coaches. While the following information is updated annually, please visit [ncaa.org/playcollegesports](http://ncaa.org/playcollegesports) for the most up-to-date information and guidance.

### NCAA Division I Academic Requirements

Division I schools require college-bound student-athletes to meet academic standards for NCAA-approved core courses, core-course GPA and test scores. To be eligible to practice, compete, and receive an athletics scholarship in your first full-time year at a Division I school, you must graduate from high school and meet all the following requirements:

1. Complete a total of 16 core courses in the following areas:
  - a. English – 4 years
  - b. Math (Algebra I or higher) – 3 years
  - c. Natural/Physical Science (Including one year of lab, if offered) – 2 years
  - d. Additional (English, math or natural/physical science) – 1 year
  - e. Social Science – 2 years
  - f. Additional Courses (Any area listed to above, foreign language or comparative religion/philosophy) – 4 years
2. Complete 10 of your 16 core courses, including seven in English, math, or natural/physical science, before the start of your seventh semester. Once you begin your seventh semester, any course that is needed to meet the 10/7 requirement cannot be replaced or repeated.
  - a. 10 of 16 core courses, including seven in English, math, or natural/physical science, before the start of the seventh semester.
  - b. The Eligibility Center will use the best combination of courses to meet the 10/7 requirement. Courses can be repeated or replaced so long as they are not needed to meet the 10/7 requirement.
    - i. Students with solely international academic credentials (including Canada) are not required to meet the 10/7 requirement.
3. Complete the 16 NCAA-approved core courses in eight academic semesters or four consecutive academic years from the start of ninth grade. If you graduate from high school early, you still must meet core-course requirements.
4. Earn an SAT combined score or ACT sum score that matches your core-course GPA (minimum 2.300) on the Division I full-qualifier sliding scale. Review the sliding scale to ensure that your score meets Division I requirements. More information regarding the impact of COVID-19 and test scores can be found at [http://fs.ncaa.org/Docs/eligibility\\_center/COVID19\\_Fall2022\\_Public.pdf](http://fs.ncaa.org/Docs/eligibility_center/COVID19_Fall2022_Public.pdf)

### NCAA Division II Academic Requirements

Division II schools require college-bound student-athletes to meet academic standards for NCAA-approved core courses, core-course GPA and test scores. To be eligible to practice, compete and receive an athletics scholarship in your first full-time year at a Division II school, you must graduate from high school and meet all of the following requirements:

1. Complete 16 core courses in the following areas:
  - a. English – 3 years

- b. Math (Algebra I or higher) – 2 years
  - c. Natural/Physical Science (Including one year or lab, if offered) – 2 years
  - d. Additional (English, math or natural/physical science) – 3 years
  - e. Social Science – 2 years
  - f. Additional Courses (any area listed above, foreign language or comparative religion/philosophy) – 4 years
2. Earn an SAT combined score or ACT sum score that matches your core-course GPA (minimum 2.200) on the Division II full-qualifier sliding scale. More information regarding the impact of COVID-19 and test scores can be found at [http://fs.ncaa.org/Docs/eligibility\\_center/COVID19\\_Fall2022\\_Public.pdf](http://fs.ncaa.org/Docs/eligibility_center/COVID19_Fall2022_Public.pdf)
  3. Submit proof of graduation to the Eligibility Center

Student-athletes enrolling at an NCAA member school Aug. 1, 2021, or later who do not meet Division II qualifier standards will be deemed partial qualifiers. All Division II partial qualifiers may receive an athletics scholarship and practice during their first year or full-time enrollment at a Division II school, but may NOT compete.

### **Nontraditional and Online Courses**

Nontraditional courses are classes taught online or through distance learning, credit recovery, independent study, individualized instruction, or correspondence methods.

For a nontraditional course to count as an NCAA-approved core course:

- The course must be comparable in length content and rigor to course taught in a traditional classroom setting and must be four-year college preparatory.
- All courses must include ongoing access between the instructor and student, as well as regular interaction for the purposes of teaching, evaluation, and providing assistance.
- The course must have a defined time period for completion.
- Nontraditional courses should be clearly identified as such on the high school transcript.

### **Early Academic Certification Process**

If a student meets specific criteria after six semesters, she/he may be deemed an early academic qualifier for Division I and may practice, compete and receive an athlete's scholarship during her/his first year of enrollment.

Division I: Minimum SAT (math and critical reading) of 900 or minimum sum score of 75 on the ACT.

Core-course GPA of 3.0 or higher in a minimum of 14 courses:

- 3 – English
- 2 – Math
- 2 – Science
- 2 – More English/math/science
- 2 – Additional core courses in any area

Division II: Minimum SAT (math and critical reading) of 1000 or minimum sum score of 85 of the ACT.

Core-course GPA of 3.0 or higher in a minimum of 12 courses:

- 3 – English
- 2 – Math
- 2 – Science
- 5 – Additional core courses in any area

## Grading Scale

The following grading scale will be used for course work and GPA determination:

Letter Grade	Percentages	Quality Points	AP, IB, & Dual-enrolled Quality Points
A	90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100	4.0	5.0
B+	87, 88, 89	3.5	4.5
B	80, 81, 82, 83, 84, 85, 86	3.0	4.0
C+	77, 78, 79	2.5	3.5
C	70, 71, 72, 73, 74, 75, 76	2.0	3.0
D+	67, 68, 69	1.5	2.5
D	60, 61, 62, 63, 64, 65, 66	1.0	2.0
E	0 – 59	0.0	0.0

Because most applications to colleges need to be mailed early in the senior year, the student's grade point average is computed at the end of the junior year. Final GPA is determined at the end of the first semester of the senior year. The value for grades earned in Advanced Placement courses (as long as the student takes the Advanced Placement examination) is greater than that received for regular courses. When GPAs are calculated, the Advanced Placement, International Baccalaureate, and dual-enrolled value is assumed for a course in which a student is currently enrolled.

## Advanced Placement

Students enrolled in Advanced Placement courses must take the identified associated examinations. By taking these exams, students have the benefit of possible college credit and consequent advanced standing if qualifying grades are earned. Fees for Advanced Placement tests for courses listed in this Program of Studies are paid by the Arlington Public Schools if the student has been enrolled in the class for the current school year.

## Dual Enrollment

Dual enrollment allows students to pursue an advanced curriculum in high school relevant to their postsecondary interests. Upon successful completion of a dual-enrolled course, students are awarded both high school and college credit. Before a student can be enrolled in these classes, they must meet entrance requirements established by the college. College credits earned may be transferable to other colleges.

Dual enrollment courses offered through Northern Virginia Community College (NOVA) are available to high school juniors and seniors who meet the established criteria for each class. Freshmen and sophomores can be granted exceptions on a case-by-case basis. Students interested in taking NOVA dual enrollment courses can meet the established criteria in multiple ways (i.e., by taking the Virginia Placement Test or by having eligible SAT, PSAT, ACT, AP or SOL scores.) Please consult your counselor for information on dual enrollment course eligibility, offerings, quality points awarded through DE enrollment, and transferability possibilities. Students who take a DE course receive a college transcript from the awarding institution. For more information on placement testing, alternative placement options, and spring testing dates and sites visit the following online link [www.apsva.us/dualenrollment](http://www.apsva.us/dualenrollment).

## Standards of Learning Assessments

Tests based on Virginia's Standards of Learning (SOLs) are given throughout the state at the end of the school year. All students take SOL assessments at the end of Grades 3, 4, 5, 6, 7, and 8. In addition, all students enrolled in the following courses must take SOL assessments at the end of the course:

English 11: Reading  
English 11: Writing  
World History to 1500 AD  
World History after 1500 AD

Algebra I  
Geometry  
Algebra II  
Earth Science



World Geography  
U.S. History

Biology  
Chemistry

All students enrolled in 9th grade in 2018-19 and beyond are required to pass five End-of-Course (EOC) tests to qualify for a Standard or Advanced Diploma. Students enrolled in 9th grade prior to 2018-19 are required to pass five End-of-Course (EOC) tests to qualify for a Standard Diploma and nine to qualify for an Advanced Studies Diploma. See above. If students who are required to pass tests for a diploma fail any of those tests, they will be given additional opportunities to take the test again. Tests will be offered in January, June, and August.

#### Virginia Standards of Learning Requirements

##### 9<sup>th</sup> Grade

- All students must sit for End-of-Course Math Standards of Learning Assessment
- All students must sit for End-of-Course Science Standards of Learning (Biology or End of Course Science)

##### 10<sup>th</sup> Grade

- No Standards of Learning Assessments UNLESS:
  - Student need verified credit in Math, Science, or History
  - If student has not taken Biology

##### 11<sup>th</sup> Grade

- All students must sit for End-of-Course Reading and Writing Standards of Learning Assessment
- Students without Verified Credit (400 or higher on Standards of Learning Assessment) in Math, Science, or History

##### 12<sup>th</sup> Grade

- Only students who need Verified Credit (400 or higher on Standards of Learner Assessment) in one or more of the four areas required

The Virginia Board of Education has approved a list of tests and cut off scores that may be substituted to establish a verified credit. The list of substitute tests is available at [http://www.doe.virginia.gov/testing/substitute\\_tests/index.shtml](http://www.doe.virginia.gov/testing/substitute_tests/index.shtml) from the Director of Counseling Services in each high school.

A student who needs verified credits for graduation has an option to appeal a failed End-of-Course test in Science and Social Studies, if the student has passed the course in school. Information on the appeal process can be obtained from the Department of Counseling Services.

#### **Assessment Results**

Results from tests taken by students will be mailed to parents or shared in the ParentVUE Portal after each test administration period. Advanced Placement test results only will be sent directly to the student. Overall results for schools and Arlington will be posted on the APS web site at <http://www.apsva.us>.

#### **Promotion Guidelines**

Generally, the high school English course a student is taking establishes his/her grade level. Thus, a student who is enrolled in English 9 is a Grade 9 student. For a student to be considered a senior or Grade 12 student, he/she must be able to include in his/her program for the year those courses that would permit graduation by the end of the regular school year or by the end of summer school.

Note: If a student finishes Grade 10 without earning at least four verified credits and that student is seeking a standard diploma, the student will be required to attend either a summer school course in make-up and strengthening if the student failed a course and the associated SOL test or an SOL strengthening course if the student passed the course but failed the associated SOL test. If the student does not enroll in the required summer

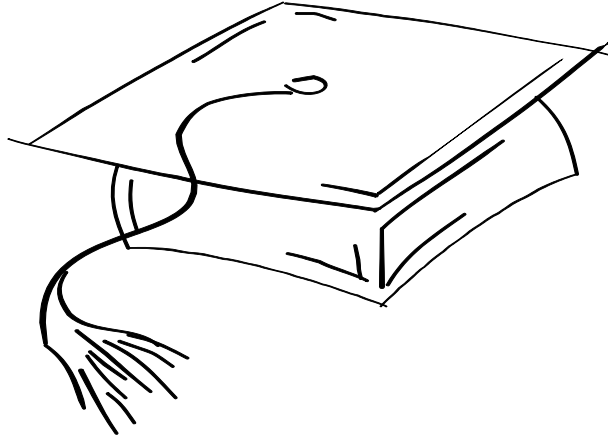


school course, then the student may be required to substitute an SOL strengthening course for an elective in Grade 11.

## **Fees**

Some courses require a fee for materials not provided by Arlington Public Schools. Where applicable the fee is noted with the course description. In cases where students/families are unable to pay the applicable fee, a request to reduce or waive the fee can be made to school.

Please contact the high school counseling office for more information.



## STUDENT SERVICES & SPECIAL EDUCATION

<b>Homebound Instruction</b>	Homebound instruction is designed to provide continuity of educational services between the classroom and home or health care facility, for students whose medical needs, physical and/or psychiatric, do not allow school attendance for a limited period. Homebound instruction may be used to supplement the classroom program for students with health impairments whose conditions may interfere with continuous daily school attendance (e.g., students receiving dialysis or radiation/chemotherapy; or students with other serious health conditions). The application for homebound instruction is posted on the APS website, <a href="https://www.apsva.us/homebound-instruction">https://www.apsva.us/homebound-instruction</a> . Copies of the application may also be requested at schools. Applications are submitted to the student's school for review before being forwarded to the Supervisor of Special Education for approval. For students with Individual Education Programs (IEP's), an IEP team meeting will be held subsequent to approval for homebound instruction, in order to determine the level of service required. Eligibility for homebound instruction is reviewed every nine weeks.
<b>Student Services</b>	Psychological services are available in schools on a regular basis. School psychologists consult with both parents and teachers about the intellectual, social and emotional development of students when need is indicated. They may also provide individual psychological evaluations. School social workers serve as liaisons between school and the home or community. They identify resources to assist students and families with social or emotional problems, financial needs, attendance concerns or other problems that may impede academic performance. Psychologists and social workers maintain a close relationship with community agencies such as mental health.
<b>Health</b>	The School Health Division, Department of Human Services, seeks to provide students and their families with preventive and early intervention health services so that students can learn to the best of their potential.
<b>Section 504</b>	<p>Section 504 of the Rehabilitation Act of 1973 prohibits discrimination against persons with a disability in any program receiving federal financial assistance. The Arlington Public Schools are committed to a policy of avoidance and correction of any educational discrimination, assuring that students with disabilities have educational opportunities and benefits equal to those without disabilities. Under Section 504, a person is considered to be a person with a disability if they (a) have a physical or mental impairment which substantially limits one or more major life activities (such as caring for one's self, performing manual tasks, walking, seeing, hearing, speaking, breathing, learning or working), (b) have a record of such an impairment, or (c) are regarded as having such impairment. The list of disabilities and major life activities is not exhaustive. Further, the term "substantially limiting" should be interpreted loosely.</p> <p>Arlington Public Schools will evaluate and provide a free, appropriate education to all students with disabilities. Parents are notified and encouraged to participate in all meetings pertaining to their students' eligibility under Section 504. Parents should address questions and concerns about Section 504 to the Director of Counseling Services or to the principal of the school. Parents may appeal eligibility decisions by contacting the 504 Compliance Officer in the Office of School Support (Student Services) at 703-228-6061.</p>
<b>Substance Abuse Counseling</b>	Arlington Public Schools provides information to students on substance abuse through the Health Program. The Office of School Support works cooperatively with the Department of Human Services to provide substance abuse prevention and early intervention services to the students in Arlington Schools. Confidential substance abuse assessment is available in certain circumstances. Students and parents receive assistance with referrals to appropriate agencies for treatment services.

## LIBRARY SERVICES

The school library is at the center of teaching and learning within the school community. The librarian curates print and digital resources for learning and independent reading, fostering the intellectual, emotional and social development of all students. Students are taught critical and creative thinking, communication, and collaboration skills so that they become successful lifelong producers and consumers of information. The librarian maintains an up-to-date collection which may be accessed both at school and at home. This collection reflects the curricular and developmental needs, as well as the social, cultural and ethnic diversity of all students.

School librarians instruct students in finding, evaluating, and integrating information into a variety of learning experiences across all content areas in collaboration with content area teachers. Students use print and digital library materials to retrieve, organize, document, analyze, evaluate, synthesize, and present information. Students are taught to adhere to the Acceptable Use Policy for appropriate use of information. Librarians also collaborate with staff to build curricular units and special programs. School libraries have extended hours to enhance learning opportunities.

Students and their families are encouraged to use the resources of the library both at school and at home by accessing their school library webpage and through the resources in the Library Services resources in Canvas.

## ALTERNATIVE PROGRAMS

### **H-B Woodlawn Secondary Program**

The H-B Woodlawn Secondary Program adheres to four pillars: caring community, self-governance, equity, and self-directed learning. Through student-led conferences, student-led electives and clubs, and weekly Town Meetings, where each student, teacher, and parent in attendance has an equal voice, the community works together to help all students develop and pursue their educational goals while developing a sense of belonging.

Student choice is a central focus of H-B Woodlawn's alternative secondary program. Students must decide how to use their time wisely to meet their obligations. The amount of self-directed time increases gradually from grade 6 to grade 12. To make this offer of freedom work, the school trusts the good intentions of its students, and teaches the value of personal responsibility. In 1971, "a word to the wise is sufficient" was selected as the school motto to reflect the association of freedom with responsibility.

Each student enters the program at H-B Woodlawn with varying degrees of independence and self-motivation. The faculty works with students as individuals, in small groups, and as grade levels to empower them to have increasing control over their educational program. H-B Woodlawn also addresses the needs of individual students through our Teacher Advisor program. The TA program ensures that every student is connected to an adult in the building and that all families have a dedicated point of contact. Teachers and TAs work together with families to ensure that each student receives what they need to reach their academic and social potential.

Our mission is to provide H-B Woodlawn graduates with the experience of being and learning in a community that appreciates its individual members and prepares them to approach life after high school with a mature, realistic understanding of their interests and abilities, with a heightened commitment to learning for its inherent value.

## **Teenage Parenting Programs**

The Teenage Parenting Programs is designed to meet the unique needs of pregnant and parenting teens in Arlington County.

The Teenage Parenting Program is designed to meet the unique needs of pregnant and parenting teens in Arlington County. This program supports the students enrolled at the Career Center, Arlington Community High School, Langston or their home schools. The program creates a caring environment where teen parents are supported in meeting their needs while they develop independent living skills. Services include addressing food assistance needs, shelter and housing needs, financial supports, health needs to include teenage health, pregnancy, breastfeeding counseling, basic baby care and health resources for their children. Services address safety needs, the development of employment skills and students' transportation needs. The Program focuses on social emotional wellness, healthy family, and partner relationships as well as the promotion of healthy attachment with young children and the advancement of parenting skills. The Program offers an onsite licensed Child Care Center, infant and toddler assessment, referrals, and education. Students receive academic support, assistance to enroll in school and to remain in school until graduation. For more information, call 703-228-5818, 5819 or 5767.

## **High School Continuation Program**

The High School Continuation Program at **Langston** offers students aged 16 and older the opportunity to earn high school credits in a small and supportive environment. **Langston** also offers ELD classes for APS students who are seeking a high school diploma. Our small setting allows us to address certain accommodations that students may need as they pursue their high school diploma. Students may elect to enter the program for many reasons. The program allows students to take one, two, three, or four block classes each semester. Taking four classes, a semester enables students to earn 8 credits a year. Additionally, students can receive credit through concurrent enrollment, on-line courses, and dual enrollment through NOVA. Students may also take classes at the Career Center and participate in their home school activities.

## **The Arlington Career Center**

### **Arlington Tech at the Arlington Career Center**

Arlington Tech is a rigorous, project-based learning program that prepares students to succeed in college and in the workplace collaborative problem solving. Students learn how to effectively combine their interdisciplinary core academic knowledge with skills developed in Career Technical Education (CTE) classes to solve real-world problems and provide services to the local community.

Arlington Tech provides students with the opportunity to explore and become certified in a variety of CTE fields, jump start on college by earning Early College Credits through dual enrollment with Northern Virginia Community College. As a culmination of the project-based learning experience, Arlington Tech students will complete a year-long senior capstone project in which they would be employed as an intern, a consultant, or act as an independent researcher. Learning at Arlington Tech is active (through inquiry), authentic (through projects), and motivated by the students' interest.

The application period corresponds to the transfer application process.

For additional information regarding Career Center programs see page 76.

**International Baccalaureate Program**

The International Baccalaureate Program, commonly referred to as the IB Program, is an internationally recognized program of studies available to highly motivated college bound grade 11 and 12 students at Washington-Liberty High School. Any Arlington student may apply for the program by following the school system’s school options policy and process. This program provides the rigor, the structure, and the experience necessary to challenge academically motivated students. The IB Program comprises a holistic philosophy of learning that seeks to address the intellectual, philosophical, and social development of the student.

The IB Program is a two-year program of studies across the disciplines. The components of the program are successful completion of six academic courses in different subject areas, completion of an external examination in each area, participation in the CAS (creativity, activity, and service), enrollment in the special Theory of Knowledge course, and the writing and submission of an independent research paper in an area of interest to the student. Students may select certain IB courses without earning the full IB Diploma. See pages 6 for requirements for earning an Advanced Studies Diploma. For more information about this program, families should contact the IB Program Office at 703-228-6234.

**New Directions High School Program**

The New Directions High School Program provides at-risk court-involved students, age 14 and over, with academic and career opportunities in a small and nurturing environment. The program is a highly structured and supportive academic setting, allowing students to earn the high school credits needed for graduation. The program administration and staff are committed to providing the academic, behavioral, and family support that will allow students to progress, families to work together toward success, and students to become contributing members of society. The staff works closely with all stakeholders to increase the opportunity for success.

**ADDITIONAL INSTRUCTIONAL DELIVERY OPTION**

**Virtual Courses**

Beginning in the 2013-14 school year, students entering Grade 9 are required by the Code of Virginia to successfully complete one virtual course. The course may be a non-credit-bearing course, including but not limited to make-up or strengthening course.

Students have opportunities to take courses virtually through outside vendors. It is important to note that students should not enroll in any course without speaking with their school counselor. Failure to do so may result in no high school credit being earned for completion of the course. Policy Implementation Procedure I-7.2.8 PIP 2 Virtual Learning Delivery/Options dictates:

**Criteria for Approval of Virtual Courses**

Any virtual course used to meet graduation requirements or that will be counted in the calculation of grade point average must either:

1. Be listed as a course offered in a virtual environment by Arlington Public Schools in the Program of Studies, or
2. If not offered by Arlington Public Schools (or the student is unable to take the Arlington Public Schools course for reasons approved and verified by the school the student is attending), the course must be:
  - a. Pre-approved by the Superintendent’s designee.
  - b. Offered by an accredited institution or offered by a provider which meets the Virginia Department of Education criteria for approved providers.

- c. Aligned with the appropriate Virginia Standards of Learning, where applicable; and
- d. Of an appropriate grade and content level comparable in level of rigor with any corresponding Arlington Public Schools courses, accessible for all learners, and
- e. Meet best practices for instructional design as outlined by the International Association for K-12 Online Learning (iNACOL).

Course options should be discussed by the student and the parent/guardian with the school counselor. School counselors must submit a request on behalf of a student for pre-approval per School Board Policy I-7.2.8 Instructional Delivery Options.

\*Successful completion of a high school credit bearing course in middle school delivered through Virtual@APS may be used to fulfill the graduation requirement. Please see your counselor for more information.

**Please see course descriptions in appropriate content area section of this document.**

**Additional information regarding Virtual@APS is available at <https://www.apsva.us/virtual-instruction/>**

## **OPPORTUNITIES FOR STUDENTS WHO RECEIVE GIFTED SERVICES**

The collaboration model is the service delivery model for gifted services. Each high school has a full-time resource teacher for the gifted (RTG). Within the collaborative model, the RTG and teachers regularly plan for daily differentiation in a variety of ways: implementing curricular resources written for gifted learners; infusing strategies identified on the Critical and Creative Thinking Framework for ongoing rigor, depth and complexity to units and lessons; differentiating lessons using pre-assessments and curriculum compacting, flexible grouping, student voice and choice, tiered assignments, problem and project based learning, personalized learning, independent study and/or research projects.

Content differentiation is achieved by course selection at the high school level. High school students identified as gifted in academic areas and the arts are offered a variety of advanced/intensified courses including the IB Program at one high school and the AP courses offered at all four comprehensive secondary schools. In addition, students may participate in independent study for credit and/or dual enrollment in college courses. Students may also take advanced technical courses at the Career Center. APS provides full funding for eligible students to attend the regional academic-year Governor's School (Thomas Jefferson High School for Science and Technology).

The RTG may also support students through specialized seminars, instructional and social-emotional support for cohorts of students who may be historically underrepresented in gifted services and who are taking historically unadvanced classes. RTGs are also the contact person for the application processes for summer opportunities to include the Summer Residential Governor's School program, PRIME and other enrichment opportunities to support student interests.

Each RTG uses a variety of ways to communicate to families to include outreach sessions such as parent information nights and participating in countywide events, sending ongoing updates and announcements to families via Naviance, Canvas, listservs and using social media such as Twitter.

### **K-12 Countywide Opportunities**

There are countywide activities available to students identified for gifted services in academics and arts. These experiences are designed to extend school-based activities and respond to students' interests. Opportunities include:

#### Academics:

- Course offerings at the Career Center (4–12)
- Regional Governor's School for the Gifted—Thomas Jefferson High School for Science & Technology (9–12)
- Independent Study for elective credit (10–12)
- P.R.I.M.E. (Professionally Related Internship/Mentorship Experience) (rising 11 & 12)
- Summer Residential Governor's School for Academics/Mentorships (rising 11 & 12)
- Summer Residential Governor's Foreign Language Academies (rising 11 & 12)
- Summer Superintendent's Seminar (rising 11 & 12)

#### Arts:

- Fine Arts Apprentice Program (Grades 10–12)
- Independent Study for elective credit (grades 10-12)
- Summer Residential Governor's School for Visual & Performing Arts (rising 11 & 12)
- Summer Superintendent's Seminar (rising 11 & 12)
- Arts area local, state, and national competitions (K–12) such as Reflections Contest (K–12), Scholastic Arts Awards (Grades 9–12), or District XII Solo/Ensemble Competitions (Grades 7–12)

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## COURSES OFFERED AT ARLINGTON COMMUNITY\*, WAKEFIELD, WASHINGTON-LIBERTY, & YORKTOWN

\*Arlington Community offers a subset of these courses' dependent upon student needs. Please consult the school counselor for scheduling.

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### ARTS EDUCATION

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

*Note: Courses that have fewer than 15 students may not be offered based on student interest and budget considerations. In some cases, additional budget considerations may require that courses may not be offered in any given year and impacted students should select an alternative course. Additionally, courses with insufficient enrollment may be offered through distance learning or online learning.*

### Music

#### **Chamber Choir (29252)**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite: Previous choral experience and audition by choral director*

The Chamber Choir ensemble provides an accelerated chamber music experience for highly proficient and developed vocalists. Literature studied is of an advanced level and spans various eras and genres. Extensive training in vocal production, music theory, and sight-reading is included in rehearsals. Attendance at numerous school, community, and traveling performance engagements is required.

#### **Concert Choir (29260)**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite: None*

This course is designed to develop musicianship and healthy vocal production, and to provide experiences in ensemble singing and sight-reading. A wide range of music is offered, including popular, sacred, and secular, from various styles and periods. Students are required to attend all performances.

#### **Advanced Choir (29289)**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite: Previous choral experience in school or community choir is preferred, but not required. Audition and/or approval of the director is required.*

The choir rehearses and performs choral literature representative of a variety of styles, including sacred and popular music of moderate to advanced difficulty. Advanced training in sight-reading, vocal production and technique, and basic music theory is provided. There are school performances and performances at community functions, as well as district festivals and other adjudicated performances. Attendance at performances is required.

#### **Treble Chorus (29263)**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite(s): None*

This course is designed to develop musicianship and vocal production specifically for soprano and alto voices. Open to all students regardless of experience or ability to explore choral literature for soprano and alto voices, ensemble singing and sight-reading. Particular attention will be paid to the developing treble singing habits and choral tone. A wide range of music will be offered. Including popular, sacred, and secular, from various styles and periods. Students are required to attend all performances.

#### **Basso Chorus (29266)**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite: None*

This course is designed to develop musicianship and vocal production specifically for male voices. Open to all young men regardless of experience or ability to allow them to explore the world of men's choral literature, ensemble singing and sight-reading. Particular attention will be paid to the changing voice, developing singing habits and choral tone. A wide range of music will be offered, including popular, sacred, and secular, from various styles and periods. Students are required to attend all performances.

#### **Intermediate Band (29233)**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite: Consent of or audition by band director*

The Intermediate Band class is open to any student who has previous experience (school and/or private study) on a wind or percussion instrument of the modern concert band. Training includes continued development of basic playing skills using music of moderate difficulty and different styles. Sight-reading and music theory are also introduced. Participation in the marching band as well as performance at concerts scheduled by the band director can be required. A limited number of school-owned instruments are available for rent.



**Advanced Band (29234)****Full year, one credit****Grade(s): 9-12**

*Prerequisite: Previous band experience and audition by band director*

The advance band rehearses and performs music of moderate to difficult repertoire of symphonic band literature, as determined by the band director. Public performances at school and community functions, concerts, district festivals, possible band trips, marching in preparation for football games, contests, and parades, may also be included. Marching Band is a required extension of this class. Attendance at performances and other band functions can be required at the discretion of the director.

**Marching Band (29254)****Half year, one-half credit****Grade(s): 9-12**

*Prerequisite: None*

*Requires regularly scheduled after school hours at Wakefield, Yorktown, and Washington-Liberty. Attendance is required at rehearsals and performances.*

Students receive training in corps style marching techniques for football half-time shows and parades. Use of precision drills, formations, dance steps, and skits is taught with emphasis on musicianship and showmanship. Auxiliary units to the Marching Band may include the Drill Team, Majorettes, Flags, Color Guard, Rifles, and Silks as interest warrants. Attendance at performances is required.

**Ensembles (29250)****Half year, one-half credit****Grade(s): 9-12**

*Prerequisite: Consent of or audition by band, orchestra, or choral director*

Regularly scheduled after school or evening rehearsals for special interest ensembles, i.e., jazz ensembles, trios, quartets, Winter Guard etc., for wind, string, brass, percussion, and/or vocal students. Attendance is required.

**Piano (29200)****Full year, one credit****Grade(s): 9-12**

*Prerequisite: None*

This course is designed to introduce basic piano skills to students. Students will cover the beginning level SOL performance music standards and include a few of the investigate standards as well. Students will not be required to purchase a piano or keyboard. Electronic keyboards will be provided by the school and remain at the school.

Students will:

- Learn basic piano skills.
- Learn to read and play simple melodies and tunes.
- Learn to play scales and read musical symbols.

- Learn to recognize and perform various rhythmic patterns.
- Learn basic pedaling technique.

**String Orchestra (29244)****Full year, one credit****Grade(s): 9-12**

*Prerequisite: Previous experience on a string instrument and the approval of the orchestra director*

Students are challenged both technically and musically using a variety of literature in string, chamber, studio, and symphonic music in classical and popular styles. Public performances at school and community functions, concerts, and district festivals are required. A possible orchestra trip may be scheduled. A limited number of school-owned instruments are available for rent.

**Chamber Orchestra (29242)****Full-year, one credit****Grade(s): 9-12**

*Prerequisite: Previous orchestra experience or permission of instructor*

The Chamber Orchestra provides an accelerated orchestral experience for highly proficient and developed instrumentalists. Literature studied is of an advanced level, spanning various eras and genres, usually in the composer's original versions. Extensive training in advanced instrumental technique, ensemble performance and sight-reading is included in rehearsals, along with contextual theoretical and historical information. Attendance at numerous schools, community and traveling performance engagements is required.

**Guitar I (29245)****Full year, one credit****Grade(s): 9-12**

*Prerequisite: None*

This course is designed for the beginning through intermediate guitar student. Method books, printed sheet music, and guitar ensemble music are used to teach note reading, melodic and chord structures through a variety of technical styles, and musical literature. A limited number of school-owned instruments are available for rent. Students taking this course may be eligible for the Performing Guitar Ensemble, per consent of the instructor.

**Advanced Guitar (29247)****Full year, one credit****Grade(s): 9-12**

*Prerequisite: Guitar I or consent of instructor*

This course is designed for the intermediate through advanced guitar student. Method books, sheet music and guitar ensemble music will be used to further the instruction of note reading, melodic and chord structures, stylistic considerations, and musical literature. Attendance at performances and other ensemble functions can be required at the discretion of the director and the principal.

**Jazz Instrumental Lab/Ensemble (29251)****Full year, one credit****Grade(s): 9-12***Prerequisite: Students are selected from symphonic or concert bands by audition*

The Jazz Instrumental Lab/Ensemble provides working experience in advanced jazz performance in a studio ensemble setting. Emphasis will be on ensemble sound, blend, musicianship, and stylistic aspects of the jazz and pop idioms. Opportunities for solo work, improvisation, and occasional performances with local jazz artists will be provided. Attendance at numerous schools, community, and traveling performance engagements is required.

**Jazz/Pop Vocal Lab/Ensemble (29280)****Full year, one credit****Grade(s): 9-12***Prerequisite: Previous choral experience and school-wide audition by choral director*

The Jazz/Pop Vocal Lab/Ensemble provides working experience in advanced jazz/pop in a studio setting. Emphasis will be on ensemble sound, blend, musicianship, and stylistic aspects of the jazz and pop idioms. Opportunities for solo work, improvisation, and occasional performances with local jazz artists will be provided. Attendance at numerous schools, community, and traveling performance engagements is required.

**Music Appreciation: History of Music Genres & Cultural Identities (29222)****Full year, one credit****Grade(s): 9-12***Prerequisite: None*

Music Appreciation is an introductory course to music. Student will explore music's various functionalities to gain deeper understanding and appreciation for all types of music. The course begins by examining basic music literacy and core musical elements such as melody, rhythm, harmony, form, and texture. This class is a general but in-depth survey of the major styles, periods, and influence streams that make up the extremely large and varied categories of music to include Classical, Rock, Pop, Hip Hop, Rap and Reggae. The text covers many styles, but focus is on mainstream popular music, produced between circa 1954 until present. By the end of the course students will have a greater understanding of where the music came from (historically), what it is doing (musically), and how it was created (technologically).

**Music Theory, AP (39226)****Full year, one credit + 1.0 quality point****Grade(s): 10-12***Prerequisite: Strong background in vocal or instrumental music, including piano*

The AP Music Theory course is taught at a pace and depth equal to a college level music theory class. The course develops a student's ability to recognize, understand, and describe the basic materials and

processes of music that are heard or presented in a musical score. The curriculum covers a wide range of analytical and compositional skills as well as ear training and sight singing. The course also includes creative tasks, such as the harmonizing of a melody by selecting the voicing for appropriate chords, composing a musical bass line to provide two-voice counterpoint, or the realization of figured-bass notation. This course will prepare students for successful completion of the AP Music Theory examination. *Students who take AP Music Theory are required to take the AP exam at the end of the year. Students not taking the exam will not earn the additional quality point (29226).*

**Song Writing, Digital Audio, & Music Theory (29225)****Full year, one credit****Grade(s): 9-12***Prerequisite: Some background in vocal or instrumental music*

Song Writing, Digital Audio, & Music Theory is a course designed to study the structure of music in electronic and acoustic settings. In addition to developing students' aural skills, an emphasis is placed on practical application of theory and student creativity in original musical compositions. Students will study song form and composition in addition to mixing and the manipulation of digital audio. Students will learn foundations for music production; proper recording techniques; and how to utilize digital audio workstations and composition & notation software to produce music in a variety of genres and settings.

**Visual Arts****Art I (29120)****Full year, one credit****Grade(s): 9-12***Prerequisite: None*

Using the elements of art principles of design and creative problem-solving skills, students explore the technical processes of drawing, painting, graphics, and 3-D art forms. Art projects are kept in portfolios with student reflections on their working process and final products. This course is a prerequisite for Art II, III and Studio, AP.

**Art II (29130)****Full year, one credit****Grade(s): 10-12***Prerequisite: Art I or permission of Visual Arts Instructor*

This course builds on the concepts and techniques learned in Art I. Students learn advanced techniques in drawing, painting, printmaking, and sculpture. Students continue to research and relate works of major artists to their own work.

**Art III (29140)****Full year, one credit****Grade(s): 11-12***Prerequisite: Art II or permission of Visual Arts**Instructor*

This course is intended for highly motivated students committed to serious study of studio art. The students will create a body of work that will include but is not limited to painting, drawing, graphics, and sculpture. Emphasis is placed on quality of work, concentration in a particular artistic concept, and breadth of expression.

**Art & Design, AP (39149)****Full year, one credit + 1.0 quality point****Grade(s): 9-12***Prerequisite: Art III and/or recommendation of teacher*

AP Studio Art is based on the serious practice of art, and students are required to submit a complete portfolio to earn the additional quality point. The course addresses three major areas: high quality in the student's art products; concentration on a particular visual interest or problem; and breadth of experience in the formal, technical, and expressive means of producing art. The students will engage in the creative and systematic investigation of formal and conceptual issues, understand the making of art as an ongoing process that requires informed and critical decision making, and develop technical skills and familiarity with the functions of the visual elements.

*Students are required to submit an AP Portfolio for this course. Students not submitting a complete portfolio will not earn the additional quality point. (29149)*

**Art History, AP (39151)****Full year, one credit + 1.0 quality point****Grade(s): 10-12***Prerequisite: None*

This is an introductory college course in art history that gives students an understanding of works of art within their historical context by examining issues such as politics, religion, patronage, gender, function, and ethnicity. The course also teaches students visual analysis of works of art. The course covers architecture, sculpture, painting, and other art forms, and students learn to view these art works critically, with intelligence and sensitivity, to analyze what they see. The course prepares students for the successful completion of the AP Art History examination. *Students are required to take the AP exam associated with this course. Students not taking the exam will not earn the additional quality point. (29151)*

**Ceramics I (29167)****Full year, one credit****Grade(s): 9-12***Prerequisite: None*

This course will address 3D clay forms in both functional and decorative forms. Students will use various techniques of hand-building, and wheel throwing. This course will allow students to experience

clay for the first time or enable more advanced students to develop their skills. Students will be encouraged to experiment with different glazes and finishing techniques. A lab fee of \$55.00 is charged for clay and glazes. *See page 13 for fee reduction waiver.*

**Ceramics II (29168)****Full year, one credit****Grade(s): 9-12***Prerequisite: Ceramics I or permission of instructor*

This course will continue to address 3D clay forms in both functional and decorative forms. This course will allow students to hone their skill in hand-building and wheel throwing. It will allow the student to further investigate the possibilities that clay has to offer the 3D artist. Students will learn other glazing, finishing, and firing techniques. Included will be the study of clay artists and their works. A lab fee of \$55.00 is charged for clay and glazes. *See page 13 for fee reduction waiver.*

**Ceramics III (29169)****Full year, one credit****Grade(s): 10-12***Prerequisite: Ceramics II or permission of instructor*

This course is intended for highly motivated students who are committed to the serious study of ceramics. Students will build on skills learned in Ceramics I and II and concentrate on breadth and depth. A lab fee of \$55.00 is charged for clay and glazes. *See page 13 for fee reduction waiver.*

**Introduction to Crafts (29160)****One semester, one-half credit****Grade(s): 9-12***Prerequisite: None*

Students create pottery, weaving, jewelry, masks, etc., from a variety of cultural perspectives and styles which may include Native American, Guatemalan, Mexican, Asian, and Colonial American.

**Crafts (29162)****Full year, one credit****Grade(s): 9-12***Prerequisite: None*

In this year-long course, students will deal with the rich cultural heritage of crafts which combine function with artistic design. Multicultural craft exemplars will serve to inspire responses to assignments involving clay, fiber, wood, etc. Knowledge necessary to work intelligently, skillfully, and creatively with craft media will be developed. Elements and principles of design and aesthetics, written and/or oral critiques, and the historical heritage of the crafts produced will be stressed.

**Painting & Drawing (29163)****One semester, one-half credit****Grade(s): 9-12***Prerequisite: None*

The student learns basic approaches to drawing and painting a variety of subject matter, including still life, landscape, figure, and fantasy. Problems presented stress perception and stylistic organization of line, space, value, texture, and color. A variety of media is used. Works of major artists in these media are studied.

### **Computer Graphics (29152)**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite: None*

Students apply creative problem-solving skills to commercial design problems that may include product image, logo design, product display, story illustration, page and publication layout. Students may use computer-generated graphics to produce completed works.

### **Computer Graphics II (29153)**

**Full Year, one credit**

**Grade(s): 10-12**

*Prerequisite: Computer Graphics I*

Students apply creative program solving skills to commercial design problems including product image, branding, display, story, illustration, page, and publication layout.

### **Computer Graphics III (29154)**

**Full Year, one credit**

**Grade(s): 10-12**

*Prerequisite: Computer Graphics I & II*

This is an advanced computer graphics course that will further expand on digital art skills learned in Computer Graphics I and II. This course provides students the skills to create designs that are digital fine art and commercial art focused. Students will learn advanced digital art techniques and will have an opportunity to explore a digital medium of choice to create a portfolio of work. This portfolio is a good foundation for students pursuing a 2-D digital AP portfolio.

### **Digital Photography I (29193)**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite: None*

Students approach photography as an art form. They will learn to use a single lens reflex camera, producing prints through various processes to include digital technology. Topics covered include history of photography, elements and principles of design, lighting, and camera functions. **A lab fee of \$50.00 is charged for printing costs. See page 13 for fee reduction/waiver information. Students are requested to supply their own camera if possible and are required to provide their own photo paper. A limited number of cameras are available based on need. Students are responsible for lost, stolen, or significantly damaged cameras.**

### **Digital Photography II (29194)**

**Full year, one credit**

### **Grade(s): 10-12**

*Prerequisite: Digital Photography I or permission of photography instructor*

In this advanced course, emphasis is placed on artistic and expressive solutions to a variety of photography problems that expand the basic concepts and techniques learned in Photography I. Works of major photographic artists are studied as they relate to photographic problems explored. **A lab fee of \$50.00 is charged for printing costs. See page 13 for fee reduction/waiver information. Students are requested to supply their own camera if possible and are required to provide their own photo paper. A limited number of cameras are available based on need. Students are responsible for lost, stolen, or significantly damaged cameras.**

### **Digital Photography III (29195) (98610W)**

**Full year, one credit, +1 quality point**

**Grade(s): 11-12**

*Prerequisite: Digital Photography I & II*

This is an advanced photography course for the serious photo student. Students will spend a year building their professional photography portfolio and advancing the skills learned in Photography I and II. **A lab fee of \$50.00 is charged for printing costs. See page 13 for fee reduction/waiver information. Students are requested to supply their own camera if possible and are required to provide their own photo paper. A limited number of cameras are available based on need. Students are responsible for lost, stolen, or significantly damaged cameras.**

- **College Credit:** *This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details.*

### **Introduction to Sculpture (29165)**

**One semester, one-half credit**

**Grade(s): 9-12**

*Prerequisite: None*

This class is designed for students interested in three-dimensional art. Students will learn the principles of sculptural processes and gain fundamental knowledge of materials, tools, and safety procedures. Students will build several sculptures, and learn various techniques used in clay and plaster. The historical significance of sculpture will be explored.

### **Sculpture (29166)**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite: Introduction to Sculpture, Introduction to Crafts or permission of the Visual Art Instructor*

This course is designed for students interested in creating self-expressive sculptural objects, through a variety of materials and techniques, including but not limited to clay, plaster, wood, and wire. Subject matter is approached through realistic, abstract, and non-objective interpretation. Exemplars of contemporary sculptors are examined.

## **Theatre Arts**

### **Theatre Arts I (21400)**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite: None*

This course is an introduction to drama and theatre techniques, designed for the student who wishes to explore the various fields of drama and the theatre as a medium of communication. Participants learn basic acting techniques through pantomime, improvisation, and scene study. Voice improvement, problem-solving abilities, play reading, and acting talents are practiced by working in groups. Activities include a study of the history of the theatre, technical aspects of theatre production, analyses of dramatic structures, and the design and production of a one-act play.

### **Theatre Arts II (21415)**

**Full year, one credit**

**Grade(s): 10-12**

*Prerequisite: Theatre Arts I or permission of Theatre Arts Teacher*

This course is designed to continue the study of dramatic techniques and performance skills gained in Theatre Arts I. Emphasis is on character development, make-up, costuming, acting theories, and stage techniques. Students write, produce, and perform shows and plays for various audiences. The study of the history of theatre continues. Out-of-class rehearsals may be necessary to complete these activities.

### **Theatre Arts III (21425)**

**Full year, one credit**

**Grade(s): 11-12**

*Prerequisite: Theatre Arts II or permission of Theatre Arts Teacher*

This course is a dramatic arts workshop course requiring active participation in productions. Students experience the areas of study and production of a drama as members of a production company, culminating in a full-length production. Each student is required to complete two detailed projects related to class production work, including assignments in at least two of the following three categories: (1) performance; (2) production/directing, management, history, and research; or (3) design/lights, costumes, sets, and props. The study of the history of theatre continues. Out-of-class rehearsals may be necessary to complete these activities.

### **Advanced Theatre IV (21430)**

**Full year, one credit**

**Grade(s): 11-12**

*Prerequisite: Theatre Arts III or permission of Theatre Arts teacher*

In Theatre Arts IV, students conceptualize and oversee the entire production process for several theatrical events. By directing, producing, and managing plays or shows, Theatre Arts IV students synthesize and apply all previously learned technical elements, acting,

and directing techniques, and group dynamic skills. Out-of-class rehearsals may be necessary to complete these activities.

### **Technical Theatre (21435)**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite: Theatre Arts I or permission of Theatre Arts Teacher*

Students learn the basic elements of lighting, set construction, costume, make-up, and props by being actively engaged in providing the technical support for a variety of theatrical events each term. Each student is required to complete two detailed projects related to production needs in the areas of lighting, sets, costumes, make-up, or props. Some after school participation is necessary.

### **Special Considerations**

Students who are interested in baccalaureate study in the arts are advised to take the sequence of study noted (i.e., Art I, II, III, AP; Theatre Arts I, II, III, IV). With instructor approval, students may work on the AP Visual Arts portfolio requirement over a two-year period by enrolling in Art III in the junior year and AP Arts in the senior year. Students interested in further music study after graduation are strongly advised to take the Music Theory course offering.

### **Apprentice, Fine Arts**

**Full year, one-half credit**

**Fine Arts I (29290), Grade(s): 10-11**

**Fine Arts II (29291), Grade(s): 11-12**

*Prerequisite: Fine Arts I or permission of Instructor.*

**Fine Arts III (29292), Grade(s): 12**

*Prerequisite: Fine Arts II or permission from the Instructor*

The Arts Education Office provides the Apprentice Program for students in grades 10-12 who are exceptionally talented and committed to visual arts, music, theatre, or dance. Individual and small group arts experiences are arranged for these identified students. Students are selected in the spring through written application, interview, and audition/portfolio. Applications are available through high school art and music staff, counselors, and the Resource Teachers for Gifted.

## CAREER & TECHNICAL EDUCATION

Career and Technical Education courses help students learn the technical applications of many occupations while they prepare for higher education or post-secondary employment. Courses are offered in the comprehensive high schools within the program areas of Business & Information Technology, Computer Science, Family & Consumer Science, Marketing, Trade and Industrial Education, and Technology Education. All APS high school students are eligible to take courses at the Arlington Career Center which offered courses not available at the comprehensive high schools. Please refer to the Career Center section to see these course offerings. Additionally, CTE offers many *Dual Enrolled courses, please review the section for a list of courses and their school locations.*

*Each Career and Technical course offer the opportunity to earn the career and technical credential required for the Standard Diploma graduation requirement. Please see your counselor for more information.*

<b>Sequence Options at Wakefield, Washington-Liberty, Yorktown High Schools, &amp; the Arlington Career Center</b>			
Graduation requirements for the Standard Diploma require a least two sequential electives. Below are a few samples of the many sequencing options available in CTE. Please see your counselor for a full list of all CTE sequences.			
<b>I. Business and Communication</b>			
<b>Arts, A/V Technology &amp; Communications</b>	<u>Sequence Option 1:</u> Introduction to Information Technology (26116) & Computer Information Systems (26614)	<u>Sequence Option 2:</u> Introduction to Information Technology (26116) & Web Page Design Multimedia (26646)	<u>Sequence Option 3:</u> Web Page Design Multimedia (26646) & Web Page Design & Multimedia, Advanced (26631)
<b>Business, Management &amp; Administration</b>	<u>Sequence Option 1:</u> Accounting with QuickBooks (26320) Computer Information Systems (26614)	<u>Sequence Option 2:</u> Introduction to Business & Marketing (26112) & IB Business Management (36114)	<u>Sequence Option 3:</u> Introduction to Information Technology (26116) & IB Information Technology in a Global Society (36613)
<b>Information Technology</b>	<u>Sequence Option 1:</u> Introduction to Information Technology (26116) Web Page Design & Multimedia (26646)	<u>Sequence Option 2:</u> Introduction to Information Technology (26116) & Database Design & Management DE (96660W)	<u>Sequence Option 3:</u> Web Page Design & Multimedia DE (96646W); Database Design & Management DE (96660W)
<b>Computer Science</b>	<u>Sequence Option 1:</u> Computer Programming (26638) & Computer Programming, Advanced (26643)	<u>Sequence Option 2:</u> Computer Science Principles, AP (33186) & Computer Science, AP (33185) or IB Computer Science Part I (36560) & Part II (36570)	<u>Sequence Option 3:</u> Computer Programming, DE (96638W), Computer Programming, Intensified, DE (96644W) & Computer Programming, Advanced DE (96643W) at the ACC
<b>Marketing</b>	<u>Sequence Option 1:</u> Entrepreneurship (99094W) DE & Entrepreneurship, Advanced (99095), DE	<u>Sequence Option 2:</u> Sports, Entertainment, and Recreation (28123) & Introduction to Business & Marketing (26112)	<u>Sequence Option 3:</u> Introduction to Fashion Careers (28147) & Entrepreneurship (99094W) DE
<b>II. Industry &amp; Engineering</b>			
<b>Science, Technology, Engineering &amp; Mathematics</b>	<u>Sequence Option 1:</u> Engineering I: Intro to Engineering Design (28491) & Engineering II: Principles of Engineering (28492)	<u>Sequence Option 2:</u> Engineering I: Intro to Engineering Design (28491) & Engineering II: Principles of Engineering (28492) Engineering Capstone: Design & Development (28494)	<u>Sequence Option 3:</u> Computer Assisted Technical Drawing (98439W) DE & Computer Assisted Architectural Drawing (98408W) DE
<b>Science, Technology, Engineering &amp; Mathematics</b>	<u>Sequence Option 4:</u> Computer Assisted Technical Drawing (28439) (98439W) & Computer Assisted Engineering Drawing (28438)		
<b>II. Health &amp; Human Services</b>			
<b>Agriculture, Food &amp; Natural Resources</b>	<u>Sequence Option 1:</u> Gourmet Foods: Nutrition & Wellness (28274) & Child Development and Parenting (28232)	<u>Sequence Option 2:</u> Gourmet Foods: Introduction to Culinary Arts (28250) & Gourmet Foods: Nutrition & Wellness (28274)	
<b>Human Services</b>	<u>Sequence Option 1:</u> Child Development & Parenting (28232) & Early Childhood Education I (28235)	<u>Sequence Option 2:</u> Child Development & Parenting (28232) & Teachers for Tomorrow I (99062W) DE	<u>Sequence Option 3:</u> Teachers for Tomorrow I (99062W) DE & Teachers for Tomorrow II (29063)

DE – Course is also available for qualified students to earn dual-enrolled college credit. Please see course description or more information.

\*IB courses are only offered at Washington-Liberty High School

\*\*Additional levels of some sequences are available at the comprehensive high schools. Other CTE courses are also available at the Arlington Career Center. Please see page 76 for more information.

- *Students may earn a selected verified credit upon completion of a CTE sequence and successfully passing a state approved industry certification for that sequence.*
- *Each CTE course provides an opportunity for industry certification for students entering high school in 2013-2014 and beyond to fulfill the career and technical certification required for the Standard Diploma graduation requirement.*

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## **BUSINESS & INFORMATION TECHNOLOGY (IT)**

*All courses qualify for the Career & Technical/Fine Arts credit.*

*Students-selected verified credit can be earned by passing the course related industry certification.*

***Any equivalent of two full-year courses satisfies the sequential elective requirement.***

*Note: Courses that have fewer than 15 students may not be offered based on student interest and budget considerations. In some cases, additional budget considerations may require that courses may not be offered in any given year and impacted students should select an alternative course. Additionally, courses with insufficient enrollment may be offered through distance learning or online learning.*

### **Accounting with QuickBooks (26320)**

**Full year, one credit**

**Grade(s): 9-12**

Accounting students study the basic principles, concepts, and practices of the accounting cycle for a service business and a merchandising business. Topics covered include analyzing transactions, journalizing, and posting entries, preparing payroll records and financial statements, and managing cash control systems. Business ethics and professional conduct are emphasized. Students learn fundamental accounting procedures, using both manual and electronic systems. Students will learn to use the computerized accounting application, QuickBooks, or a similar computerized accounting system.

- **Certification:** *Student-selected verified credit can be earned by passing the course-related industry certification.*

### **Cooperative “Coop” Education Work Experience**

**Full year, Variable (1 to 3 credits) depending on hours worked**

**1 credit (28951), 2 credits (28953), 3 credits (28954)**

*Prerequisite: Concurrently enrolled to a Career & Technical (CTE) Elective*

Cooperative Education is a structured method of instruction that combines classroom-based instruction and on-the-job training to help students prepare for or explore their occupational objectives. It is paid employment. Students work an average of 11 – 15 hours per week. Coop students are guided by a formal, individualized, written training plan that defines the student’s work-experience. The students are evaluated by the coordinating teacher and their employer supervisor to earn letter grades for the course and work experience. The student must pass the concurrent career and technical education (CTE) course to earn course credit and work-experience credit. In addition to the course credit, students may earn 1 to 3 credits for

work-experience. Students must work 280 hours for 1 credit, 560 hours for 2 credits, or a minimum of 840 hours for 3 credits during the current academic year. Any work-experience hours earned during the summer will count towards work credit for the next academic year, provided that the student continues enrollment in a CTE course. Student employment conforms to federal, state, and local child labor laws and regulations. Concurrent CTE courses are any of the Business & Information Technology, Computer Science, Trade & Industrial Education, Technology Education and Family and Consumer Science program electives offered in grades 10<sup>th</sup>- 12<sup>th</sup>. Reference the *Program of Studies* for additional course information.

### **Computer Information Systems (26614) (96614W)**

**Full year, one credit, + 1.0 quality point**

**Grade(s): 9-12**

*Prerequisite: none*

Students apply problem-solving skills to real-life situations through word processing, spreadsheets, databases, multimedia presentations, and integrated software activities. Students work individually and in groups to explore computer concepts, operating systems, networks, telecommunications, and emerging technologies. The work experience is available for this course (*Optional*). Students combine classroom instruction and supervise on-the-job training in an approved position with continuing supervision throughout the school year. With these courses students can meet the career and technical industry certification graduation and the online course graduation requirement.

- **College Credit:** *This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details.*
- **Certification:** *Student-selected verified credit can be earned by passing the course-related industry certification.*

### **Computer Information Systems, Advanced (26649) (96649W)**

**Full Year, one credit + 1.0 quality point**

**Grade(s): 10-12**

*Prerequisite(s): Introduction to IT, Computer Information Systems, or permission of instructor, and/or concurrently enrollment with another Business & Information Technology*

Students apply problem-solving skills to real-life situations through advanced integrated software applications, including printed, electronic, and Web publications. Students work individually and in groups to explore advanced computer maintenance activities, Web site development, programming, networking, emerging technology, and employability skills.

- **College Credit:** This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details.
- **Certification:** Student-selected verified credit can be earned by passing the course-related industry certification.
- **College Credit:** This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details.
- **Certification:** Student-selected verified credit can be earned by passing the course-related industry certification.

**Cyber: Cisco Academy Level 1, Part I (26542) (96542W)**

**Semester, one half credit +1.0 quality point  
Grade(s): 10-12**

*Prerequisite: Concurrent enrollment with Cyber: Cisco Academy Level 1 Part II (26543) (96543W)*

This course prepares students for entry-level careers in the Network Systems pathway. Students develop skills needed to become network technicians, PC support specialists, information systems operators, and network security analyst. It provides a hands-on introduction to networking using tools and hardware commonly found in residential and commercial environments. Labs include PC installation, Internet connectivity, wireless connectivity, file and print sharing, and the installation of game consoles, scanners, and cameras.

- **College Credit:** This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details.
- **Certification:** Student-selected verified credit can be earned by passing the course-related industry certification.

**Cyber: Cisco Academy Level 1, Part II (26543) (96543W)**

**Semester, one half credit +1.0 quality point  
Grade(s): 10-12**

*Prerequisite: Concurrent enrollment with Cyber: Cisco Academy Level 1 Part I (26542) (96542W)*

This course prepares students for jobs as network technicians and helps them develop additional skills required for computer technicians and help desk technicians. It provides a basic overview of routing and remote access, addressing, and security. It also familiarizes students with servers that provide email services. We space, and authenticated access. Students learn about the soft skills required for help desk and customer service positions, and the final chapter helps them prepare for the CCENT certification exam. Network monitoring and basic troubleshooting skills are taught in context.

**Education for Employment Development, Year 1 (29087)**

**Full year, one credit**

**Grade(s): 9-12 (extended grades for students with IEP or students who access Special Ed. Services)**

*Prerequisite: none*

This course teaches students to make informed career and continuing education choices as they transition from school, gain technical skills, and adapt to the workplace. Students are taught ethical behaviors and career-research, job-acquisition, workplace-communication, self-awareness, self-advocacy, customer-service, and life skills. This course offers students integrated labor market needs through an applied employment education format.

**Education for Employment Development, Year 2 (29089)**

**Full year, one credit**

**Grade(s): 9-12 (extended grades for students with IEP or students who access Special Ed. Services)**

This course teaches students to make informed career and continuing education choices as they transition from school, gain technical skills, and adapt to the workplace. Students are taught ethical behaviors and career-research, job acquisition, workplace-communication, self-awareness, self-advocacy, customer service, and life skills. This course offers students integrated labor market needs through an applied employment education format.

**Education for Employment Preparation, Year 1 (29083)**

**Full year, one credit**

**Grade(s): 9-12 (extended grades for students with IEP or students who access Special Ed. Services)**

This course prepares the students on workplace readiness and preparation skills, in preparation for on-the-job site work-based learning. This course teaches students to make informed career and continuing education choices as they transition from school, gain technical skills, and adapt to the workplace-communication, self-awareness, self-advocacy, customer service, and life skills. This course offers



students integrated labor market needs through an applied employment education format.

### **Education for Employment Preparation, Year 2 (29088)**

**Full year, one credit**

**Grade(s): 9-12 (extended grades for students with IEP or students who access Special Ed. Services)**

*Prerequisite: Education for Employment Development, Year 1*

This course continues to advance the students workplace readiness and preparation skills, in preparation for on-the-job site work-based learning. This course teaches students to make informed career and continuing education choices as they transition from school, gain technical skills, and adapt to the workplace. Students are taught ethical behaviors and career-research, job-acquisition, workplace-communication, self-awareness, self-advocacy, customer service, and life skills. This course offers students integrated labor market needs through an applied employment education format. (Optional, opportunity for on-site work experience, which is based on the students' age and work readiness and preparation).

### **Entrepreneurship (29094) (99094W)**

**Arlington Student Enterprise Program**

**Full year, one credit + 1.0 quality point**

**Grade(s): 9-12**

*Prerequisite: None*

Students explore qualities of individual enterprise. They develop skills needed to advance in an ever-changing work environment. Specifically, students develop competencies in decision making, long-range planning, effective communication, accountability, responsibility, and continuing education. This course is designed for students who wish to concentrate on strategies for career development through ownership/management of their own businesses. Although individual skills are emphasized, the focus of the course is on development of a business plan, including the following: determination of the type of business enterprise, legal considerations, location selection, financing, steps in getting the enterprise started, marketing strategy, and interaction with successful entrepreneurs.

As part of the entrepreneurship course, students may apply for the Arlington Student Enterprise (ASE) program. Students are selected to work on client projects based on their expertise in an information technology area. Students will need to demonstrate that they are highly qualified and can work independently on ASE client projects.

- **College Credit:** *This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details.*

- **Certification:** *Student-selected verified credit can be earned by passing the course-related industry certification.*

### **Entrepreneurship Advanced (29095) (99095W)**

**Full year, one credit + 1.0 quality point**

**Grade(s): 9-12**

*Prerequisite: Entrepreneurship (29094) (99094W)*

This course is designed for students who wish to concentrate on advanced strategies for entrepreneurship, building upon concepts introduced in Entrepreneurship (29094) (99094W). The focus of the course is on development of a business plan and small business management. Students will establish, market, and maintain a business.

- **College Credit:** *This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details.*

- **Certification:** *Student-selected verified credit can be earned by passing the course-related industry certification.*

### **Introduction to Information Technology (26116)**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite: None*

Students are offered a hands-on introduction to the various information technology studies available through APS including multimedia production and presentation skills, computer software applications, network administration, programming languages, operating systems, and computer hardware. They will explore IT as a career area and will be able to make an informed choice of advanced IT study, particularly for the IT sequences that lead to industry certification such as A+, Network+, CNA, and the Cisco Academy. With successful completion of the course, students are prepared to pursue further study in the information technology that leads to dual enrolled college courses at Northern Virginia Community College that apply toward the Associates of Science in Information Technology or the Associates of Applied Science in Information Technology at NOVA.

- **Certifications:** *Student-selected verified credit can be earned by passing the course-related industry certification*

### **Web Page Design & Multimedia (26646) (96646W)**

**Full Year, one credit**

**Grade(s):9-12**

*Prerequisite: None*

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

- **College Credit:** *This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details*
- **Certifications:** *Student-selected verified credit can be earned by passing the course-related industry certification.*

### **Web Page Design & Multimedia, Advanced (26631) (96631W)**

**Full Year, one credit + 1.0 quality point**

**Grade(s):10-12**

*Prerequisite: Web Page Design & Multimedia (26646) (96646W)*

Students develop advanced skills for creating desktop-published, interactive multimedia, and Web-site projects. Students work with sophisticated hardware and software, applying skills to real-world projects.

- **College Credit:** *This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details*
- **Certifications:** *Student-selected verified credit can be earned by passing the course-related industry certification.*

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## **COMPUTER SCIENCE**

*All courses qualify for the Career and Technical/Fine Arts credit*

Computer Science is a program of study that prepares students for post-secondary education and careers in programming, information technology, mathematics, science, and engineering fields. Students receive a mathematics or science credit for advanced computer

science courses. Selected courses offer students industry certifications, paid work experience, college credit, and can satisfy the Career and Technical/Fine Arts credit and verified credit requirements for graduation.

### **Computer Programming (26638)**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite: Strongly recommended successful completion of Algebra with a "B" or better*

Students learn to use Java and/or Python programming language to code and compile programs in an open source or Windows environment. Course content includes program design and problem solving, control structures, functions, parameter passing, data structures, arrays, and file processing. Emphasis is on program design. Students can also prepare for recognized industry certifications.

- **Certification:** *Student selected verified credit can be earned by passing the course-related industry certification.*

### **Computer Programming Advanced (26643)**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite: Computer Programming (26638)*

Advanced computer programming builds on the foundation of programming skills. Advanced Programming students use object-oriented programming concepts, I/O control structures, functions and/or methods, data abstractions, data structures to develop database applications, interactive multimedia applications including game applications, mobile applications, and Web applications. The course discusses computer network architecture and the function of computer hardware, including networks and operating systems, data organization, algorithms, and software engineering. Students continue to develop their employability skills as they research pathways for continuing education and careers in the information technology and computer sciences industries and engage in various career building activities. Students can also prepare for highly recognized industry certifications. *Students can also prepare for highly recognized industry certifications.*

- **Certification:** *Student selected verified credit can be earned by passing the course-related industry certification.*

### **Computer Science, AP (33185)**

**Full year, one mathematics credit + 1.0 quality point**

**Grade(s):10-12**

*Prerequisite: Completion of Computer Programming (26638 or MS 16640) with a grade of "B" or better or permission of the instructor*

Advanced Placement Computer Science is a rigorous course emphasizing programming methodology, algorithms, and data structures. Emphasis is placed on applications involving arrays, linked lists, trees, and sorting techniques. Many projects involve outside-of-class practice, study, and reading. Students entering this course must have a solid knowledge of Java programming language. This course meets the requirements for AP Computer Science as outlined in the syllabus published by the College Entrance Examination Board. *Students are required to take the AP exam associated with this course. Students not taking the exam will not earn the additional quality point. (23185) Segments of this course will be taught online, thereby satisfying the graduation requirement for a virtual course.*

**Computer Science Principles, AP (33186)**  
**Full year, one credit + 1.0 quality point**  
**Grade(s): 9-12**

*Prerequisite: Successful completion of Algebra with a "B" or better*

This course offers a multidisciplinary approach to teaching the underlying principles of computation. The course will introduce students to creative aspects of programming, using abstraction and algorithms, working with large data sets, understandings of the internet and issues of cybersecurity, and impacts of computing that affect different populations. APS Computer Science Principles will give students the opportunity to use current technologies to solve problems and create meaningful computational artifacts. (College Board). *Students are required to take the AP exam associated with this course. Students not taking the exam will not earn the additional quality point. (23186). Segments of this course will be taught online, thereby satisfying the graduation requirement for a virtual course.*

**Computer Programming Advanced (26643)**  
**Full year, one credit**  
**Grade(s): 9-12**

*Prerequisite: Computer Programming for MS (16640) or Computer Programming (26638)*

Advanced computer programming builds on the foundation of programming skills. Advanced Programming students use object-oriented programming concepts, I/O control structures, functions and/or methods, data abstractions, data structures to develop database applications, interactive multimedia applications including game applications, mobile applications, and Web applications. The course discusses computer network architecture and the function of computer hardware, including networks and operating systems, data organization, algorithms, and software engineering. Students continue to develop their employability skills as they research pathways for continuing education and careers in the information technology and computer sciences industries and engage in various career building activities.

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## FAMILY & CONSUMER SCIENCES

*All courses qualify for the Career & Technical/Fine Arts credit (full year-one credit, half-year-half credit) Students-selected verified credit can be earned by passing the course related industry certification*

*Note: Courses that have fewer than 15 students may not be offered based on student interest and budget considerations. In some cases, additional budget considerations may require that courses may not be offered in any given year and impacted students should select an alternative course. Additionally, courses with insufficient enrollment may be offered through distance learning or online learning.*

**Child Development & Parenting- Semester (28230)**  
**One semester, one-half credit**  
**Grades 9-12**

*Prerequisite: Tuberculosis screening is required skin*  
This course is designed for the student to learn about quality care for children and good parenting skills. It starts with decision-making steps toward having a family and insights into careers involving children. The course includes nutrition and prenatal development, how to take care of a baby, child growth and development, why children behave the way they do, how play is children's work, how to discipline children, communication techniques, and planning activities for children of various ages. Part of the course work includes guided observations of children with participation in the early childhood setting.

**Child Development & Parenting - Year (28232)**  
**Full year, one credit**  
**Grade(s): 9-12**

*Prerequisite: Tuberculosis screening is required*  
This course is designed for the student to learn about quality care for children and good parenting skills. It starts with decision-making steps toward having a family and insights into careers involving children. The course includes nutrition and prenatal development, how to take care of a baby, child growth and development, why children behave the way they do, how play is children's work, how to discipline children, communication techniques, and planning activities for children of various ages. It also includes the study of adoption, childhood diseases and immunizations, day care options, establishment of routines, sibling rivalry, toy selection, and play activities. The course includes exposure to community resources and observation/participation in the nursery laboratory.

**Gourmet Foods: Nutrition & Wellness - Semester (28272)**

**One semester, one-half credit**

**Grade(s): 9-12**

*Prerequisite: None*

This course offers students the opportunity to further their knowledge of the relationship of diet and exercise to a healthy lifestyle. It includes the management of time, energy, and money to provide adequate food for the individual and family. Nutritional needs, safety, and sanitation practices, and use and care of kitchen equipment provide a framework for the laboratory experiences in basic food preparation.

**Gourmet Foods: Nutrition & Wellness – Year (28274)**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite: None*

This course offers students the opportunity to further their knowledge of the relationship of diet and exercise to a healthy lifestyle. It includes the management of time, energy, and money to provide adequate food for the individual and family. Nutritional needs, safety, and sanitation practices, and use and care of kitchen equipment provide a framework for the laboratory experiences in basic food preparation. Content includes preparing foods for special diets, creating meals with time to spare, learning about foods for entertaining, preparing various ethnic dishes, and exposure to various food related careers.

**Gourmet Foods: Introduction to Culinary Arts (28250)**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite(s): None*

Introduction to Culinary Arts students investigate food safety and sanitation, culinary preparation foundations, basic culinary skills, diverse cuisines, services styles, nutrition and menu development, and the economics of food. Students also explore postsecondary education option and career opportunities within the food industry.

**Introduction to Fashion Careers (28147)**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite: None*

Students in Introduction to Fashion Careers focus on identifying and exploring the individual careers within the apparel, accessory, and textile design, manufacturing, and merchandising industry. Units of study include the relationships that exist among all areas of the clothing industry; related global and economic issues, apparel, accessory, and textile technology; exploration of careers, including entrepreneurial opportunities in related areas; and the skills and personal characteristics necessary for success

in careers in the apparel, accessory, and textile design, manufacturing, and marketing industry.

**Introduction to Interior Design (28289)**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite: None*

The Introduction to Interior Design students explore the influences on the design of interior spaces, investigate careers in the interior design industry, and focus on the technical and soft skills necessary for employment in the field of interior design. Students develop an interior design project that meets specific criteria and includes the elements and principles of design.

**Teachers for Tomorrow I (29062) (99062W)**

**Full year, one credit + 1.0 quality point**

**Grade(s): 11-12**

*Prerequisite: 2.7 GPA*

The Teachers for Tomorrow course introduces juniors and seniors to a career in teaching and education. The primary components of the curriculum are the learner, the school, and the teacher and teaching. The components are intentionally broad in scope and provide a great deal of flexibility based on the career interest of a student. All students are required to observe and participate in an internship outside the Teachers for Tomorrow classroom. The internship may be done from the pre-school level through 12<sup>th</sup> grade. *Note: Students with a grade of “B” or better may earn four credits through Shenandoah University.*

- **College Credit:** *This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details*
- **Certification:** *Student-selected verified credit can be earned by passing the course-related industry certification.*

**Teachers for Tomorrow II (29063)**

**Full year, one credit**

**Grade(s): 12**

*Prerequisite: Teachers for Tomorrow I*

Students continue to explore careers in the Education and Training Cluster and pathways. This course provides the opportunity for students to prepare for careers in education as they research postsecondary options, learn about the process of teacher certification in Virginia, and participate in a practicum experience.

- **Certification:** *Student-selected verified credit can be earned by passing the course-related industry certification.*

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## MARKETING

All courses qualify for the Career and Technical/Fine Arts credit.

Students-selected verified credit can be earned by passing the course related industry certification

The Marketing program is designed for students interested in studying marketing and careers in the following areas: marketing, marketing research, financial services, sports and entertainment, internet marketing, international trade, entrepreneurship, fashion merchandising, marketing management, sales management, international business, hospitality marketing, workplace readiness skills, and advertising. Students acquire a solid foundation in preparing for post-secondary studies and employment. Students can elect to participate in the work experience. Students are also prepared to take the National Customer Service Exam for a selected student-verified credit.

*Note: Courses that have fewer than 15 students may not be offered based on student interest and budget considerations. In some cases, additional budget considerations may require that courses may not be offered in any given year and impacted students should select an alternative course. Additionally, courses with insufficient enrollment may be offered through distance learning or online learning.*

### Introduction to Business & Marketing (26112)

Full year, one credit

Grade(s): 9-12

Prerequisite: None

Introduction to Business and Marketing is recommended as a foundation course to a Business & Information Technology sequence. Students learn the functions of American and international business organizations in the global economy. Activities emphasize the roles of the consumer, marketer, and producer. Students learn basics of the private enterprise system and are introduced to careers in business, including the opportunities of entrepreneurship and world trade.

- **Certification:** Student-selected verified credit can be earned by passing the course-related industry certification.

### Sports, Entertainment, & Recreation Marketing (28123)

Full year, one credit

Grade(s): 10-12

Prerequisite: None

This introductory course helps students develop a thorough understanding of fundamental marketing concepts and theories as they relate to the sports,

entertainment, and recreation industries. Students will investigate the components of branding, sponsorships, and endorsements, as well as promotion plans needed for sports, entertainment, and recreation events. The course also supports career development skills and explores career options. Academic skills (mathematics, science, English, and history/social science) related to the content are a part of this course.

- **Certification:** Student-selected verified credit can be earned by passing the course-related industry certification.

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## TECHNOLOGY EDUCATION

Technical Education courses are designed to offer an orientation to industry and technology and provide exploratory experiences with the tools, equipment, materials, processes, and products of society. Courses may be elected to assist students in making informed and meaningful career and technical education choices and to prepare them for further education.

All courses qualify for the Career and Technical/Fine Arts credit.

*Note: Courses that have fewer than 15 students may not be offered based on student interest and budget considerations. In some cases, additional budget considerations may require that courses may not be offered in any given year and impacted students should select an alternative course. Additionally, courses with insufficient enrollment may be offered through distance learning or online learning.*

### Computer Assisted Technical Drawing (28439) (98439W)

Full year, one period, one credit + 1.0 quality point

Grade(s): 10-12

Prerequisite(s): None

This is a beginning level mechanical drawing class which introduces the skills required to communicate effectively using graphic language. Students use three methods of graphic representation: freehand sketching, mechanical drafting, and computer-assisted drawing. The course content includes career opportunities in the field of technical drawing, freehand sketching, lettering techniques, line types, geometric constructions, multi-view drawings, dimensioning, sectional views, auxiliary views, and computer assisted design. This course is especially recommended for future engineers, architects, or home builders, including students involved in the construction trades.

- **College Credit:** This course may be dual enrolled at Northern Virginia Community

*College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details.*

**Computer Assisted Architectural Drawing (28408)  
(98408W)**

**Full year, one period, one credit + 1.0 quality point  
Grade(s): 10-12**

*Prerequisite(s): Computer Assisted Technical Drawing (28439) (98439W)*

This is a drawing course which focuses on the practices of the fields of architecture and construction using mechanical drafting and computer assisted drawing. These documents include floor plans, electrical plans, wall sections, elevations, and renderings. Students build scale models and reports on various building materials and their individual properties. This class provides information helpful for the homeowner and is especially beneficial to the future architect, interior designer, or contractors, including students involved in the construction trade skill classes. Computer aided drafting using AutoCAD is a component of this course.

- **College Credit:** *This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details.*

**Computer Assisted Engineering Drawing (28438)**

**Full year, one period, one credit**

**Grade(s): 9-12**

*Prerequisite: Computer Assisted Technical Drawing (28439)*

This is a drawing course which focuses on the practices of the fields of engineering and design. Students prepare working drawings necessary in the design and manufacturing of components and assemblies using mechanical drafting and computer assisted drawing programs. These documents include isometric and orthographic drawings as well as models of the drawings. Students also study building materials and their individual properties. This class teaches essential programs for the future engineer and is especially beneficial for college bound STEM students. Computer aided drafting using AutoCAD is a critical part of this course.

**Advanced Drawing & Design (28440)**

**Full Year, one credit**

**Grade(s): 10-12**

*Prerequisite: Computer Assisted Engineering (28438) Drawing or Computer Assisted Architectural Drawing (28408)*

Students use a graphic language for product design and technical illustration. They increase their understanding of drawing techniques learned in the

prerequisite courses. They research design-related fields while identifying the role of advanced drawing and design in manufacturing and construction industry processes. They apply the design process, analyze design solutions, reserve engineer products, create 3-D solid models using CADD, construct physical models, and create multimedia presentations of finished designs. They complete a work portfolio based on a chosen graphic project.

**Engineering I: Intro to Engineering Design (28491)**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite: None*

Engineering I emphasize the development of engineering design. Students use computer software to produce, analyze and evaluate models of project solutions. They study the design concepts of form and function, and then use state-of-the-art technology to translate conceptual design into reproducible products. This course teaches students to understand and apply the design process, apply adaptive design concepts in developing sketches, solve design problems while they develop, create, and analyze product models using solid modeling computer design software.

**Engineering II: Principles of Engineering (28492)**

**Full year, one credit**

**Grade(s): 10-12**

*Prerequisite: Engineering I (28491)*

This course provides an overview of engineering technology. Students develop problem-solving skills by tackling real-world engineering problems. Through theory and practical hands-on experiences, students address the emerging social and political consequences of technological change. Some of the topics covered will be an overview and perspective of engineering, the design process, communication and documentation, engineering systems, statics, materials and materials testing, and thermodynamics.

- **Certification:** *Student-selected verified credit can be earned by passing the course-related industry certification.*

**Engineering Capstone: Design & Development (28494)**

**Full year, one credit**

**Grade(s): 10-12**

*Prerequisite: Engineering II (28492)*

In this 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.

- **Certification:** *Student-selected verified credit can be earned by passing the course-related industry certification.*

### **Introduction to Game Design (28461)**

**Full year, one credit**

**Grade(s): 10-12**

*Prerequisite: None*

Students will explore the use of modeling, simulation, and game development software to solve real-world problems in science, technology, engineering designs, modeling geospatial data, observing, and analyzing physics simulations, programming games for educational purposes, and creating visualization systems with 3D models, including augmented and virtual reality, and artificial intelligence (AI). Students will develop an understanding of the systems, processes, tools, and implications of the field of modeling and simulation technology.

- **Certification:** *Student-selected verified credit can be earned by passing the course-related industry certification.*

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## **DRIVER EDUCATION & SAFETY**

Applicants for a driver's license who are under nineteen years of age must possess a Driver Education Authorization Card (DEC-1) which certifies completion of a driver education program which includes a parent/student driver education component (§22.1-205). ***Failure to successfully complete the classroom component necessitates waiting until the age of nineteen before applying for a license.***

**Driver Education & Safety (27010)**

**First semester, one-half credit**

**Driver Education & Safety (27011)**

**Second semester, one-half credit**

**Grade(s): 10-12**

*Prerequisites:*

- *Virginia Learner's Permit,*
- *Parent/guardian permission form,*
- *Minimum age of fifteen and one-half years, as of the first day of the semester for which enrolled. (Students will be selected for Driver's Education with preference given to the oldest students).*
- *A fee (based on state & APS funding) is charged for the behind-the-wheel instruction program. See page 13 for fee*

**reduction/waiver information.** *The fee must be paid by the first week of classroom instruction.*

- *Students and their parents/guardians are required by state law (§22.1-205; HB1782) to attend the parent/student driver education component meeting (90 minutes) at the beginning of the course.*

The Driver Education course consists of periods of instruction divided between classroom and in-car education, including student experiences in simulators. Successful completion entitles the student to ½ credit, a Driver Education Certificate (DEC-1), and completion of the 45 hours of guided practice (parent log). *Students and their parents/guardians are required by state law (HB1782) to attend the parent student driver education component meeting (90 minutes) at the beginning of the course.* **The parent/student component meeting will start promptly at the advertised time and those arriving late will not be admitted.**

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## **ENGLISH LANGUAGE ARTS**

The English Language Arts Program in Arlington Public Schools focuses on communication and multimodal literacies, reading, writing, and research skills students need for success in school and beyond. Concept-based curriculum is built around literature study in which students are expected to read, write, speak, listen, and think critically and extensively. Curriculum at all grade levels is aligned with the Virginia English Standards of Learning.

Four English credits are required for graduation from high school in Virginia. At all high schools, students may select from a full range of courses, including, but not limited to, English, Intensified, Advanced Placement, Dual Enrollment, and electives.

*Note: Courses that have fewer than 15 students may not be offered based on student interest and budget considerations. In some cases, additional budget considerations may require that courses may not be offered in any given year and impacted students should select an alternative course. Additionally, courses with insufficient enrollment may be offered through distance learning or online learning.*

**English 9 (21130)**

**Full year, one credit**

*"Identity" is the central theme at Grade 9. Core curricular units are designed around enduring*

understandings and essential questions and align with the SOLs for ninth grade.

- Emphasis is placed on reading comprehension by comparing fiction and nonfiction texts. In fiction texts, students will apply knowledge of literary terms and analyze a variety of genres. In ninth grade there will be an increased emphasis on nonfiction reading, and students will make inferences and draw conclusions using explicit and implied textual evidence.
- The student will expand vocabulary using the structural analysis of roots and affixes to understand complex words.
- The student will plan, draft, revise, and edit while writing in a variety of forms with an emphasis on analysis and persuasion while defending a position using counterclaims, reasons, and evidence from credible sources.
- Students will analyze and interpret the social, commercial, and/or political motives behind media messages. Students will use multimodal tools to create presentations both independently and in small groups.
- The student will apply research techniques to analyze information gathered from diverse sources by identifying misconceptions, and possible bias citing both quoted and paraphrased information using either MLA or APA style.
- Students will continue to work in collaborative groups assisting with setting rules and working toward consensus.

### **ELD 3 English 9 (20796)**

**Full year, one credit**

*Prerequisite: English language proficiency placement test, or successful completion of ELD 2 English*

This course is designed for English learners (ELs) who are identified as Level 3 or 4. This course follows the English 9 Standards of Learning

The following alternative course uses the basic structure and content of English 9 but expects more rigorous study.

### **English 9 Intensified (22132)**

**Full year, one credit**

*Prerequisite: High academic achievement in previous English classes. Teacher/counselor recommendation.*

This course is designed for the needs of gifted and advanced students, and requires extensive reading and writing, intensive grammar and vocabulary, rigorous study of fiction, nonfiction, drama, and poetry, and high-level performance all strands of English language arts **beyond** what is required in English 9. Students read a wide array of canonical and contemporary literature related to the theme of “identity” and develop

robust writing skills to showcase their understandings and prepare for future AP/IB/DE course expectations.

### **English 10 (21140)**

**Full year, one credit**

“Community” is the central theme at Grade 10. Core curricular units are designed around enduring understandings and essential questions and align with the SOLs for tenth grade.

- There is a continued emphasis on reading comprehension by comparing fiction and nonfiction texts. Students will analyze the cultural and social function and universal themes of fictional texts from different cultures. Tenth grade students will analyze and synthesize information from nonfiction texts to solve problems, answer questions, and generate new knowledge.
- The student will continue development of vocabulary using roots and affixes, with attention to connotations, idioms, classical allusions, and figurative language.
- The student will use the writing process to write/compose with an emphasis on persuasion and analysis while showing relationships among claims, reasons, and evidence from reliable sources.
- Students will create media messages and analyze the cause-and-effect relationships between mass media coverage and public opinion trends. Students will continue to use multimodal tools to create presentations both independently and in small groups.
- The student will continue to build research skills presenting information gathered from diverse sources, identifying misconceptions and possible bias while crediting sources using MLA or APA style.
- Students will continue to become skilled communicators, working both independently and in collaborative groups while presenting alternate views and working toward common goals.

### **ELD 4 English 10 (20799)**

**Full year, one credit**

*Prerequisite: English language proficiency placement test, or successful completion of ELD 3 English 9*

This course is designed for English learners (ELs) who are identified as Level 3 or 4. This course follows the English 10 Standards of Learning.

**The following alternative course uses the basic structure and content of English 9 but expects more rigorous study.**

### **English 10 Intensified (21142)**

**Full year, one credit**



*Prerequisite: High academic achievement in previous English classes. Teacher and/or counselor recommendation.*

This course is designed for the needs of gifted and advanced students, and requires extensive reading and writing, intensive grammar and vocabulary, rigorous study of study of fiction, nonfiction, drama, and poetry, and high-level performance all strands of English language arts **beyond** what is required in English 10. Students read a wide array of canonical and contemporary literature related to the theme of “community” and develop writing skills to showcase their understandings and prepare for future AP/IB/DE course expectations.

### **English 11**

*There are two end-of-course (EOC) SOL examinations taken during Grade 11 for English. These tests are cumulative, and cover Grades 9, 10 and 11. Passing both SOL tests and the course earns two verified credits:*

**End of Course Tests in English include Writing (March) and Reading (May).**

#### **English 11 (21150)**

**Full year, one credit**

“*National Perspectives*” is the central theme at Grade 11. Core curricular units are designed around enduring understandings and essential questions and align with the SOLs for eleventh grade.

- There is a sustained emphasis on reading comprehension of fiction and nonfiction texts. Students will conduct comparative analyses of multiple texts that address the same topic to determine how authors reach similar or different conclusions. The students will examine and analyze fiction texts by American authors describing the contributions of other cultures and identifying prevalent themes and characterizations, which are reflective of American history and culture.
- The student will continue development of vocabulary, with attention to connotations, idioms, classical allusions, and figurative language.
- The student will continue to use the writing process to write/compose with an emphasis on persuasion and argumentation for multiple purposes and audiences to create focused, organized, and coherent writing.
- Students will create media messages and analyze the cause-and-effect relationships between mass media coverage and public opinion trends. Students will create persuasive multimodal presentations that address alternative perspectives.

- The student will produce a research product synthesizing information from primary and secondary sources while maintaining ethical and legal guidelines for gathering and using information.
- Students will continue to build communication skills working both independently and in collaborative groups. Students will continue to demonstrate the ability to work within collaborative groups while presenting alternate views and working toward common goals.

The following alternative course uses the basic structure and content of English 11 but offers more rigorous study

### **English Language & Composition, AP (31196)**

**Full year, one credit + 1.0 quality point**

**Grade(s): 11**

*Prerequisite: High academic achievement in previous English classes. Teacher/counselor recommendation.*

The Advanced Placement English Language and Composition course is designed to help students become skilled readers of prose written in a variety of American periods, disciplines, and rhetorical contexts and to become skilled writers who can compose for a variety of purposes. Students will become aware of the interactions among a writer’s purposes and rhetorical choices, audience expectations, and subjects, as well as the way literary conventions and the resources of language contribute to effective writing. Class assessments will prepare students for the College Board’s two-part culminating exam, which consists of multiple choice and free response essays. *Students are required to take the AP exam associated with this course. Students not taking the exam will not earn the additional quality point. (21196)*

### **English 11, (College Composition) Dual Enrollment (91150W)**

**Full year, one credit, + 1.0 quality point**

**Grade: 11**

*Prerequisite(s): High academic achievement in previous English classes. Teacher/counselor recommendation. The NVCC entrance requirements must be met before registering.*

This course will address the Virginia Standards of Learning for Grade 11 English and introduce students to critical thinking and the fundamentals of academic writing. Through the writing process, students will refine topics; develop and support ideas; investigate, evaluate, and incorporate appropriate resources; edit for effective style and usage; and determine appropriate approaches for a variety of contexts, audiences, and purposes. Writing activities will include exposition and argumentation with at least one researched essay

that requires students to locate, evaluate, integrate, and document sources and effectively edit for style and usage.

- **College Credit:** *This course may be dual enrolled at Northern Virginia Community College ENG 111 / ENG 112. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details.*

### **Remedial Independent Self-Paced Education**

#### **(RISE) Writing (20201)**

#### **(RISE) Reading (20202)**

**One semester, one-half elective credit**

**Grade(s): 11-12**

Students engage in remedial work in the academic areas for which they have passed the class but failed the SOL assessment. Instructional software and/or on-line programs may be used to supplement instruction. The majority of student work will be completed on an independent study basis, with assistance from the teacher as needed.

### **English 12 (21160)**

**Full year, one credit**

“Power” is the central theme at Grade 12. Core curricular units are designed around enduring understandings and essential questions and align with the SOLs for twelfth grade.

- There is a sustained emphasis on reading comprehension of fiction and nonfiction texts. Students will review multiple texts to identify and evaluate resources to make decisions and solve problems. The students will examine and analyze fiction texts by British and world authors evaluating how authors use key elements to contribute to meaning and interpreting how themes are connected across texts.
- The student will continue development of vocabulary, with attention to connotations, idioms, classical allusions, and figurative language.
- The student will continue to use the writing process to write/compose with an emphasis on persuasion and argumentation for multiple purposes and audiences to create focused, organized, and coherent writing. Students will write to a standard acceptable to both the workplace and postsecondary education.
- Students will create media messages and analyze the cause-and-effect relationships between mass media coverage and public opinion trends. Students will create persuasive/argumentative multimodal presentations both independently and in collaborative groups.

- The student will produce a research product synthesizing information from primary and secondary sources while maintaining ethical and legal guidelines for gathering and using information.
- Students will continue to demonstrate the ability to work within diverse teams and collaborative groups working toward common goals.

The following alternative courses use the basic structure and content of English 12 but offers more rigorous study.

### **English Literature & Composition, AP (31195)**

**Full year, one credit + 1.0 quality point**

**Grade(s): 12**

*Prerequisite: High academic achievement in previous English classes. Teacher/counselor recommendation.*

The Advanced Placement English Literature and Composition course is designed to engage students in the careful reading and critical analysis of imaginative world literature. Through the close reading of selected texts, students can deepen their understanding of the way writers use language to provide both meaning and pleasure for their readers. As they read, students will consider a work’s structure, style, narrative perspective, setting, and themes, as well as more nuanced literary elements such as figurative language, imagery, symbolism, poetic meter, syntax, and tone. Class assessments will prepare students for the College Board’s two-part culminating exam, which consists of multiple choice and free response essays. *Students are required to take the AP exam associated with this course. Students not taking the exam will not earn the additional quality point. (21195)*

### **English 12, (College Composition) Dual Enrollment (91160W)**

**Full year, one credit, + 1.0 quality point**

**Grade: 12**

*Prerequisite(s): High academic achievement in previous English classes. Teacher/counselor recommendation. The NVCC entrance requirements must be met before registering.*

This course will address the Virginia Standards of Learning for Grade 12 English and introduce students to critical thinking and the fundamentals of academic writing. Through the writing process, students will refine topics; develop and support ideas; investigate, evaluate, and incorporate appropriate resources; edit for effective style and usage; and determine appropriate approaches for a variety of contexts, audiences, and purposes. Writing activities will include exposition and argumentation with at least one researched essay that requires students to locate, evaluate, integrate, and

document sources and effectively edit for style and usage.

- **College Credit:** *This course may be dual enrolled at Northern Virginia Community College ENG 111 / ENG 112. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details.*

### **English 12, (British & World Literature) Dual Enrollment (91161W)**

**Full year, one credit, + 1.0 quality point**

**Grade: 12**

*Prerequisite(s): Successful completion of English 11, College Composition, DE (91150W) or English 12, College Composition, DE (91160W). NOVA ENG 111 & ENG 112.*

This course will address the Virginia Standards of Learning for Grade 12 English and examine major works of British and World Literature. Students will study major English works from the Anglo-Saxon period to the present, emphasizing ideas and characteristics of the British literary tradition. Students will also examine major works of world literature, from canon to contemporary. This course involves critical reading and writing experiences throughout.

- **College Credit:** *This course may be dual enrolled at Northern Virginia Community College ENG 251 / ENG 243. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details.*

### **ELECTIVE ENGLISH LANGUAGE ARTS COURSES**

To enrich their studies, increase their achievement, or to pursue their interests, students may take the courses listed below in addition to their required **Major English Language Arts** course.

#### **Elements & Strategies of Reading (21180)**

**Full year, one credit**

**Grade(s): TBD by school**

*Prerequisites: None*

This course is highly recommended for students who would benefit from additional foundational reading support in phonics, phonemic awareness, fluency, vocabulary, and/or comprehension. The course will provide fiction and nonfiction texts matched to individual student reading levels as determined by universal screening tools, as well as short passages appropriate for SOL test preparation.

#### **English 11 Extension (21185)**

**Full year, one elective credit**

**Grade(s): 11-12**

*Prerequisites: Recently exited English Learners who are concurrently enrolled in English 11.*

This course is designed for students who have recently exited from direct services in the English Learners program and who need additional support in reading and writing to succeed in English class and on the EOC English examinations. Students will be supported as they develop analytical reading and writing skills required for success in high school and beyond.

#### **Film Study (21446)**

**One semester, one-half credit**

**Grade(s): TBD by school**

*Prerequisite:*

This course will provide students with grounding in film appreciation, production, and history. Students will be introduced to the major concepts and techniques filmmakers employ in producing a motion picture. After learning the technical aspects of film, students will also be exposed to classic movies and will evaluate their importance as works of art. The course will also hone students' oral and written communication skills as these are the keys to film analysis. *A credit earned in this course will fulfill the Career & Technical/Fine Arts credit requirement for graduation.*

#### **Dynamic Communication (21517)**

**One semester, one-half credit**

**Grade(s): 9-12**

*Prerequisite: None*

This course emphasizes the dynamics of the communication process: speaking, listening, and interacting. Voice development, use of gestures, and audience awareness are stressed as important components of this process. Students will learn techniques to develop confidence in effective discussions, presentations, speeches, interviews, and other social/business speech experiences.

#### **Journalism: Broadcast (21218)**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite: English teacher recommendation, completion of application, and/or interview with instructor.*

Students in this class work to produce a school-specific news show that is regularly broadcasted. Students in this class will explore methods and techniques for reporting, producing, and delivering news and news programs via radio, television, internet, and video/film media. Instruction will explore the responsibilities of professional broadcast journalists, editors, producers, directors, and managers. Students will also have hands-on experience of the principles of broadcast

technology; broadcast reporting; program, sound, and video/film editing; program design and production; and professional standards and ethics. Exact course expectations vary by high school; please consult with instructor for details.

**Journalism: Literary Magazine (21207)**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite: English teacher recommendation, completion of application, and/or interview with instructor.*

Students in this class work to publish a magazine of student literary writings and accompanying artwork. Fiction, nonfiction, poetry, drama, and musical scores are composed and/or edited throughout the publication cycle. Visual art, photography, and layout design is digitally curated and refined throughout the publication cycle. Exact course expectations vary by high school; please consult with instructor for details.

**Journalism: Newspaper (21205)**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite: English teacher recommendation, completion of application, and/or interview with instructor.*

Students in this class work to produce a regularly published school-specific print newspaper and/or website. Expository writing is the main emphasis of this course. The writing includes but is not limited to news, features, editorials, sports, column, and critique writing. Interview and research techniques are employed used to prepare the copy. The mechanics of newspaper production, including copy-editing, layout and design, typography, headline writing, photography and digital picture editing, and various publishing techniques are presented. Exact course expectations vary by high school; please consult with instructor for details

**Journalism: Yearbook (21209)**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite: English teacher recommendation, completion of application, and/or interview with instructor.*

Students in this class work to publish the yearbook. Students use expository writing skills in most aspects of the work, including feature, headline, and caption writing. Students learn and practice the mechanics of magazine production: layout styles, central theme, copy editing, typography, photography, picture editing, layout, and printing techniques. Exact course expectations vary by high school; please consult with instructor for details.

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## HEALTH & PHYSICAL EDUCATION

Two years of health and physical education are required for graduation. To meet this requirement, students generally are scheduled for health and physical education classes in grades 9 and 10. In grades 11 and 12 physical education courses may be elected for a semester or a full year. A program of adaptive physical education is also available in grades 9 through 12.

*Note: Courses that have fewer than 15 students may not be offered based on student interest and budget considerations. In some cases, additional budget considerations may require that courses may not be offered in any given year and impacted students should select an alternative course. Additionally, courses with insufficient enrollment may be offered through distance learning or online learning.*

**Health I (27320)**

**One semester, half credit**

**Grade(s): 9**

This course integrates a variety of health knowledge skills, and behaviors. Students will identify health resources and become advocates for a healthy lifestyle for themselves, family and community. Students will demonstrate their knowledge in emergency first aid and the use of an AED and hands-on practice of skills necessary to perform CPR. Areas of study include emotional, mental, social, and environmental health, safety and emergency preparedness, relationships, substance abuse and disease prevention, and family life education.

**Health & Physical Education (27330)**

**Washington-Liberty and Wakefield only**

**Full year, one credit**

**Grade(s): 9**

*Prerequisite: Concurrent enrollment in ELD courses*  
This course is designed to enable the student with limited English-speaking ability to participate in a positive physical fitness/health education program. Areas of study include emotional, mental, social, and environmental health, safety and emergency preparedness, relationships, substance abuse and disease prevention and family life education.

**Health & Physical Education I (27300)**

**Full year, one credit**

**Grade 9**

*Prerequisite: None*

This course integrates a variety of health knowledge skills, and behaviors and provides students an opportunity to physically demonstrate their knowledge and skills in a variety of lifetime activities. Students will identify health resources and become advocates for a healthy lifestyle for themselves, family, and

community. Students will demonstrate their knowledge to include emergency first aid and the use of an AED and hands-on practice of skills necessary to perform CPR. Areas of study include emotional, mental, social, and environmental health, safety and emergency preparedness, relationships, substance abuse and disease prevention, and family life education. Instruction will show the importance of energy balance and nutrition. Students will plan fitness goals and understand principles of exercise physiology, biomechanics, and anatomy to improve their personal fitness.

### **Health and Physical Education II (27400)**

**Full year, one credit**

**Grade(s): 10**

*Prerequisite: Health and Physical Education I*

Students will demonstrate health and wellness knowledge and skills. Areas of instruction include emotional, mental, social and environmental health; safety and emergency preparedness; relationships; substance abuse, and disease prevention; family life education; and health/medical career promotion. Students will understand principles of exercise physiology biomechanics and anatomy through participation in a variety of lifetime activities. This course emphasizes lifetime physical fitness through individual, group, dance and recreational pursuits. It emphasizes personal fitness by designing, implementing, self-assessing, and modifying a personal fitness plan.

**Adaptive Physical Education (27670) Grade 9**

**Adaptive Physical Education (27680) Grade 10**

**Adaptive Physical Education (27690) Grade 11**

**Adaptive Physical Education (27700) Grade 12**

Students may be enrolled in Adaptive Physical Education by the school nurse upon recommendation by parents, occupational and/or physical therapist, or the family physician. The physical activities of each individual are developed with the aid and cooperation of the parent, school nurse, family physician, and instructor. The family physician should identify activities which are contraindicated for the disability of the student.

### **ELECTIVE PHYSICAL EDUCATION COURSES**

**Physical Education III (27510)**

**First semester; (27515) Second semester**

**One semester, one-half credit**

**Grade(s): 11-12**

**Physical Education IV (27610)**

**First semester; (27615) Second semester**

**One semester, one-half credit**

**Grade(s): 11-12**

*Prerequisite: Physical Education I, II*

This course provides students with the opportunity to participate in physical activities for specific purposes. Options for offering specialized movement courses can be configured by the students' needs. Students will

self-select areas of concentration to study from the following examples:

- Aerobics
- Aquatics (swimming, kayaking, life guarding)
- Dance
- Individual sports/activities
- Outdoor pursuits
- Advanced Weight Training & Conditioning
- Skating
- Self-Defense

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### **ENGLISH LEARNER SERVICES**

English Learner (EL) Services provide instruction for students with who have been identified as ELs. The English Language Development (ELD) curriculum is aligned with the WIDA English Language Proficiency Standards and Virginia Standards of Learning.

Students identified as English language proficiency (ELP) Level 1 or Level 2 study reading/language arts (a two-period block) with a certified ESL teacher. Students study science and social studies with either a certified ESL teacher or in a co-taught classroom and participate in general education electives and physical education. Students are recommended for mathematics courses based on readiness. English credit may be earned with ELD 1, ELD 2, ELD English 9 and ELD English 10 and partially fulfills the English requirement for graduation. Additional ELD classes carry elective or content credit as noted below.

*Note: Courses that have fewer than 15 students may not be offered based on student interest and budget considerations. In some cases, additional budget considerations may require that courses may not be offered in any given year and impacted students should select an alternative course. Additionally, courses with insufficient enrollment may be offered through distance learning or online learning.*

### **English Language Development (ELD) Offerings**

**Full year**

*Placement based on English Language proficiency assessments*

**20775 ELD 1/SLIFE Literacy Development**

*(elective credit). Native language support may be provided as needed.*

**20776 ELD 1/SLIFE Reading (elective credit)**

**20780 ELD 1 Science (elective credit: does not meet science requirement for graduation)**

**20781 ELD 2 Science (elective credit: does not meet science requirement for graduation)**

**24317 ELD Biology (Science credit)**

**24362 ELD Environmental Science (Science credit)**

**24501 ELD Principles of Physics (Science credit)**

**20786 ELD 1 English (English credit)**

20787 ELD 1 Reading (*elective credit*)  
20788 ELD 1 Speaking/Writing (*elective credit*)  
20789 ELD 1 Social Studies (*elective credit*)  
22446 ELD Virginia & US Government (*Social Studies credit*)  
20790 ELD 2 English (*English credit*)  
20791 ELD 2 Reading (*elective credit*)  
20793 ELD 2 Social Studies (*elective credit*)  
20794 ELD 3 Reading 9 (*elective credit*)  
20796 ELD 3 English 9 (*English credit*)  
20797 ELD 4 Reading 10 (*elective credit*)  
20799 ELD 4 English 10 (*English credit*)  
22345 ELD 3 – 4 World History & Geography: 1500 AD to Present (*Social Studies credit*)  
22213 ELD Economics & Personal Finance (*Social Studies credit*)

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## MATHEMATICS

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

Students and families interested in exceptions to course prerequisites or dual enrollment in mathematics courses should see page 2 under Exceptions to Course Prerequisites. These students need to speak with their mathematics teacher.

*Note: Courses that have fewer than 15 students may not be offered based on student interest and budget considerations. In some cases, additional budget considerations may require that courses may not be offered in any given year and impacted students should select an alternative course. Additionally, courses with insufficient enrollment may be offered through distance learning or online learning.*

### High School General Mathematics (23120)

Full year, one elective credit

Grade(s): 9-11

*Prerequisite: Pre-Algebra for 8<sup>th</sup> graders*

Students will develop their understanding of whole number, fraction, decimal and percent computation and estimation. These concepts will be applied to practical problem-solving in the areas of measurement, probability, statistics, and geometry. Students will learn pre-algebra content, including rational numbers, ratio and proportion, integers, variable expressions and equations, and graphing. ***This course will not fulfill the mathematics credits requirement; it does provide an elective credit.***

### ELD SLIFE Math Foundations (23111)

Full year, one elective credit

Grade(s): 9-11

*Prerequisite: None*

This course is intended for students with interrupted schooling who are enrolled in the ELD program. Students will develop their understanding of whole number, fraction, decimal and percent computation and estimation. These concepts will be applied to practical problem solving in the areas of measurement, probability, statistics, and geometry. ***This course will not fulfill the mathematics credits requirement; it does provide one elective credit.***

### ELD SLIFE Pre-Algebra (23113)

Full year, one elective credit

Grade(s): 9-11

*Prerequisite: None*

This course is intended for students with interrupted school who are enrolled in the ELD program. Students will learn pre-algebra content, including rational numbers, ratios & proportions, integers, variable expressions & equations, and graphing. A variety of strategies to target content, process, and language development will be implemented. ***For students expected to enroll in Algebra I or Algebra I, Part I after successful completion of this course. This class will not fulfill the mathematics credits requirement; it does provide one elective credit.***

### Algebra I, Part I (23131)

Full year, one credit after successful completion of 23132 or 23130

*Prerequisite: None*

This full-year, one-period course includes properties of the real number system, the coordinate plane, linear equations and inequalities, systems of equations, functions, and problem solving. Students will earn an elective credit for this course, unless they are seeking standard diploma with accommodations, this course counts as a math credit for a standard diploma with accommodations. After this course, students should take Algebra I, Part II. Students do NOT take an SOL test at the end of this course, but content from this course appears on the Algebra I SOL test at the end of Algebra I, Part II.

### Algebra I, Part II (23132)

Full year, one credit

Grade(s): 9-11

*Prerequisite: Grade "C" or better in the previous mathematics course and teacher recommendation*

This full year, one-period course includes a review of Algebra I, Part I and then adds these topics: exponents, radicals, polynomials, solving and graphing quadratic equations, statistics, and problem-solving. This course counts as a mathematics credit for all students. Prior to this course, students should have taken Algebra I, Part I. *Students take the Algebra I SOL test at the end of this course. Passing the test and the course earns a verified mathematics credit towards graduation.*

**Algebra I (23130)**  
**Full year, one credit**  
**Grade(s): 9-12**

*Prerequisite: Grade "C" or better in the previous mathematics course and teacher recommendation*

This course includes properties of the real number system, linear equations and inequalities, systems of equations and inequalities, exponents, radicals, rational expressions and equations, polynomials, factoring, solving, and graphing quadratic equations, functions, statistics, and problem-solving. Students take the Algebra I SOL test at the end of this course. *Passing the SOL test and the course earns a verified credit.*

**Algebra I Strategies (23124)**  
**Full year, one elective credit**  
**Grade(s): 9-12**

*Prerequisite: None*

The Algebra I Strategies course is an elective course for students who need additional support for success in Algebra I. Students enrolled will develop deeper, targeted, background knowledge, experience more conceptual approaches to the content, and develop the core course content more thoroughly. Concurrent enrollment in Algebra I (23130) is required.

**Algebra, Functions & Data Analysis (AFDA) (23145)**

**Full Year, one credit**  
**Grade(s): 10-12**

*Prerequisite: Algebra I*

This course is intended to be an extension of Algebra I concepts toward a conceptual overview of Algebra II topics with the context of mathematical modeling and data analysis as well as a more in-depth study of statistics topics. Using a discovery approach to learning, students will study the broad characteristics of functions and their behaviors and solve problems that require the formulation of linear, quadratic, exponential, logarithmic equations or a system of equations or inequalities. Students will develop a global understanding of these functions which will aid a more detailed study in subsequent courses. Probability, experimental design and implementation, and analysis of data will be incorporated into the study of functions, and data will be generated by practical applications arising from real life scenarios. This course may be taken after Algebra I and before Geometry or after Geometry and before Algebra II. It is not intended to be taken after Algebra II.

**Algebra II (23135)**  
**Full year, one credit**  
**Grade(s): 9-12**

*Prerequisite: Grade "C" or better in Algebra I (or Algebra I Intensified) and Geometry (or Geometry, Intensified)*

This course is an extension of Algebra I and Geometry. The Algebra II curriculum includes a thorough treatment of quadratics, polynomials, powers, roots, radicals, rationals, and the functions associated with

these topics. The study of logarithms, exponential functions, complex numbers, sequences, series, and permutations, combinations, and probability and statistics is included. The uses of technology and applications are integral parts of this course. *There is an end-of-course SOL test in Algebra II that students may be required to take in an order to meet Federal requirements and/or earn a verified math credit towards graduation.*

**Algebra II/Trigonometry, Intensified (23136)**  
**Full year, one credit**  
**Grade(s): 9-12**

*Prerequisite: Grade "B" or better in Geometry, Intensified and teacher recommendation or "B" in both Algebra I and Geometry and teacher recommendation*

In addition to a more in-depth study of the content of Algebra II (23135) the following topics are included in this advanced course: trigonometry and trigonometric functions. The uses of technology and applications are integral parts of this course. *There is an end-of-course SOL test in Algebra II that students may be required to take in order to meet Federal requirements and/or earn a verified math credit towards graduation.*

**Algebra III (23155)**  
**Full year, one credit**  
**Grade(s): 9-12**

*Prerequisite: Grade "C" or better in Algebra II or grade "D" or better in Algebra II, Intensified and teacher recommendation.*

This course is an in-depth study of trigonometry and advanced algebra topics. The 12-18-week study of trigonometry will include triangle and unit circle trigonometry and trigonometric functions and their applications. Advanced algebra topics will include an extension of previous algebra skills, exponential and logarithmic functions, and rational expressions. Additional topics may include probability, sequences and series, and discrete mathematics. The uses of technology and applications are integral parts of this course.

**Algebra II Strategies (23126)**  
**Full year, one elective credit**  
**Grade(s): 9-12**

*Prerequisite: None*

The Algebra II Strategies course is an elective course for students who need additional support for success in Algebra II. Students enrolled will develop deeper, targeted background knowledge, experience more conceptual approaches to the content, and develop the core course content more thoroughly. Concurrent enrollment in Algebra II (23135) is required.

**Geometry (23143)**  
**Full year, one credit**  
**Grade(s): 9-12**

*Prerequisite: Grade "C" or better in Algebra I Intensified, Algebra I or Algebra I Part II*

Geometry involves the student in the study of mathematical structure using deductive reasoning and the application of direct and indirect proof. This course covers the concepts of transformations, congruence, parallelism, similarity, and perpendicularity, as well as the properties of circles, polygons, and solids. Algebra I concepts are reviewed and applied to coordinate geometry. *There is a Geometry end-of-course SOL test that students may be required to take to meet Federal requirements and/or earn a verified math credit towards graduation.*

### **Geometry, Intensified (23141)**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite: Grade "B" or better in Algebra I Intensified or Grade "A" in Algebra I and teacher recommendation*

Intensified Geometry is a rigorous study of logical reasoning through the use of plane and solid figures and the concepts of Algebra I. The student is expected to demonstrate deductive thinking within a postulational system by constructing original direct, indirect, and coordinate proofs. This course is designed for students who intend to matriculate in the Advanced Placement Program. *There is a Geometry end-of-course SOL test that students may be required to take in order to meet Federal requirements and/or earn a verified math credit towards graduation.*

### **Geometry, Principles (23142)**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite: Grade "C" or better in Algebra I or Algebra I part II or Grade "D" or better Algebra I or Algebra I part II if student has completed and passed the course a second time*

Geometry, Principles is a course designed to enable the student to view geometry through applications. The unity of mathematics is demonstrated through the appropriate use of algebra in developing geometric principles. Such topics as angles, congruence, similarity, parallelism, triangles, transformations, quadrilaterals, and circles are included. The requirements, with respect to coordinate and deductive proof, are less demanding than those of Geometry (23143). *There is a Geometry end-of-course SOL test that students may be required to take to meet Federal requirements and/or earn a verified math credit towards graduation.*

### **Geometry Strategies (23128)**

**Full year, one elective credit**

**Grade(s): 9-12**

*Prerequisite: None*

The Geometry Strategies course is an elective course for students who need additional support for success in Geometry. Students enrolled will develop deeper, targeted background knowledge, experience more conceptual approaches to the content, and develop the core course content more thoroughly. Concurrent

enrollment in Geometry (23143) or Geometry, Principles (23142) is required.

### **Remedial Independent Self-Paced Education (RISE) Algebra (20203)**

### **Remedial Independent Self-Paced Education (RISE) Geometry (20204)**

**One semester, one-half elective credit**

**Grade(s): 11-12**

*Prerequisite: Students have passed the corresponding class but failed the SOL assessment and are lacking the necessary verified credits to graduate.*

Student's study/do target remediation work in the academic areas in which they have passed the class but failed the SOL assessment, using instructional software and/or on-line programs. Although study will be teacher assisted, most of the student work will be completed on an independent study basis. Courses offered for remediation include English (writing), English (reading/literature and research), Algebra I, Geometry, Biology, Earth Science, World Geography, and World History. *Note: Students will take this class on a pass/fail basis.*

### **Pre-Calculus/Trigonometry (23162)**

**Full year, one credit**

**Grade(s): 11-12**

*Prerequisite: Grade "C" or better in Algebra III or Algebra II, Intensified or Grade "A" in Algebra II and teacher recommendation*

This course consists of an integrated review of elementary functions: polynomial, linear, exponential, logarithmic, and trigonometric. Other major areas include a study of analytic geometry, parametric equations, polar coordinates, sequences and series, discrete mathematics, vectors, matrices, and an introduction to limits and derivatives. Students will also study trigonometric functions, solve trigonometric equations, and trigonometric identities. This course provides students with the necessary skills and concepts for the study of Calculus AB the following year. The uses of technology and applications are integral parts of this course.

### **Pre-Calculus, Intensified (23164)**

**Full year, one credit**

**Grade(s): 10-12**

*Prerequisite: Grade "B" or better in Algebra II/Trigonometry, Intensified and teacher recommendation or Grade "A" in Algebra III and teacher recommendation.*

This course offers the student a study of the same topics as those in Pre-Calculus/Trigonometry (23162), but the material is covered in greater depth and enriched with more emphasis on abstract concepts and mathematical structure. It provides the student with the necessary skills and concepts for the study of calculus the following year. In addition, the following topics may be included: vectors, analytic geometry of lines and planes in space, transformations of the plane, development of the concept of the limit of a sequence,



and completeness of the real number system. The uses of technology and applications are integral parts of this course.

### **Probability & Statistics (23190)**

**Full year, one credit**

**Grade(s): 10-12**

*Prerequisite: Grade "C" or better in Algebra II or Algebra II Intensified.*

This course offers an introduction to modern statistics and probability. Students learn the fundamental ideas of probability, some of which are applied to developing statistical methods in the next part of the course. The study of statistics includes the construction and interpretation of statistical graphs, measures of central tendency and variation, methods of sampling, binomial and normal distributions, and hypothesis testing, confidence intervals, regression, correlation, probability, permutations, and combinations. Applications are emphasized and technology will be used to simulate probability experiments, illustrate statistical concepts, and perform statistical analyses.

### **Statistics, AP (33192)**

**Full year, one credit + 1.0 quality point**

**Grade(s): 11-12**

*Prerequisite: Grade "B" or better in Algebra II or Algebra II, Intensified, Probability & Statistics, or Algebra III and teacher recommendation*

This course provides the advanced mathematics student the opportunity to study the topics included in the Advanced Placement Statistics syllabus as provided by the College Entrance Examination Board. Topics include the study of probability and probability distributions, descriptive statistics such as measure of central tendency and variation, random numbers and simulation, confidence intervals, hypothesis testing for one and two sample data, contingency tables, correlation, and regression analysis. The uses of technology and computer software to analyze data are emphasized. *Students are required to take the AP exam associated with this course. Students not taking the exam will not earn the additional quality point. (23192)*

### **Calculus AB, AP (33177)**

**Full year, one credit, + 1.0 quality point**

**Grade(s): 10-12**

*Prerequisite: Grade "C" or better in Pre-Calculus, Intensified, and teacher recommendation. Grade "B" or better in Pre-Calculus/Trigonometry and teacher recommendation*

A review of those topics needed for the study of calculus; theory of limits, differential calculus, and its applications; integral calculus and its applications, problem solving at the calculus level; and those topics which are contained in the Advanced Placement Calculus AB syllabus as given by the College Entrance Examination Board. *Students are required to take the AP exam associated with this course. Students not taking the exam will not earn the additional quality point. (23177)*

### **Calculus BC, AP (33179)**

**Full year, one credit, + 1.0 quality point**

**Grade(s): 10-12**

*Prerequisite: Grade "B" or better in Pre-Calculus, Intensified, and teacher recommendation or grade "A" in Pre-Calculus and teacher recommendation*

In addition to the topics in Calculus AB, vector functions, polar areas, volumes, sequences, and series are covered. Limits and proofs are given more stress than in Calculus AB. Details may be found in the syllabus for Calculus BC published by the College Entrance Examination Board. *Students are required to take the AP exam associated with this course. Students not taking the exam will not earn the additional quality point. (23179)*

**The following dual enrollment courses may be taught as independent study, online courses at some locations. Please consult your school counselor for more information.**

### **Multivariable Calculus (93178W)**

**Full year, one credit, + 1.0 quality point**

**Grade(s): 12**

*Prerequisite: Successful completion of Calculus BC, and students must meet all criteria for dual enrollment courses with Northern Virginia Community College*

Multivariable Calculus is offered for those students who have completed the Calculus BC prior to their senior year. Some of the topics the course will cover are graphing three dimensional surfaces, integration and differentiation of vector valued functions, limits, and continuity of functions of two or more variables, partial derivatives, multiple integrals, directional derivatives and gradients, vector fields, Green's Theorem, and Stoke's Theorem.

- **College Credit:** *This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details.*

### **Vector Calculus (93175W)**

**One Semester, one-half credit, + 1.0 quality point**

**Grade(s): 12**

*Prerequisite: Successful completion of Calculus BC, AP, and students must meet all criteria for dual enrollment courses with Northern Virginia Community College*

Vector Calculus is offered for those students who have completed Calculus BC prior to their senior year. Some of the topics the course will cover are graphing three dimensional surfaces, integration and differentiation of vector valued functions, limits, and continuity of functions of two or more variables, partial derivatives, multiple integrals, directional derivatives and gradients, vector fields, and Green's Theorem.

- **College Credit:** *This course may be dual enrolled at Northern Virginia Community*

*College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details.*

### **Linear Algebra (93165W)**

**One Semester, one-half credit, + 1.0 quality point**

**Grade(s): 12**

*Prerequisite: Successful completion of Calculus BC, AP and student must meet all criteria for dual enrollment courses with Northern Virginia Community College*

Linear Algebra is offered for those students who have completed Calculus BC prior to their senior year. Students will learn about systems of linear equations, vector spaces, linear transformations, and eigenvalues. This course will improve students' quantitative reasoning and develop deductive logic skills.

- **College Credit:** *This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details.*

### **Differential Equations (93180W)**

**One Semester, one-half credit, + 1.0 quality point**

**Grade(s):12**

*Prerequisite: Successful completion of Calculus BC, AP and student must meet all criteria for dual enrollment courses with Northern Virginia Community College*

Differential Equations is offered for those students who have completed Calculus BC prior to their senior year. This course introduces first order differential equations, linear differential equations, numerical methods, and applications. Some of the topics the course will cover are techniques of solving first order differential equations, homogeneous and non-homogeneous linear differential equations with constant coefficients, systems of linear differential equations using eigenvalues, and applied problems.

- **College Credit:** *This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details.*

### **Quantitative Analysis (93167W)**

**Full year, one credit, + 1.0 quality point**

**Grade(s): 11 & 12**

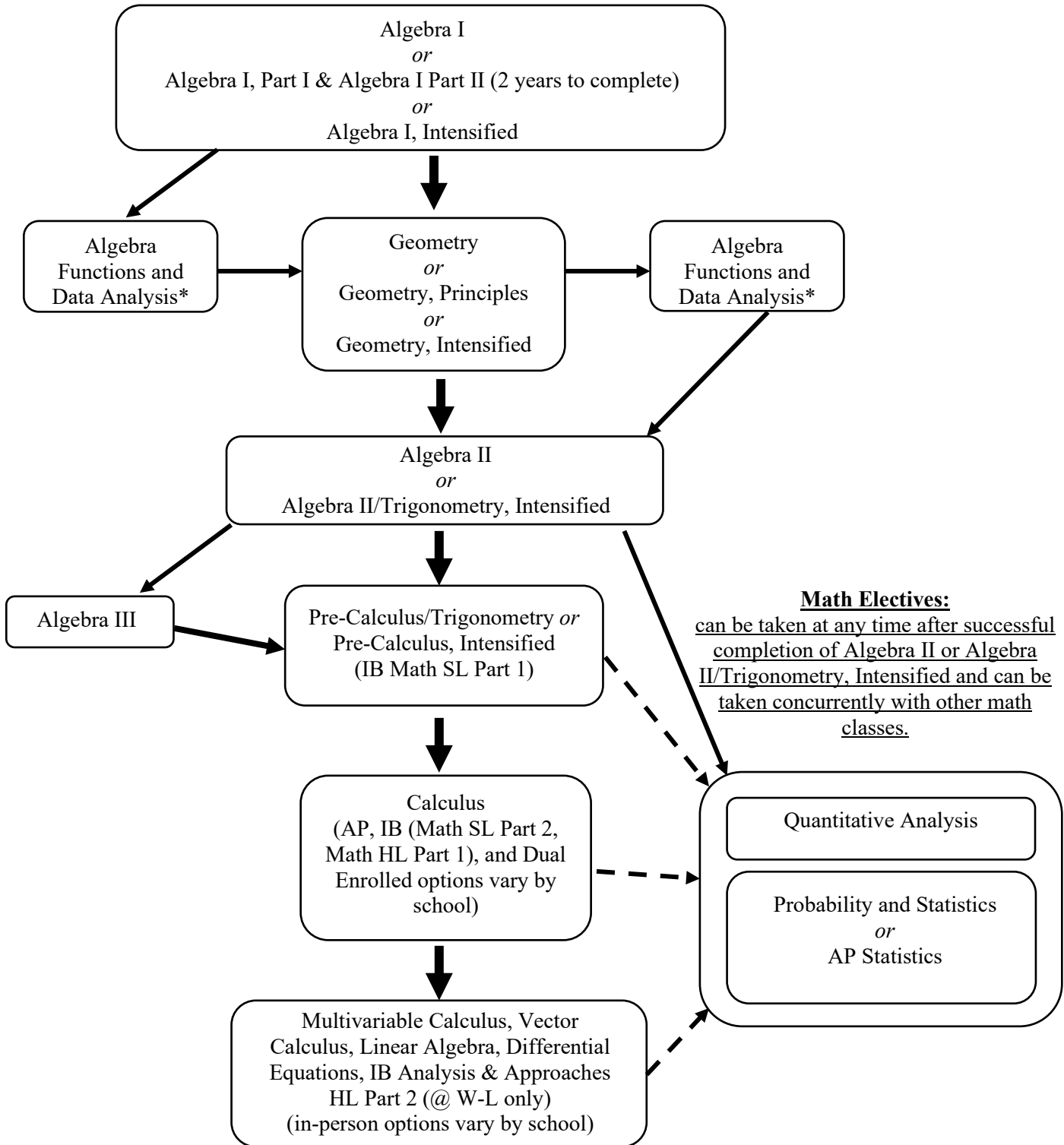
*Prerequisite: Qualifying score on the NOVA placement exam; Grade "C" or higher in Algebra I, Geometry, Functions, and Data Analysis or Algebra II*

This dual enrollment course presents topics in proportional reasoning, modeling, financial literacy, and validity studies (logic and set theory). Focuses on the process of taking a real-world situation, identifying the mathematical foundation needed to address the problem, solving the problem, and applying what is learned to the original situation.

- **College Credit:** *This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details.*

## Arlington Public Schools' Math Course Pathways from Algebra I and above

*Students will enter these pathways when enrolled in any Algebra I course (which will occur at different grade levels). There are multiple pathways and courses that students may take depending upon their readiness. Please see specific course descriptions for prerequisite requirements.*



For specific IB and Dual Enrolled courses not mentioned here, please see the index of courses offered at individual high schools. Students needing additional support may be concurrently enrolled in Algebra I, Geometry, or Algebra II and a Strategies course.

\*AFDA may be taken after Algebra I and before Geometry OR after Geometry and before Algebra II in high school only.

## HS Pathways options towards College Credit Courses based on Grade 8 Math Course

(for students who *are not* enrolled in Intensified Math Courses in Grade 9)

Grade 8	Grade 9	Grade 10	Grade 11	Grade 12
Pre-Algebra for 8 <sup>th</sup> Graders	Algebra I	Geometry	Algebra II	<i>Quantitative Analysis*</i> or <i>AP Statistics**</i>
Pre-Algebra for 8 <sup>th</sup> Graders	Algebra I (w/ Geometry NW in the Summer AFTER 9 <sup>th</sup> grade)	Algebra II	Pre-Calculus/ Trigonometry***	<i>AP Calculus AB</i> or <i>Quantitative Analysis</i> or <i>AP Statistics</i>
Algebra I (or Algebra I, Intensified with a C or lower)	Geometry	Algebra II	Pre-Calculus/ Trigonometry***	<i>AP Calculus AB</i> or <i>Quantitative Analysis</i> or <i>AP Statistics</i>
Algebra I (or Algebra I, Intensified with a C or lower)	Geometry	Algebra II	Algebra III	<i>Quantitative Analysis*</i> or <i>AP Statistics</i>
Intensified Geometry (with a C or lower)	Algebra II	Pre-Calculus/ Trigonometry***	<i>AP Calculus AB</i> or <i>AP Statistics</i>	<i>AP Calculus BC</i> or <i>AP Statistics</i>

\*To enroll in Quantitative Analysis, students must meet placement criteria. This is a Dual Enrolled course with NVCC thus grades will go on a NVCC transcript

\*\* To enroll in AP Statistics following Algebra II, students must earn a B or higher in Algebra II

\*\*\* To enroll in Pre-Calculus/Trigonometry after Algebra II, students must earn an A or higher in Algebra II and have a teacher recommendation

(for students who *are* enrolled in Intensified Math Courses in Grade 9)

Grade 8	Grade 9	Grade 10	Grade 11	Grade 12
Algebra I, Intensified	Geometry, Intensified	Algebra II/ Trigonometry, Intensified	Pre-Calculus, Intensified	<i>AP Calculus BC</i> or <i>AP Calculus AB</i> or <i>AP Statistics</i>
Geometry, Intensified	Algebra II/ Trigonometry, Intensified	Pre-Calculus, Intensified	<i>AP Calculus BC</i>	<i>Multivariable Calculus</i> or <i>Vector Calculus &amp; Linear Algebra</i> or <i>AP Statistics</i>
Geometry, Intensified	Algebra II/ Trigonometry, Intensified	Pre-Calculus, Intensified	<i>AP Calculus AB</i> or <i>AP Statistics</i>	<i>AP Calculus BC</i> or <i>AP Statistics</i>

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## SCIENCE

The Arlington Public Schools is committed to providing a comprehensive science program. The ideal science curriculum engages all students while providing opportunities for those students demonstrating a heightened science interest and aptitude.

A full range of science offerings is available to all students. In addition, enhanced science opportunities are provided through an intensified science sequence and advanced placement programs.

*It is important to note the math prerequisites at each course level to ensure sequential progress within the intensified science sequence and advanced placement programs.*

*Note: Courses that have fewer than 15 students may not be offered based on student interest and budget considerations. In some cases, additional budget considerations may require that courses may not be offered in any given year and impacted students should select an alternative course. Additionally, courses with insufficient enrollment may be offered through distance learning or online learning.*

### **ELD Biology (24317) Laboratory course**

**Full year, one credit**

**Grade(s): 10-12**

*Prerequisite: Placement based on English Language proficiency assessments*

This course consists of a basic study of the cell, plants, animals, and human biology. Students work both independently and cooperatively on laboratory investigations and textbook materials.

*There is an end-of-course SOL Examination. Passing the SOL test and the course earns a verified credit.*

### **Biology (24310) Laboratory course**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite: None*

This course covers the development of biological concepts applicable to everyday living. Content includes the use of various methods of science and a study of cells, microbiology, plants, animals, genetics, physiology, and ecology. Emphasis is placed on laboratory work to encourage critical thinking. A variety of supplementary materials is used to stimulate and encourage students of varying abilities. *There is an end-of-course SOL Examination. Passing the SOL test and the course earns a verified credit.*

### **Intensified Biology (24315) Laboratory course**

**Full year, one credit**

**Grade(s): 9**

This course aims to prepare students for college-level work in biology. Topics covered include molecular biology, cytology, genetics, cell physiology, ecology, and a survey of the biological kingdoms. Extensive laboratory technique, experimentation, and analysis are emphasized. In addition, students will complete an independent experimental or engineering design project. *There is an end-of-course SOL Examination. Passing the SOL test and the course earns a verified credit.*

### **Biology, AP (34370) Laboratory course**

**Full year, one credit + 1.0 quality point per credit upon completion of both credits and AP exam, double periods, concurrent enrollment with (34371)**

**Grade(s): 11-12**

*Prerequisite: Successful completion of Intensified Science sequence or first level courses in biology and chemistry and permission of the instructor*

Advanced Placement Biology is a college level biology course which presents students with an in-depth study of all the major areas of biology. The course outline has been developed by the College Entrance Examination Board based on a recent survey of college biology courses. Through this course student are prepared to take the Advanced Placement Biology examination for which college credit may be awarded. Course content reflects the following three major topics: Molecules and Cells, Heredity and Evolution, and Organisms and Populations. A rigorous laboratory program is based on the laboratory activities required in the Advanced Placement Biology syllabus. *Students are required to take the AP exam associated with the two required courses. Students not taking the exam will not earn the additional quality point for either course. (24370) (24371)*

### **Selected Topics in Biology (34371)**

**Full year, one credit, double periods**

**Grade(s): 11-12**

*Prerequisite: Concurrent enrollment in Advanced Placement Biology (34370)*

Laboratory experience is an essential element of aspect of the course. The recommended biology laboratory topics include diffusion and osmosis, enzyme catalysis, mitosis and meiosis, plant pigments and photosynthesis, cell respiration, molecular biology, genetics of organisms, population genetics and evolution, transpiration, physiology of the circulatory system, animal behavior, dissolved oxygen and aquatic primary productivity.

### **Ecology (24365)**

**Full year, one credit**

**Grade(s): 10-12**

*Prerequisite(s): Successful completion of Biology*

This course is designated to build on biological concepts that focus on the relationship and interactions

between organisms and their environment. Topics include the flow of matter and energy in biotic and abiotic components of an ecosystem, geochemical processes (carbon, nitrogen, phosphorus, and oxygen cycles), chemical and biochemical processes essential for life, water on life processes, and processes and interactions of Earth systems.

**Environmental Science (24361)**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite: None*

This is an interdisciplinary course, with a focus on the environment and humans' impact on our planet. Topics include scientific inquiry, the physical world, the living environment, resource conservation, and legal and civic responsibility. Laboratory and field experiences are an important component of this course and are designed to stimulate critical thinking as well as reinforce and expand content. *This course may count as either Biology or Earth Science credit.*

**ELD Environmental Science (24362)**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite: Placement based on English Language proficiency assessments*

The course is designed to be an introduction to the important ideas of environmental science. Topics will be dealt with on a conceptual level and will include scientific inquiry, the physical world, the living environment, resource conservation, and legal and civic responsibility. Laboratory and field experiences are an important component of this course and are designed to stimulate critical thinking as well as reinforce and expand content. *This course may count as either Biology or Earth Science credit.*

**Chemistry (24410) Laboratory course**

**Full year, one credit**

**Grade(s): 10-12**

*Prerequisite: Successful completion of Algebra I or equivalent course*

The primary goal is to give students a broad introduction to the fundamental aspects of chemistry, which could be applied to future studies in chemistry or to daily life. Concepts are reinforced through numerous laboratory activities. *There is an end-of-course SOL Examination. Passing the SOL test and the course earns a verified credit.*

**Intensified Chemistry (24415) Laboratory course**

**Full year, one credit**

**Grade(s): 10-11**

*Prerequisite: Completion or concurrent enrollment in Algebra II or permission of the instructor*

This course aims to prepare students for college-level work in chemistry. The course provides a thorough introduction to the structure and behavior of atoms and molecules and the principles governing chemical reactions. Laboratory work, stressing analysis of

quantitative data, is emphasized. In addition, students will complete an independent experimental or engineering design project. *There is an end-of-course SOL Examination. Passing the SOL test and the course earns a verified credit.*

**Chemistry, AP (34470) Laboratory course,**

**Full year, one credit + 1.0 quality point per credit upon completion of both credits and AP exam, double periods, concurrent enrollment with (34471)**

**Grade(s): 11-12**

*Prerequisite: Successful completion of Intensified Science sequence or first level course in Chemistry and permission of the instructor*

Advanced Placement Chemistry is a college level course designed to develop an in-depth understanding of the major areas of chemistry. The curriculum is based on the topics included in the Advanced Placement Chemistry syllabus provided by the College Entrance Examination Board. Emphasis is placed on chemical calculation, mathematical formulation of principles, and laboratory work. *Students are required to take the AP exam associated with the two required courses. Students not taking the exam will not earn the additional quality point for either course. (24470) (24471)*

**Selected Topics in Chemistry (34471)**

**Full year, one credit, double periods**

**Grade(s): 11-12**

*Prerequisite: Concurrent enrollment in Advanced Placement Chemistry (34470)*

The focus of the Selected Topics class will be lab work that allows the students to gain experience with traditional laboratory exercises and to have opportunities to design and carry out their own investigations. Topics of study include, but are not limited to, atomic theory and atomic structure, chemical bonding, nuclear chemistry, gases, liquids and solids, solutions, reaction types, stoichiometry, equilibrium, kinetics, and thermodynamics.

**Earth Science (24210) Laboratory course**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite: Reading on or above ninth grade level*

Earth Science is an introduction to geology, oceanography, meteorology, and astronomy. The course includes the formation of rocks and minerals, landforms and changes, interrelationships of the earth's interior, surface and land features, a study of the solar system, and cosmic phenomena. Laboratory experiences within these areas of study are provided. *There is an end-of-course SOL Examination. Passing the SOL test and the course earns a verified credit.*

**Intensified Earth Science (24215) Laboratory course,**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite: Reading on or above ninth grade level*

This course aims to prepare students for college-level work in geology, oceanography, meteorology, and astronomy. The course includes the formation of rocks and minerals; landforms and changes; interrelationships of the earth's interior, surface, and land features; a study of the solar system; and the life and death of stars. Laboratory technique, experimentation, and analysis are emphasized. In addition, students will complete an independent experimental or engineering design project. *There is an end-of-course SOL Examination. Passing the SOL test and the course earns a verified credit.*

**Principles of Physics (24500) Laboratory course,  
Full year, one credit  
Grade(s): 10-12**

*Prerequisite: None*

The course is designed to be an introduction to the important ideas in physics. Topics will be dealt with on a conceptual level. The first semester emphasizes the study of motion and forces. The second semester emphasizes the study of light, electricity, magnetism, and nuclear physics.

**ELD Principles of Physics (24501) Laboratory course**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite: English language proficiency placement test*

The course is designed to be an introduction to the important ideas in physics. Topics will be dealt with on a conceptual level. Emphasis will be placed on motion, forces, momentum, energy, heat, light, electricity, and magnetism.

**Physics (24510) Laboratory course**

**Full year, one credit**

**Grade(s): 10-12**

*Prerequisite: Completion or concurrent enrollment in Algebra II or an equivalent course*

The primary goal of the course is to give a broad introduction to the fundamental topics/ideas in physics. Emphasis will be placed on the use of mathematical skills in solving problems involving motion, forces, momentum, energy, heat, light, electricity, and magnetism.

**Intensified Physics (24515) Laboratory course**

**Full year, one credit**

**Grade(s): 11-12**

*Prerequisite: Completion of or concurrent enrollment in Algebra II or an equivalent course*

This course aims to prepare students for college-level work in physics. Intensified Physics is a thorough and rigorous introduction to classical mechanics, thermodynamics, waves, light, electromagnetism, quantum mechanics, relativity, and nuclear physics on the high school level. The course emphasizes the development of mathematical and other problem-solving skills. Laboratory work involving quantitative

data collection and analysis will be stressed. In addition, students will complete an independent experimental or engineering design project.

**Physics I, AP (34578) Laboratory course,  
Full year, one credit + 1.0 quality point per credit upon completion of both credits and AP exam, double periods, concurrent enrollment with (34568)  
Grade(s): 11-12**

*Prerequisite: Successful completion or concurrent enrollment in Pre-Calculus or Algebra III or completion of Physics or Intensified Physics. Concurrent enrollment in Selected Topics in Physics I, AP is required.*

This is an algebra-based physics course that is equivalent to a first-semester college course in algebra-based physics. The course covers Newtonian mechanics (including rotational dynamics and angular momentum); work, energy, and power; mechanical waves; and sound. It will also introduce electric circuits. *Students not taking the exam will not earn the additional quality point for either course. (24578) (24568)*

**Selected Topics in Physics I, AP (34568)**

**Full year, one credit, double periods**

**Grade(s): 11-12**

*Prerequisite: Concurrent enrollment in Physics I, AP (34578)*

The predominant focus of the Selected Topics class will be in-depth lab work that challenges the students to apply knowledge to real life. Topics of study will complement the material taught in Physics I, AP.

**Physics II, AP (34579) Laboratory course,**

**Full year, one credit + 1.0 quality point per credit upon completion of both credits and AP exam, double periods, concurrent enrollment with (34569)  
Grade(s): 11-12**

*Prerequisite: Successful completion or concurrent enrollment in Pre-Calculus or Algebra III or completion of Physics or Intensified Physics. Concurrent enrollment in Selected Topics in Physics II, AP is required.*

This is an algebra-based physics course that is equivalent to a second-semester college course in algebra-based physics. The course covers fluid mechanics; thermodynamics; electricity and magnetism; optics; and atomic and nuclear physics. *Students not taking the exam will not earn the additional quality point for either course. (24579) (24569)*

**Selected Topics in Physics II, AP (34569)**

**Full year, one credit, double periods**

**Grade(s): 11-12**

*Prerequisite: Concurrent enrollment in Physics II, AP (34579)*

The predominant focus of the Selected Topics class will be in-depth lab work that challenges the students

to apply knowledge to real life. Topics of study will complement the material taught in Physics II, AP.

**Physics C: Mechanics & Electricity & Magnetism, AP (34570) Laboratory course,  
Full year, one credit + 1.0 quality point per credit upon completion of both credits and AP exam, double periods, concurrent enrollment with (34571)  
Grade(s): 12**

*Prerequisite: Successful completion of Intensified Science sequence or first level course in Physics and permission of the instructor. Successful completion of or concurrent enrollment in Calculus AB, AP or BC, AP.*

Physics C, AP represents the first part of a university-level sequence in physics. Calculus is used to derive physical principles and to solve problems. A rigorous laboratory program is conducted that complements the advanced placement syllabus. The first semester is an in-depth study of Newtonian Mechanics, and the second semester is concerned entirely with Electricity and Magnetism. *Students are required to take the AP exam associated with the two required courses. Students not taking the exam will not earn the additional quality point for either course. (24570) (24571)*

**Selected Topics in Physics C (34571)  
Full year, one credit, double periods  
Grade(s): 12**

*Prerequisite: Concurrent enrollment in Advanced Placement Physics C: Mechanics and Electricity & Magnetism (34570)*

Selected Topics in Physics provides students the opportunity to extend laboratory experiences in mechanics and electricity and magnetism. In addition, students can study other areas of physics. These topics emphasize laboratory explorations, critical thinking, and represent the opportunity to engage in independent research. Topics include, but are not limited to, relativity, waves, alternating current circuits, and energy conversions.

**Astronomy (24700) Laboratory course  
Full year, one credit  
Grade(s): 11-12**

*Prerequisite: Successful completion of Earth Science or Physics*

Astronomy is an introductory study of the universe, its contents, and physical laws. Content includes solar system physics, celestial navigation, constellation study, and cosmology. Laboratory activities provide exercises in celestial mechanics and observations and predictions of astronomical events.

**Remedial Independent Self-Paced Education (RISE) Biology (20205) (RISE) Earth Science (20206)  
One semester, one-half elective credit  
Grade(s): 11-12**

*Prerequisite: Students have passed the class(es) but failed the SOL assessment(s) and are lacking the necessary verified credits to graduate.*

Student's study/do remedial work in the academic areas in which they have passed the class but failed the SOL assessment, using instructional software and/or on-line programs. Although study will be teacher assisted, most of the student work will be completed on an independent study basis. *Note: Students will take this class on a pass/fail basis.*

**FULL YEAR SCIENCE PROGRAMS (CAREER CENTER)**

**Biotechnology in Health & Sciences (28326)  
Full year, one credit  
Grade(s): 10-12**

*See page 82 for description of this course.*

**Emergency Medical Technician I (98334W)  
Full year, one credit + 1.0 quality point  
Grade(s): 10-12**

*See page 90 for description of this course.*

**Emergency Medical Technician II (98335W)  
Full year, one credit + 1.0 quality point  
Grade(s): 10-12**

*See page 90 for description of this course.*

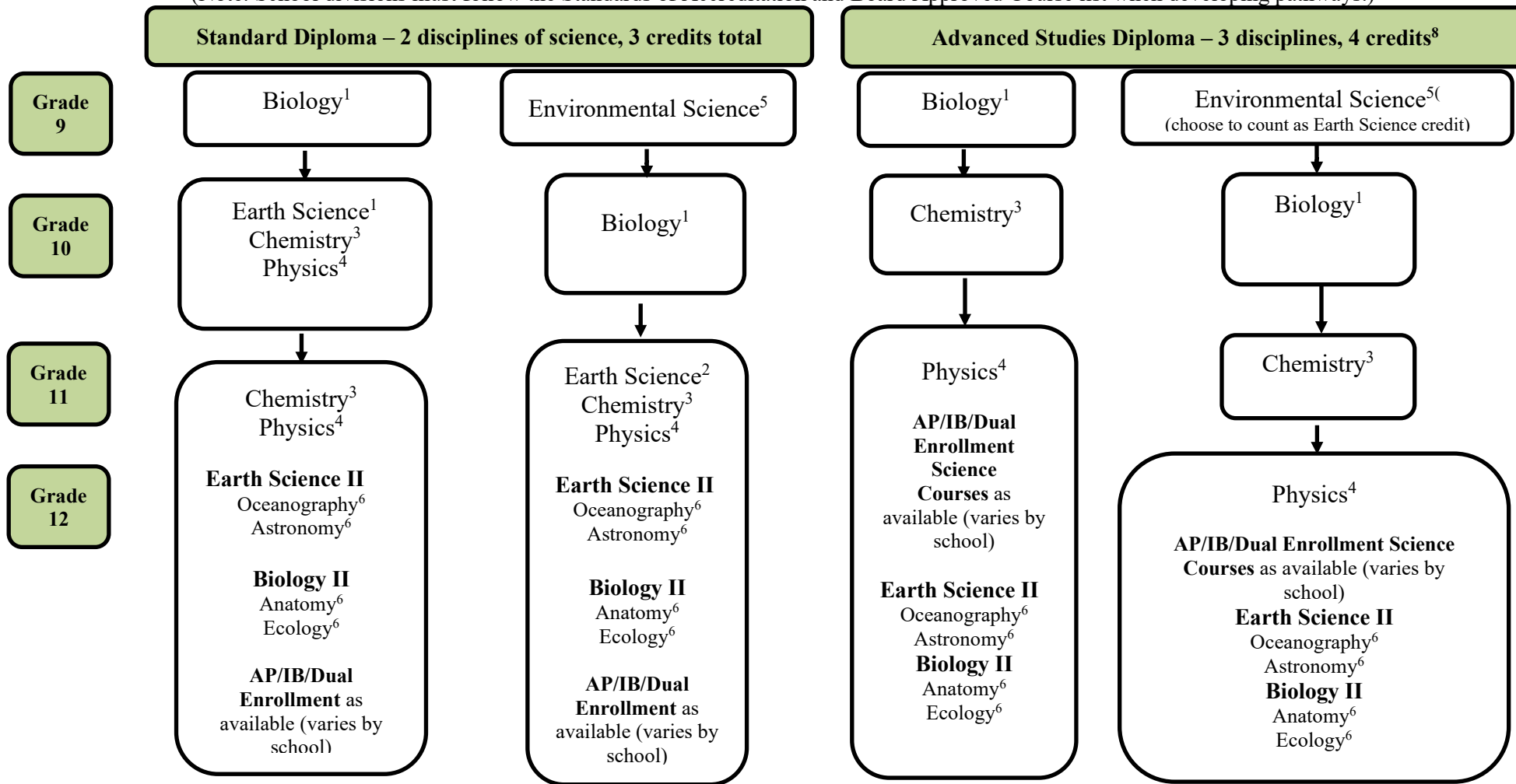
**Physical Therapy/Sports Medicine Technology (28332)  
Full year, two periods, two credits (Optional: 105 clinical hours for three credits)  
Grade(s): 10-12**

*See page 93 for description of this course.*



## Suggested Science Course Sequences

(Note: School divisions must follow the Standards of Accreditation and Board Approved Course list when developing pathways.)



NOTES: Some courses have pre or co-requisites. Additional Science courses offered at the Career Center may fulfill science graduation credits. Please see the individual Science Course descriptions.

### Science Course Footnotes (non-AP/IB courses)

<sup>1</sup>Courses in Biology include Biology (24310), Intensified Biology (24315), ELD Biology (24317) and Biology Part 1 and Part 2 (which are available for students with credit accommodations, see footnote 7)

<sup>2</sup>Courses in Earth Science include Earth Science (24210), Intensified Earth Science (24215) and Earth Science Part 1 and Part 2 (which are available for students with credit accommodations, see footnote 7)

<sup>3</sup>Courses in Chemistry include Chemistry (24410), Intensified Chemistry (24415)

<sup>4</sup>Courses in Physics include Physics (24510), Principles of Physics (24500), ELD Principles of Physics (24501) and Intensified Physics (24515)

<sup>5</sup>Courses in Environmental Science include Environmental Science (24361) and ELD Environmental Science (24362)

<sup>6</sup>The prerequisite content for these courses is the first-level SOL core course in this discipline. Students who have not taken the first level course in this discipline are required to take the corresponding SOL test

<sup>7</sup>The Board of Education's Guidelines on Credit Accommodations allow students with disabilities who are eligible for credit accommodations in science to use each part of Earth Science, Parts 1 and 2, and Biology, Parts 1 and 2, to earn a standard credit towards the three science credits required for the Standard Diploma only. A student who chooses to earn standard credits by taking the Earth Science and Biology in two parts must complete *both* parts of both courses to meet the minimum course requirements and would earn three standard credits in science plus one additional elective credit. Two-part courses may also be combined with full-year courses in other Board-approved science courses to meet the requirements.

<sup>8</sup>It is highly recommended that students planning to apply or attend college take four science courses to include Biology, Chemistry, and Physics

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## SOCIAL STUDIES

The Arlington Public Schools offer a comprehensive social studies program that develops essential knowledge, skills and values that enable students to become informed, responsible, and reasoned citizens of a democratic society and an interdependent world.

A full range of offerings is available to all students, including intensified and advanced placement courses.

*Note: Courses that have fewer than 15 students may not be offered based on student interest and budget considerations. In some cases, additional budget considerations may require that courses may not be offered in any given year and impacted students should select an alternative course. Additionally, courses with insufficient enrollment may be offered through distance learning or online learning.*

### World History and Geography

Students need one or more credits in either history or geography or both to meet graduation requirements. Credit may be taken in the following forms:

- **ELD 3-4 World History & Geography: 1500 AD to present (22345)**
- **World History & Geography: 1500 AD to the Present (22216)**
- **World History Intensified (22343)**
- **World History & Geography: Beginnings to 1500 AD (22215)**
- **World History & Geography: Beginnings to 1500 AD, Intensified (22219)**
- **World History: Modern, AP (32400)**
- **World Geography (22210)**

### ELD 3-4 World History & Geography: 1500 AD to present (22345)

**Full year, one credit**

**Grade(s): 9**

*Prerequisite: Assignment by Department of Counseling Services in conjunction with Social Studies Offices of English Learners Departments*

This course is especially designed to meet the graduation requirement in World History for limited English-speaking students. The course parallels the content offered in the regular World History course but uses materials more suited to their reading and skill development levels. The course relates the subject matter in World History to student experiences and learning styles and follows a more conceptual framework than the traditional chronological approaches. *There is an end-of-course SOL Examination. Only students who are in need of a verified credit in Social Studies are eligible to take the SOL exam.*

### World History & Geography: 1500 AD to the Present (22216)

**Full year, one credit**

**Grade(s): 9**

*Prerequisite: None*

This course will focus on the significant events, people, and ideas of western and non-western civilizations from 1500 AD to the present. The concept of "identity" will be the organizing theme for this course of study. Students will view themselves relative to the changes in political, economic, social, cultural, and geographic developments of contemporary history since 1500 AD. A brief review of ancient civilizations will take place at the beginning of the course. Students will study four eras of history: expansion of world populations around 1500 AD, encounters and exchanges of exploration, the age of revolutions, and the world since World War I. *There is an end-of-course SOL Examination. Only students who need a verified credit in Social Studies are eligible to take the SOL exam.*

### World History Intensified (22343)

**Full year, one credit**

**Grade(s): 9**

*Prerequisite: None*

This course is designed for the needs of advanced students to explore World History's thematic concepts of identity, culture, and conflict. The course is aligned with and goes beyond the Virginia Standards of Learning for World History & Geography: 1500 AD to the Present. *There is an end-of-course SOL Examination. Only students who are in need of a verified credit in Social Studies are eligible to take the SOL exam.*

### World History & Geography: Beginnings to 1500 AD (22215)

**Full year, one credit**

**Grade(s): 10-12**

*Prerequisite: None*

This fast-paced, challenging course will focus on an interdisciplinary study of ancient western and non-western civilizations from the beginnings of humankind to about 1500 AD. Students will read literature, compare, and contrast philosophies and religions, investigate archaeological findings, research the beginnings of written language, analyze works of art, music, and dance, examine patterns of human and environmental interaction, and investigate historical and legal documents that describe cultures of this time period. *This course, with a prerequisite of the post-1500 AD world history geography course, fulfills a requirement for the Advanced Studies Diploma candidates or is counted as an elective for Standard Diploma candidates. There is an end-of-course SOL Examination. Only students who are in need of a verified credit in Social Studies are eligible to take the SOL exam.*

**World History & Geography: Beginnings to 1500 AD (22219), Intensified****Full year, one credit****Grade(s): 10-12***Prerequisite: None*

This course, designed for advanced students, is a rigorous study of ancient world history from the dawn of humanity to about 1500 AD. An emphasis on integrating the humanities-literature, art, drama, and philosophy-will provide students a broad perspective of human development in the western and non-western worlds. From the earliest human settlements to the most advanced civilizations of the ancient world, students will learn the origins and growth of "community," the focus of the course. As a result, this course will provide students with an excellent foundation for the understanding of the nature of our modern global community in terms of security, institutions, values and beliefs, culture, and the interaction with other communities. Specifically, students will study the Stone Age, early river valley civilizations, Ancient Greece and Rome, the Byzantine Empire, the rise of Christianity and Islam, the early Middle Ages, and the development of civilization in East Asia, India, Africa, and Mesoamerica. *This course fulfills a requirement for the Advanced Studies Diploma and serves as an elective for the Standard Diploma. There is an end-of-course SOL Examination. Only students who need a verified credit in Social Studies are eligible to take the SOL exam.*

**World History: Modern, AP (32400)****Full year, one credit + 1.0 quality point****Grade(s): 9-12\****Prerequisite: Teacher recommendation; "B" or better in previous social studies course*

This course is part of the Advanced Placement Program of the College Entrance Examination Board that makes demands on students equivalent to those of an introductory college course. In AP World History: Modern, students investigate significant events, individuals, developments, and processes from 1200 to the present. Students develop and use the same skills, practices, and methods employed by historians: analyzing primary and secondary sources; developing historical arguments; making historical connections; and utilizing reasoning about comparison, causation, and continuity and change over time. The course provides six themes that students explore throughout the course in order to make connections among historical developments in different times and places: humans and the environment, cultural developments and interactions, governance, economic systems, social interactions and organization, and technology and innovation.

The Advanced Placement syllabus gives a complete course description. *Students are required to take the AP exam associated with this course. Students not taking the exam will not earn the additional quality point. (22400) \* Yorktown High School offers this course in Grades 10 - 12 only.*

**World Geography (22210)****Full year, one credit****Grade(s): 9-12***Prerequisite: None*

This course will focus on the interactions of people and their environment in such regions of the world as Africa, Asia, Australia, Central America, the Caribbean, Europe, the Middle East, North America, South America, and areas of the former Soviet Union. The five themes of geography, location, place, human and environmental relationships, movement, and regions will be used to study physical, cultural, political, economic, and other types of geography. *This course fulfills requirements for both the Advanced and Standard Studies Diplomas if the course as well as the SOL Examination are passed. Only students who need a verified credit in Social Studies are eligible to take the SOL exam. Note: This course is identical to the World Geography course offered in the middle schools at grade eight.*

**Economics and Personal Finance**

These courses explore the general scope of economics and personal finance. They explore the American enterprise system, economic principles, economics of supply/demand, labor and industry, the Federal Reserve System, governmental fiscal policies, and the comparison of economic systems of major countries and economics philosophies to develop an understanding of the impact of global trade. Students learn the major areas of financial and investment planning, stock market, annuities, return on investments, retirement and estate planning, consumer credit and money management, budgeting, financial statements, insurance and risk management, home ownership, planning for college education, payroll taxes, consumer protection laws and financial responsibilities. *The WISE Financial Literacy Test may be administered for students to earn the graduation requirement of a Career and Technical credential. The course incorporates all economics and financial literacy graduation requirements. Students may also fulfill this graduation requirement through successful completion of AP or IB Economics. Students who successfully complete this course and a CTE course may qualify for completer status. Consult with your school counselor for more information.*

Credit may be taken in the following forms:

**Economics & Personal Finance (22212)****Full year, one credit****Grade(s): 10-12***Prerequisite: None*

This course meets face to face. Segments of the course will be taught online, thereby satisfying the graduation requirement for a virtual course.

**Virtual Economics & Personal Finance****Full year or semester block, one credit (22212V)****Grade(s): 10-12***Prerequisite: None*

This course covers the same content as the EPF Course (22212) but is delivered in a fully virtual format. It satisfies the graduation requirement for a virtual course.

### **ELD Economics & Personal Finance (22213)**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite: Placement based on English Learners proficiency assessments*

Segments of this course will be taught online, thereby satisfying the graduation requirement for a virtual course.

### **Economics, AP (32806)**

**Full year, one credit, + 1.0 quality point**

**Grade(s): 10-12**

*Prerequisite: None*

This course is part of the Advanced Placement Program, which makes demands on students "equivalent to those of an introductory year in economics at the college freshman level." Students enrolled in this course will take a semester of Macro Economics which focuses on a thorough understanding of the principles of economics that apply to an economic system as a whole. In addition, students will take a semester of Microeconomics which focuses on the principles of economics that apply to the functions of individual decision makers, both consumers and producers within the economic system. *Students are required to take the two AP exam associated with this course. Students not taking the exams will not earn the additional quality point (22806). Successful completion of this course will meet the Economics and Personal Finance graduation requirement for students\*.* Segments of this course will be taught online, thereby satisfying the graduation requirement for a virtual course.

*\*If this course is taken through Virtual Virginia, students will need to take additional personal finance modules at their home school to meet the Economics and Personal Finance graduation requirement*

### **Virginia & United States History**

This is one of the courses required for high school graduation. It is generally taken in grade 11 but may be taken in other grades after consultation with a counselor. Credit may be taken in the following forms:

- **Virginia & United States History (22360)**
- **Virtual Virginia & United States History (22360V)**
- **Virginia & United States History, AP (32319)**

*See additional courses listed for the Career Center, Wakefield, Washington-Liberty, and Yorktown that satisfy this requirement*

### **Virginia & United States History (22360)**

**Full year, one credit**

**Grade(s): 11**

*Prerequisite: None*

This course is organized around the theme of perspectives. The course objectives focus on the significant people, places, and events in American and Virginia history whose influence, position, and point of view have affected geography and environment, the democratization process, the development of enterprise, the evolution of global interaction, the impact of scientific and technological developments, and the meaning of the American Dream. *There is an end-of-course SOL Examination. Only students who are in need of a verified credit in Social Studies are eligible to take the SOL exam.*

### **Virtual Virginia & United States History**

**Full year or semester block, one credit (22360V)**

**Grade(s): 11**

*Prerequisite: None*

This course is organized around the theme of perspectives. This course objective focus on the significant people, places, and events in American and Virginia history whose influence, position, and point of view have affected geography and environment, the democratization process, the development of enterprise, the evolution of global interaction, the impact of scientific, and technological developments, and the meaning of the American Dream. The semester block of the course will include the 140 hours of the full year version. *This course will be taught in a virtual format thereby satisfying the online graduation requirement for the virtual course. There is an end-of-course SOL Examination. Only students who need a verified credit in Social Studies are eligible to take the SOL exam.*

### **Virginia & United States History, AP (32319)**

**Full year, one credit + 1.0 quality point**

**Grade(s): 11**

*Prerequisite: Teacher recommendation; "B" or better in previous high school social studies and English courses*

This course is part of the Advanced Placement Program of the College Entrance Examination Board which makes demands on students equivalent to those of an introductory college course. Students electing this course in place of the regular Virginia and United States History course are expected to read extensively, give time to abstract concepts and thoughts, and deal with various topics in American History. The Advanced Placement syllabus gives a complete course description. Students electing this course are expected to work with materials and texts on an advanced level. *There are both an SOL Examination and an AP Exam at the end of the course. Passing the SOL test and the course earns a verified credit. Only students who need a verified credit are eligible to sit for the exam. Students are required to take the AP exam associated with this course. Students not taking the exam will not earn the additional quality point. (22319)*

## Virginia & United States Government

This is one of the courses required for high school graduation. Credit may be taken in the following forms:

- **Virginia & United States Government (22440)**
- **Virginia & United States Government-Virtual (22440V)**
- **ELD Virginia & United States Government (22446)**
- **Virginia & United States Government, AP (32445)**
- **Virginia & United States Government, Dual Enrollment (92240W)**

### Virginia & United States Government (22440)

**Full year, one credit**

**Grade(s): 12**

*Prerequisite: None*

This course is organized around the theme of *power*. The objectives focus on the sources from which American governmental institutions derive their authority to function, and the applications of this authority to critical processes, procedures, and systems. The influence of various groups and the patterns of other world governments are also studied. The key concepts for study are the foundations of government, rights, responsibilities, liberties, institutions, political processes, public programs, policy making, and comparative political and economic systems.

### Virtual Virginia & United States Government

**Full year or semester block, one credit (22440V)**

**Grade(s): 12**

*Prerequisite: None*

This course is organized around the theme of *power*. The objectives focus on the sources from which American governmental institutions derive their authority to function, and the applications of this authority to critical processes, procedures, and systems. The influence of various groups and the patterns of other world governments are also studied. The key concepts for study are the foundations of government, rights, responsibilities, liberties, institutions, political processes, public programs, policy making, and comparative political and economic systems. The semester block of the course will include the 140 hours of the full year version. *This course will be taught in a virtual format thereby satisfying the online graduation requirement for a virtual course.*

### ELD Virginia & United States Government (22446)

**Full year, one credit**

**Grade(s): 9-12**

This course emphasizes practical aspects of government and citizenship through literacy and skill development. Attention is given to basic American

documents, state and local government, the function of the American political system and the understanding of how politics work at the national and state level. This course is designed to provide, each student with a basic understanding of how government works and each person as a citizen participating in the government.

### Virginia & United States Government, AP (32445)

**Full year, one credit + 1.0 quality point**

**Grade(s): 12**

*Prerequisite: Recommendation of eleventh grade U.S. and Virginia History teacher*

This course is part of the Advanced Placement Program of the College Entrance Examination Board, which makes demands on students' equivalent to those of an introductory year in political science at the college freshman level. The course is designed for the serious student who is willing to meet the demands of an in-depth analysis of both American Government and Politics and Comparative Government and Politics. In addition, course emphasis will be given to political theory and local and state government. Much emphasis is placed on writing and the student is expected to read extensively. *Students are required to take the AP exam associated with this course. Students not taking the exam will not earn the additional quality point. (22445)*

### Virginia & United States Government, Dual Enrollment (92240W)

**Full year, one credit + 1.0 quality point**

**Grade(s): 12**

*Prerequisite: Students must meet the NOVA entrance requirements*

The objectives of this course focus on the sources from which American governmental institutions derive their authority to function, and the applications of this authority to critical processes, procedures, and systems. The influence of various groups and the patterns of their world governments are also studied. The key concepts for students are the foundation of government, rights, responsibilities, liberty, institutions political processes, public programs policy making, and comparative political and economic systems. In addition, this course provides an in-depth analysis of American Government and Politics with emphasis on critical thinking and writing skills. *Some components of this course will be taught virtually. This course is only offered after school at a countywide location. The course meets twice weekly according to the NOVA college schedule.*

- **College Credit:** *This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements*

*must be met before registering. Please consult with your school counselor for more details.*

**Remedial Independent Self-Paced Education  
(RISE) World Geography (20208)  
(RISE) World History II (20207)  
(RISE) Virginia United States History (20209)  
One semester, one-half elective credit  
Grade(s): 11-12**

*Prerequisite: Students have passed the class(es) but failed the SOL assessment(s) and are lacking the necessary verified credits to graduate.*

Students engage in remedial work in the academic areas in which they have passed the class but failed the SOL assessment, using instructional software and/or on-line programs. Although study will be teacher assisted, the majority of student work will be completed on an independent study basis. Courses offered for remediation include English (writing), English (reading/literature and research), Algebra I, geometry, biology, earth science, world geography, world history and Virginia & US history. *Note: Students will take this class on a pass/fail basis.*

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## **SOCIAL STUDIES ELECTIVE COURSES**

### **African American Studies (22371)**

**Full year, one credit**

**Grade(s): 10-12**

*Prerequisite: None*

The African American Studies course is designed to develop an understanding of the causes, character, and consequences of the African American experience and its influence on the world, the United States, and the African American community, the courses will provide a descriptive and corrective overview which will introduce the student to the study of the African and American experiences.

### **European History, AP (32399)**

**Full year, one credit + 1.0 quality point**

**Grade(s):10-12**

*Prerequisite: Teacher recommendation; "B" or better in previous social studies course*

This course is part of the Advanced Placement Program of the College Board which makes demands on students equivalent to those of an introductory college course. This rigorous course introduces students to cultural, economic, political, and social developments that played a fundamental role in shaping our world. Students are expected to demonstrate knowledge of the basic chronology, major events, movements, changes, and trends in Modern European history beginning with the Renaissance in the 1400s and ending with the creation of the European Union in the 1990s. This course stresses analytical thinking and writing skills, which are applied to document-based question essays, seminars, class discussions and/or debates. The

Advanced Placement syllabus gives a complete course description. *Students are required to take the AP exam associated with this course. Students not taking the exam will not earn the additional quality point. (22399)*

### **Human Geography, AP (32212)**

**Full year, one credit + 1.0 quality point**

**Grade(s): 10-12**

*Prerequisite: Recommendation of current social studies teacher*

This course is part of the Advanced Placement Program of the College Board which makes demands on students equivalent to those of an introductory level college course. AP Human Geography introduces students to the systematic study of patterns and processes that have shaped human understanding, use, and alteration of the Earth's surface. Students learn to employ spatial concepts and landscape analysis to examine human socioeconomic organization and its environmental consequences. On successful completion of the course, students should have developed skills that enable them to interpret maps and analyze geospatial data, understand, and explain the implications of associations and networks among phenomena in places, recognize and interpret the relationships among patterns and processes at different scales of analysis, define regions and evaluate regionalization process, and characterize and analyze changing interconnections among places. Geographic concepts emphasized through the course are location, space, place, scale, pattern, regionalization, and globalization. Topics covered will include nature and perspectives of geography; population and migration; cultural patterns and processes; political organization of space, agriculture, food production and land use; industrialization and economic development; cities and urban land use. The Advanced Placement syllabus gives a complete course description. *Students are required to take the AP exam associated with this course. Students not taking the exam will not earn the additional quality point. (22209)*

### **Introduction to Law (22218)**

**One semester, one-half credit**

**Grade(s): 10-12**

*Prerequisite: None*

This course introduces students to the function of law in our society. It will include an overview of the American legal process, sources of laws, and the organization of both federal and state courts. Students will examine the litigation process, with comparisons between civil and criminal litigation. This course will include looking at and discussing constitutional protections, judicial policymaking, tort, contractual and constitutional law and criminal justice. Students will examine trial procedures and participate in class mock trials, simulations, and legal case studies.

**Latin American Studies (22373)****Full year, one credit****Grade(s): 10-12***Prerequisite: None*

This course will cover the histories of ancient civilizations through the 21<sup>st</sup> century in Latin America. Students will learn about Latin American cultures, their political and economic structures, and their impact on the globalized world through a variety of lenses. Though analysis of historical and current issues, students will gain a deeper understanding of Latin America and explore the ways in which the region's history influences interactions and patterns across the globe.

**Leadership Skills for Diversity Peer Trainers (22700)****Full year, one credit****Grade(s): 10-12***Prerequisite: None*

This course is designed to train students to facilitate workshops for their peers that address diversity issues and promote tolerance and mutual respect. Students will develop awareness and understanding of (1) prejudice, discrimination, stereotyping, and (2) the means by which they can become more directly involved in the school and community.

**Psychology (22900)****Full year, one credit****Grade(s): 10-12***Prerequisite: None*

This course introduces the student to the general field of psychology. Study includes the physiological basis of behavior, child growth and development, learning, personality, social psychology, abnormal psychology, and the adolescence and general psychological development of the human organism.

**Psychology, AP (32902)****Full year, one credit + 1.0 quality point****Grade(s): 11-12***Prerequisite: Recommendation of current social studies teacher*

The science of behavior is psychology. The purpose of the Advanced Placement Psychology course is to introduce students to the systematic and scientific study of the behavior and mental processes of human beings and other animals. Major topics in the AP course include the following: I. methods, approaches, and history. II. biological bases of behavior. III. sensation and perception. IV. states of consciousness. V. learning. VI. cognition. VII. motivation and emotion. VIII. developmental psychology. IX. personality. X. testing and individual differences. XI. psychological

disorders. XII. treatment of psychological disorders. XIII. social psychology.

*Students are required to take the AP exam associated with this course. Students not taking the exam will not earn the additional quality point. (22902)*

**Sociology (22500)****Full year, one credit****Grade(s): 10-12***Prerequisite: None*

Sociology is the scientific study of groups of people and their impact on our individual lives. Emphasis is placed on an understanding of the "social facts" in each person's life. From parents to schoolteachers to our peers, groups of people impact who we are, what we value and who we will become. In-depth attention is also given to societal problems such as racism, and poverty and crime. The essential goal of Sociology is to help the student better understand society's impact on the individual and one's role within that society.

**World Affairs (22388)****One semester, one-half credit****Grade(s): 10 - 12***Prerequisite: None*

This course starts by reviewing the role of the United States in world affairs through the history of American foreign policy. We will examine the role of the United States and the United Nations in various conflicts and discuss how foreign policy decisions and resolutions are made. Other topics covered include diplomacy, international relations, institutions and organizations, human rights, terrorism, genocide, global and regional conflicts and issues, and recent and current events.



## Suggested Arlington Public Schools High School Social Studies Pathways

The pathways are flexible, and movement is not limited to staying in one column. Students may accelerate as they are ready to do so. Check graduation course requirements for Standard and Advanced Diploma. \*

Grade 8	World Geography Suggestion: Ninth grade course selection will determine subsequent year course selections.				
<b>Grade 9</b>	<ul style="list-style-type: none"> <li>World History &amp; Geography: 1500 AD to the present (22216) or English 9 &amp; World History &amp; Geography: 1500 AD to the present (Yorktown Only) (22216/21130) or World History Intensified (22343)</li> </ul>	<ul style="list-style-type: none"> <li>World History &amp; --Geography: 1500 AD to present ELD (22345)</li> </ul>	<ul style="list-style-type: none"> <li>World History Intensified (22343) or World History &amp; --Geography: 1500 AD to present ELD (22345) or World History AP (W-L &amp; Wakefield Only) (32400)</li> </ul>	<ul style="list-style-type: none"> <li>World History AP (W-L &amp; Wakefield only) (32400)</li> </ul>	<ul style="list-style-type: none"> <li>VA./US Part. 1 (IEP only) **</li> </ul>
<b>Grade 10</b>	<ul style="list-style-type: none"> <li>Economics &amp; Personal Finance (22212) Virtual Economics &amp; Personal Finance (22212V), ELD Economic &amp; Personal Finance (22213) or AP Economics (32806)</li> <li>World History &amp; Geography: Beginnings to 1500 AD (22215) or World History &amp; Geography: Beginnings to 1500 AD (22219) Intensified</li> <li>Human Geography, AP (32212)</li> <li>Introduction to Law (22218)</li> <li>Psychology (22900)</li> <li>Leadership Skills for Diversity (22700)</li> <li>Psychology, AP (32902)</li> <li>Sociology (22500)</li> <li>World Affairs (22388)</li> </ul>	<ul style="list-style-type: none"> <li>Economics &amp; Personal Finance (22212) Virtual Economics &amp; Personal Finance (22212V), ELD Economic &amp; Personal Finance (22213) or AP Economics (32806)</li> <li>World History &amp; Geography: Beginnings to 1500 AD (22215) or World History &amp; Geography: Beginnings to 1500 AD (22219) Intensified</li> <li>Human Geography, AP (32212)</li> <li>Introduction to Law (22218)</li> <li>Psychology (22900)</li> <li>Leadership Skills for Diversity (22700)</li> <li>Psychology AP (32902)</li> <li>Sociology (22500)</li> <li>World Affairs (22388)</li> </ul>	<ul style="list-style-type: none"> <li>AP Government (Pre-IB Students only at WL) (32445)</li> </ul>	<ul style="list-style-type: none"> <li>AP Economics (32806) AP European History (32399)</li> </ul>	<ul style="list-style-type: none"> <li>VA/US Part. 2 (IEP only) **</li> </ul>
<b>Grade 11</b>	<ul style="list-style-type: none"> <li>VA/US History (22360), Virtual VA/US History (22360V)</li> <li>Economics &amp; Personal Finance (22212)</li> <li>Human Geography, AP (32212)</li> <li>Introduction to Law (22218)</li> <li>Leadership Skills for Diversity (22700)</li> <li>Psychology (22900) or Psychology, AP (32902)</li> <li>Sociology (22500)</li> <li>World Affairs (22388)</li> </ul>	<ul style="list-style-type: none"> <li>VA/US History (22360), Virtual VA/US History (22360V), or VA/US History, AP (32319) &amp;</li> <li>Human Geography, AP (32212)</li> <li>Introduction to Law (22218)</li> <li>Psychology (22900) or Psychology, AP (32902)</li> <li>Leadership Skills for Diversity (22700)</li> <li>Sociology (22500)</li> <li>World Affairs (22388)</li> </ul>	<ul style="list-style-type: none"> <li>IB History of the Americans HL Part I (32385) &amp;</li> <li>IB Economics SL (32802)</li> <li>IB Geography SL (32210)</li> <li>IB Psychology SL (32901) HL Part I (32904)</li> <li>IB Philosophy SL (32600)</li> <li>IB Social Anthropology SL (32372) HL Part I (32374)</li> </ul>	<ul style="list-style-type: none"> <li>VA/US History, AP (32319)</li> </ul>	<ul style="list-style-type: none"> <li>Personal Living &amp; Finance (20055) (IEP Only) **</li> </ul>
<b>Grade 12</b>	<ul style="list-style-type: none"> <li>VA/US Govt. (22440), Virtual VA/US Govt. (22440V), ELD 1 VA/US Govt. (22446) or VA/US Govt DE (92240W) &amp; Economics &amp; Personal Finance (22212)</li> <li>Introduction to Law (22218)</li> <li>Leadership Skills for Diversity (22700)</li> <li>Psychology (22900) or Psychology, AP (32902)</li> <li>Sociology (22500)</li> <li>World Affairs (22388)</li> </ul>	<ul style="list-style-type: none"> <li>VA/US Govt. (22440). Virtual VA/US Govt. (22440V), ELD VA/US Govt. (22446), VA/US Govt, AP. (32445), VA/US Govt DE (92240W) &amp;</li> <li>Introduction to Law (22218)</li> <li>Leadership Skills for Diversity (22700)</li> <li>Psychology (22900 or Psychology, AP (32902)</li> <li>Sociology (22500)</li> <li>World Affairs (22388)</li> </ul>	<ul style="list-style-type: none"> <li>IB Topics in 20<sup>th</sup> Century World History HL part 2 (32386)</li> <li>IB Economics SL (32802)</li> <li>IB Psychology SL (32901) HL Part II (32904)</li> <li>IB Philosophy (32600)</li> <li>IB Geography SL (32210)</li> <li>IB Social Anthropology SL (32372) Part II (32377)</li> </ul>	<ul style="list-style-type: none"> <li>VA/US Govt, AP. (32445) or VA/US Govt. &amp; Comparative Govt., AP (32245) or VA/US Govt DE (92240W)</li> <li>&amp; Psychology, AP (32902)</li> </ul>	<ul style="list-style-type: none"> <li>VA/US Govt. (20018) (IEP only) **</li> </ul>

\*Students must take a version of Virginia & United States History and a version of Virginia & United States Government as well as one course in either world history or geography or both to fulfill graduation requirements for a Standard diploma or two courses from this category for an Advanced Diploma.

\*\*To earn a social studies credit for this course a student must complete both Part I and Part II, have a current Individual Education Plan in place which specifies this course, and take the associated VA SOL exam.

\*\*\*Students must take a version of Economics & Personal Finance to fulfill graduation requirements for a Standard or Advanced Diploma.



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## SPECIAL EDUCATION

Special Education consists of services for students with a disability who require specially designed instruction. Instruction is individualized to meet the needs of the student. An Individualized Education Program (IEP) is developed for each student in accordance with federal law and Virginia regulations. For additional information concerning Special Education policies and procedures, contact the office of Special Education.

*Note: Courses that have fewer than 15 students may not be offered based on student interest and budget considerations. In some cases, additional budget considerations may require that courses may not be offered in any given year and impacted students should select an alternative course. Additionally, courses with insufficient enrollment may be offered through distance learning or online learning.*

### **English 9 (20001)**

**Full year, one credit**

*Prerequisite: Student must be identified as in need of Special Education services*

This course is a highly structured program designed to meet the needs identified in each student's IEP. Course work focuses on reading comprehension, spelling, vocabulary usage, sentence structure, paragraph development, and literature study through the short story, poetry, and the novel. Materials and textbooks are selected in accordance with the instructional level of the individual student.

### **English 10 (20002)**

**Full year, one credit**

*Prerequisite: Student must be identified as in need of Special Education services*

This course is a highly structured program designed to meet the needs identified in each student's IEP.

Course work focuses on reading comprehension, vocabulary development, sentence mastery and paragraph development, review of basic grammar and mechanics, and literature study through the short story, poetry, and the novel. Materials and textbooks are selected in accordance with the student's instructional level.

### **English 11 (20003)**

**Full year, one credit**

*Prerequisite: Student must be identified as in need of Special Education services*

This course is an option for students working toward an Applied Studies Diploma, or students who entered Grade 9 prior to 2013-2014 and who are eligible for a Modified Standard Diploma based on their IEP. This course is a highly structured program designed to meet the needs identified in each student's IEP. Course work focuses on reading comprehension, vocabulary development, composition writing which could include a research paper, study of grammar and mechanics, and

literature study through the short story, poetry, and the novel. Materials and textbooks are selected in accordance with the student's instructional level. Students working toward an Applied Studies Diploma, or a Modified Standard Diploma will earn English credit upon successful completion of this course. *Students in this class will not be required to take an end-of-course SOL exam.*

### **English 12 (20004)**

**Full year, one credit**

*Prerequisite: Student must be identified as in need of Special Education services*

This course is a highly structured program designed to meet the needs identified in each student's IEP. Content includes reading fiction and non-fiction, language usage, vocabulary study, and expository writing. Functional skills may also be included. Materials and textbooks are selected in accordance with the student's instructional level.

### **Reading (20015)**

**Full year, one credit**

**(20006) Semester, one-half credit**

*Prerequisite: Student must be identified as in need of Special Education services.*

This course is highly recommended for students who are in need of additional reading support and strategies to support overall academic performance, and to prepare for SOL exams. The course includes fiction and nonfiction literature that will be new to the students, short passages appropriate for test preparation, and critical reading to enhance understanding. The course will be focused on the improvement of reading and will use materials that will help students with reading in their other courses.

### **Algebra I Part I (20008)**

**Full year, one credit**

**Grades 9-12**

*Prerequisite: Student must be identified as in need of Special Education services*

This course includes properties of the real number system, first-degree equations and inequalities, problem solving, graphing in the coordinate plane, and linear modeling. Students who are working toward a standard diploma must go on to complete Algebra I Part II in order to receive a mathematics credit for this course. Completion of Part I and Part II of this sequence earns two mathematics credits toward a standard diploma with credit accommodations. The content of the Algebra I course (23130) is covered with the Algebra I SOL exam given upon completion of Part II. Passing the SOL exam earns verified credit.

### **Selected Topics in Geometry (20054)**

**Full year, one credit**

*Prerequisite: Student must be identified as in need of Special Education services and have earned a grade of "D" or better in Algebra I, Part I*

This course is an option for students working toward an applied studies diploma or students who entered Grade 9 prior to 2013-2014 and may be eligible for a Modified Standard Diploma based on their IEP. This course is designed to enable the student to view geometry through applications with an emphasis on two- and three-dimensional reasoning skills, and coordination in geometry and the use of geometric models to solve problems. Such topics as angles, congruence, similarity, parallelism, triangles, quadrilaterals, and circles are included. Students who are working toward an Applied Studies Diploma or a Modified Standard Diploma will receive mathematics credit upon successful completion of this course. *There is no end-of-course SOL examination.*

### **Personal Living & Finances (20055)**

**Full year, one credit**

*Prerequisite: Student must be identified as in need of Special Education services*

This course is an option for students working toward an Applied Studies Diploma or students who entered Grade 9 prior to 2013-2014 and who may be eligible for a Modified Standard Diploma based on their IEP. This course is designed to provide students with those skills necessary to handle personal business and finances. There is an emphasis on problem solving in areas such as banking and checking, wage-earning, loans and credit, and budgeting. Students who are working toward a modified standard diploma will receive mathematics credit upon successful completion of this course. Students who participate in the 21 Workplace Readiness Skills (WRS) for the Commonwealth, as a part of this course with successful completion of the WRS Assessment may be considered for Credit Accommodations toward a Standard Diploma.

### **World Geography (20040)**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite: Student must be identified as in need of Special Education services*

This course will focus on the interactions of people and their environment in such regions of the world as Africa, Asia, Australia, Central America, the Caribbean, Europe, the Middle East, North America, South America, and areas of the former Soviet Union. The five themes of geography: **location, place, human and environmental relationships, movement, and regions** will be used to study physical, cultural, political, economic, and other types of geography. *This course fulfills requirements for both the Advanced Studies and Standard Diploma if the course and the SOL Examination are passed.* (This course is identical to the course offered in the middle schools in eighth grade.)

### **World History & Geography, 1500 AD to the Present, Part I (20051)**

**Full year, one credit**

*Prerequisite: Student must be identified as in need of Special Education services*

This course focuses on the chronology of significant events, peoples, and ideas of Western Europe from 1500 AD to the present. The various ways geography has influenced history will be explored with increasing attention given to the political, social, and economic changes affecting contemporary societies. The course parallels the content offered in the first semester of general education World History & Geography: 1500 AD to the Present (22216) course, with pacing materials and teaching/learning strategies adapted for students with disabilities. *Students who are working toward an Applied Studies Diploma or a Modified Standard Diploma will receive a social studies credit upon successful completion of this course. Students who are seeking a Standard Diploma with credit accommodations must go on to complete World History and Geography 1500 AD to the Present, Part II in order to earn a social studies credit for this course. There is no end-of-course SOL examination.*

### **World History & Geography, 1500 AD to the Present, Part II (20052)**

*Prerequisite: Successful completion of World History and Geography, 1500 AD to the Present, Part I*

This course focuses on the regional perspective of significant events, peoples, and ideals of Western Europe for 1500 AD to the present. Students will review content from Part I and then learn in-depth content for each world region during the established periods of history. *Students may earn Social Studies credit for this course. An end-of-course SOL Examination is required.*

### **Virginia & United States History, Part I (20016)**

**Full year, one elective credit upon completion of VA/US History, Part II**

**Grade(s): 9-12**

*Prerequisite: Successful completion of World Geography or World History, and student must be identified as in need of Special Education services and in need of Credit Accommodations*

This course will span the time periods from America's discovery through the period of Reconstruction. The course objectives will focus on the influence of geography on American cultural politics and economy; the development of American government in meeting the needs of an evolving society; the impact of population movements on American society; the way that technological and scientific advancements have affected life in America; and the role of America as it evolved from a small confederation of states to a growing nation. Emphasis will be given to major issues and events in a chronological survey of Virginia and United States history. Pacing materials and teaching/learning strategies will be adapted to students

reading skill development. Students working toward a Standard Diploma with credit accommodations will earn a social studies credit for this course when they go on to take Part II of this course. There is no end-of-course SOL Examination for this course.

### **Virginia & United States History, Part II (20019)**

**Full year, one social studies credit**

**Grade(s): 10-12**

*Prerequisite: Successful completion of United States and Virginia History, Part I and student must be identified as in need of Special Education services and in need of Credit Accommodations*

This course will span the time periods from America's post-Reconstruction era to the post-World War II era. The course objectives will focus on the influence of geography on American cultural politics and economy; the development of American government in meeting the needs of an evolving society; the impact of population movements on American society; the way that technological and scientific advancements have affected life in America; and the role of American as it has evolved from a growing nation to a global power. Emphasis will be given to major issues and events in a chronological survey of Virginia and United States history. Pacing materials and teaching/learning strategies will be adapted for students reading skill development. There is an end-of-course SOL Examination covering content from VA/US History Part I and VA/US History Part II. Passing the SOL test and the course earns a verified credit.

### **United States History, Applications (20053)**

**Full year, one credit**

**Grade(s): 11**

*Prerequisite: Student must be identified as in need of Special Education services*

This course spans the time periods from America's discovery through the period of Reconstruction. The course objectives focus on the influence of geography on American culture, politics, and economy; the development of American government in meeting the needs of an evolving society; the impact of immigration and population movements on American society; the ways that technological and scientific advancements have affected life in America; and the role of America as a global power. Materials and teaching/learning strategies suited to students reading skill development will be used. *Students who are working toward an Applied Studies Diploma or a Modified Standard Diploma will earn credit in Social Studies upon successful completion of this course. This course counts as a social science credit for students seeking a Modified Standard Diploma. There is no end-of-course SOL Examination.*

### **Virginia & United States History (20017)**

**Full year, one credit**

*Prerequisite: Student must be in the eleventh grade and have been identified as in need of Special Education services*

This course is a highly structured program to meet the needs identified in each student's IEP. The student follows the historical development of society from its beginnings to the present. Emphasis is given to major issues and events in a chronological survey of Virginia and United States history. *An end-of-course SOL Examination is required.*

### **Virginia & United States Government (20018)**

**Full year, one credit**

*Prerequisite: Student must be in the twelfth grade and have been identified as in need of Special Education services*

The course emphasizes practical aspects of government, citizenship, and skill development. Attention is given to basic American documents, state and local government, the functioning of the American political system, and understanding how politics work on the local level.

### **Biology, Part I (20020)**

**Full year, one credit**

*Prerequisite: Student must be identified as in need of Special Education services*

This course is a study of the fundamental concepts common to Biology to include the cell; heredity and evolution; interdependence of organisms; matter, energy, and organization in living systems; and behavior of organisms. This is the first course of a two-part sequence and will include strategies to help students develop their skill in reading in the content area, study and organization, and interdependence of various forms of data. *This course counts as a science credit for students seeking an Applied Studies Diploma or a Modified Standard Diploma. There is no end-of-course SOL examination. This course may also count as a laboratory science credit for the Standard Diploma, with credit accommodations, if followed by Biology, Part II, and the Biology SOL exam.*

### **Biology, Part II (20021)**

**Full year, one credit**

*Prerequisite: Student must be identified as in need of Special Education services and must have successfully completed Biology, Part I*

This course is a continued study of the fundamental concepts common to Biology to include greater depth of study of the cell; heredity and evolution; interdependence of organisms; matter; energy, and organization in living systems; and behavior of organisms. This is the second of a two-course sequence and will include strategies to help students continue to develop their skills in reading in the content area, study and organization, and interpretation of various forms of data. *There is an end-of-course SOL Examination. Students who complete this course and pass the Biology end-of-course SOL Examination will earn one verified science credit.*

**Principles of Physics (20049)****Full year, one credit****Grade(s): 10-12**

*Prerequisite: Students must be identified as in need of Special Education services*

This course is an option for students working toward an Applied Studies Diploma or students who entered Grade 9 prior to 2013-2014 and who may be eligible for a Modified Standard Diploma based on their IEP. This course is a study of the fundamental concepts of physics, motion, forces, light, electricity, magnetism, and nuclear physics. This course will include strategies to help students develop their skills in reading in the content area, study and organization, and interpretation of various forms of data.

**Instructional Studies****Full year, one credit (20028)****Semester, one-half credit (20030)**

*Prerequisite: Student must be identified as in need of Special Education services*

Course work is individualized based on the student's IEP and reinforces the needs of each student's general education courses. In addition, listening skills, writing skills, organizational and general study skills are emphasized.

**Social Skills (20023)****Full year, one credit****Grade(s): 9-12**

The Social Skills class offers secondary students the opportunity to acquire and practice skills that are necessary for appropriate social interactions with others. Skills to be taught may include: Making and keeping friends, communicating with others, perspective taking, self-determination, working with groups, coping strategies for stress and frustration, and understanding the "unwritten rules" for social behavior. Organizational and self-advocacy will also be covered.

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**FUNCTIONAL ACADEMICS**

The following classes are offered in a setting called the Functional Life Skills setting. The curriculum content is in accordance with the student's instructional needs as delineated by an Individual Education Plan (IEP), and the Aligned Standards of Learning which supports the Virginia Alternative Assessment Program (VAAP). Curriculum focuses on developing functional life skills in the areas of communication, self-help, social skills, pre-vocational skills, and functional academic skills. Instruction takes place in a variety of natural settings within the school and community at large.

**English (20035)****Full year, one credit**

This course is a highly structured program designed to meet the needs identified in each student's IEP. Course work focuses on reading comprehension, spelling,

vocabulary usage, sentence structure, paragraph development, and literature study through the short story, poetry, and the novel. Materials and textbooks are selected in accordance with the student's reading level.

**Mathematics (20036)****Full year, one credit**

This course is a highly structured program designed to meet the needs identified in each student's IEP. Course work focuses on operations with whole numbers, fractions, decimals, integers, ratios and proportions, percent, and measurement.

**Social Studies (20039)****Full year, one credit**

This course is a highly structured program designed to meet the needs identified in each student's IEP. The student follows the historical development of society from its beginnings to the present. Emphasis is given to major issues and events in a chronological survey of Virginia and United States History.

**Reading (20014)****Full year, one credit**

This course is a highly structured program designed to meet the needs identified in each student's IEP. Course work is designed to meet specific reading deficiencies as demonstrated by the student. In addition, reading for enjoyment and comprehension for specific skills that are necessary in utilizing other classroom materials are stressed.

**Writing (20005)****One semester, one-half credit**

This course is designed to improve and refine paragraph development. Construction, editing, and proofreading skills are emphasized through descriptive, narrative, and expository writing. Students' progress to multi-paragraph reports. Correct sentence structure and a basic knowledge of paragraph form is required.

**Living Skills (20026)****Full year, one credit****Grade(s): 9-12**

*Prerequisite: Student must be participating in the Life Centered Career Education Curriculum*

This course will focus on four core areas including Health and Nutrition, Occupational Preparation, Home Maintenance, and Community Exploration. Concepts to be covered include but are not limited to basic personal health and awareness of the world, strengthening employment behaviors, menu planning, food preparation and establishing social relationships. This course may be taken more than one time for credit.

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**Science (20038)****Full year, one credit**

*Prerequisite: Living Skills (20026)*

This course will focus on basic personal health and awareness of the world. The concept of how one's personal health and grooming affect one's immediate environment is emphasized. Many different types of materials are used. All concepts relate to everyday experiences.

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**VOLUNTEER SERVICES****Volunteer Service****Full year, (20155)****One semester, (20156)****Grade(s): 9-12**

The purpose of this program is to afford students pertinent learning experiences which increase their knowledge of the professional working responsibilities of the staff and many of the operational activities of the school. Close staff supervision is maintained for each student working with teachers, secretaries, and administrators. In addition, a job description by the adult supervisor which outlines specific responsibilities for volunteer service students is submitted to the administrative staff for approval. Many staff members and offices effectively utilize volunteer aides for a variety of clerical and non-clerical responsibilities which provide a wide range of learning experiences for students.

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**AP ELECTIVES****Consult, AP (20184)****Full year, one period, one credit****Grade(s): 11-12**

*Prerequisites: Students enrolled in their first AP course or in 2 or more AP courses who are also on track to earn an advanced diploma*

- Reading, Quiet Study
- Tutoring/Individual Help in AP Subject Matter
- Homework, Make-Up Work
- Study Group Formation
- AP Test Review Sessions
- PSAT/SAT Workshops
- AP Coping Workshops (e.g., time-management, organizational skills, stress management)
- College Planning Workshops

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**WORLD LANGUAGES**

Students in Arlington Public Schools in grades 7-12 may receive world language credit for native language study and for the study of world languages. To receive world language credit, the following requirements must be met:

- A transcript verifying a minimum of 140 hours of formal language study for each credit must be submitted.
- The student must have earned a passing grade.
- A grade of "C" or better in the course must be verified if the student is to continue with the language in the Arlington Public Schools.
- A state approved Credit-by-Exam assessment has been taken and the student has demonstrated proficiency levels that may earn up to four credits.

Speakers of other languages taught in the Arlington Public Schools should consult with counselors for placement testing.

*Students seeking the Advanced Studies diploma will meet the world language requirements by completing three years/levels of study in one language or two years of study in each of two languages. Successful completion of each world language course results in one credit toward the Advanced Studies Diploma. Some colleges require the study of world languages to continue in high school. If your student has successfully completed three years of study upon completion of their freshman year, be sure to look at the college admissions criteria for the student's college(s) of choice. According to SB323 in 2020, a student who is pursuing an Advanced Studies Diploma and whose Individual Education Program, (IEP) specifies a credit accommodation for world language may substitute two standard units of credit in computer science for two standard units of credit in a world language.*

*Under 8VAC20-131-51 (graduation requirements to students entering 9th grade in 2018-19 or thereafter), the Advanced Studies Diploma has a sequential elective requirement for both world languages and electives. Thus, only a fourth and fifth year of a world language could count towards the sequential elective requirement.*

*Note: Courses that have fewer than 15 students may not be offered based on student interest and budget considerations. In some cases, additional budget considerations may require that courses may not be offered in any given year and impacted students should select an alternative course. Additionally, courses with insufficient enrollment may be offered through distance learning or online learning.*

German Level I-III are offered at the Career Center. Students at the high school may travel to the Career Center to study German. Transportation is provided 3 times a day. Japanese levels I-III are only offered at our comprehensive neighborhood high schools. In some instances, languages may be available only through online courses by outside providers, such as Chinese (except Washington Liberty HS). Courses offered by online distance-learning providers elsewhere in the state or in the country have policies for grading, homework and attendance that may differ from those of APS. American Sign Language (ASL) meets public Virginia university and community college entrance requirements as a world language. Some out-of-state post-secondary institutions do not recognize ASL as a world language. ASL is not considered an IB language.

### **American Sign Language I (25990)**

**Full Year, one credit**

**Grade(s): 9-12**

*Prerequisite: None*

Students will learn receptive and expressive language skills within the context of everyday interaction with others in their home, school, and community environments. Students will learn to ask and answer questions about family, school events and celebrations. They will exchange essential information such as making introductions, leave-taking, getting attention and negotiating the signing environment using appropriate non-manual behaviors (i.e., facial expression, body posture, spatial organization). Students will study the history of American Sign Language and will explore aspects of Deaf culture.

### **American Sign Language II (25995)**

**Full Year, one credit**

**Grade(s): 9-12**

*Prerequisite: Successful completion of ASL I with a grade of C or better, or equivalent proficiency as determined by the teacher*

Students will expand and enhance the communicative skills in ASL. They will ask and respond to questions for clarification and be able to further express opinions and preferences regarding their everyday experiences and environment. Students will expand their vocabulary and conversational ability by studying more abstract topics and literary works. A deeper understanding of the Deaf community will also be a goal of this level, through the discussion of the community's norms and values. Students will gain an understanding of concepts that are unique to the Deaf community and their implications for language learning. They will be encouraged to interact with others using their ASL skills beyond the classroom level.

### **American Sign Language III (25997)**

**Full Year, one credit**

**Grade(s): 9-12**

*Prerequisite: Successful completion of ASL II with a grade of C or better, or equivalent proficiency as determined by the teacher*

Students will apply the language skills and vocabulary acquired in previous levels to increase their conversational abilities, focusing on more abstract topics. These topics include literary works and current events and issues of the Deaf world. Students will deepen their understanding of the Deaf community through discussion of the community's norms and values. Through a more involved study of the ASL roots and linguistics, students will gain a better understanding of the language while also being able to compare it to their own language. Students will be encouraged to use the language both within and beyond the school setting. For example, students will interview members of the Deaf community on topics of personal interest, the greater community and/or world concern.

### **American Sign Language IV (25992)**

**Full Year, one credit**

**Grade(s): 9-12**

*Prerequisite: Successful completion of ASL III with a grade of C or better, or equivalent proficiency as determined by the teacher.*

Students will apply the language skills and vocabulary acquired in previous levels to increase their conversational abilities, focusing on specific fine-tuning strategies which will help them reach the next level with their ASL skills and prepare them for college-level ASL courses, as well as prepare them for possible careers involving ASL. Topics include literary works, deaf art, current events, and issues within the Deaf community. Students will deepen their understanding of the Deaf World through a storytelling lens with a brief taste of the ASL interpreting process. Through a more involved study of ASL roots and linguistics, notably classifiers and parameters, students will gain better understanding of the language while comparing it with their native language. Students will be encouraged to use ASL both within and beyond the school setting. In addition to this, they will collaborate with their ASL IV peers from another high school. For example, students might participate in a Deaf literature book club, reading outside of class. They will return to the classroom where they will share in ASL with each other their newfound knowledge.

**Arabic levels I and II at the Career Center, may be delivered through distance learning technologies. At our secondary programs, Arabic may be available only through online courses by outside providers.**

### **Arabic I (25800)**

**Full Year, one credit**

**Grade(s): 9-12**

*Prerequisite: None*

This level introduces students to the Arabic alphabet and sound system. This course is very rich in cultural and historical information. The history of the Arabic language, family tree of Arabic language and script are given. In addition to the initial focus on the sound and writing systems, students learn and reproduce sounds, stress patterns and intonation of the language. Basic grammatical structures and vocabulary are introduced so that students can produce basic formulaic exchanges in simple sentences and conversations in contexts appropriate to the novice level. Students will be able to write words and sentences accurately from dictation, read previously learned words and sentences, greet, and introduce others, form simple questions and answers, engage in basic social interactions, talk about themselves, family members and others and exchange basic personal information. The principal topic around which language is developed is personal and family life.

### **Arabic II (25822)**

**Full Year, one credit**

**Grade(s): 9-12**

*Prerequisite: Successful completion of Arabic I with a grade of C or better, or equivalent proficiency as determined by the teacher*

This course continues the development of listening, speaking, reading, and writing at a novice proficiency level and revolves around daily life situations high school students in Arabic speaking countries may encounter. Students increase vocabulary building and continue to learn more about basic Arabic sentence structure and to apply basic grammatical structures for engaging in functional language. Upon completion of Arabic II, students will be able to initiate social interactions, and be aware of basic cultural perspectives. Students will be able to understand and respond to simple questions, short statements, and high frequency commands, especially on familiar topics. Using previously practiced or memorized sentences and phrases, students will be able to describe people, talk about how they look and feel, exchange information about hobbies and will be able to read and compose simple sentences and short paragraphs using previously learned material. They will also be familiar with some of the differences between formal and spoken Arabic. Topics include school and home life, social life and personal interests and community life, including shopping, restaurants, and food.

### **Arabic III (25830)**

**Full Year, one credit**

**Grade(s): 9-12**

*Prerequisite: Successful completion of Arabic II with a grade of C or better, or equivalent proficiency as determined by the teacher*

Students continue to develop their listening, speaking, reading, and writing skills. The content is focused on issues and challenges that relate to the lives of high school students. Themes and topics go beyond daily life situations into social issues related to the world around them. As part of the curriculum, students will be able to read and understand simplified texts that relate to issues that are of interest to Arabs as manifested in pop songs and poetry. Students will comprehend simple to more complex songs and video texts that revolve around familiar topics and be able to express views in simple terms about issues that rotate around the self and the people around you. Students will handle a number of uncomplicated communicative tasks relating to social situations and be able to read and understand basic instructions and standard messages and expressions such as those found on menus, maps and road signs. They will also understand main ideas in texts that are highly contextualized. Topics include additional and more sophisticated aspects of personal and family life, teen culture, future plans and choices and the environment.

### **Arabic IV (25840)**

**Full Year, one credit**

**Grade(s): 9-12**

*Prerequisite: Successful completion of Arabic III with a grade of C or better, or equivalent proficiency as determined by the teacher*

This course continues the refinement of linguistic functions identified in the level III curriculum and develops more sophisticated communication skills with emphasis on the oral and written language. Themes focus on future plans and choices, current and historic events and the environment and include topics on careers, jobs and educational plans, national holidays and the arts, nature, ecology, conservation and ecotourism. Students will be able to summarize, ask and answer questions related to themes and topics studied. In addition, students will be able to demonstrate an understanding of the practices, products, and perspectives of the Arabic cultures and how they compare and contrast with their own culture.

### **Arabic V (25841)**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite: Successful completion of Arabic IV with a grade of C or better, or equivalent proficiency as determined by the teacher*

Arabic Level V is based on newspaper articles from different parts of the Arab world. The articles revolve around several themes, and the structure of the language is discussed and reviewed. Course material focuses on professional topics of everyday interest

including health, economic and popular culture such as: Arab Markets (historical markets, markets of Jeddah, Om Derman market), and Arab songs. At the end of the course, students should be able to read Arabic newspapers with a good general understanding, especially on familiar topics. Students should be able to express themselves by combining and recombining known elements.

**All levels of Chinese at the high schools, except Washington-Liberty, are delivered only through online courses by outside providers with support of a native Chinese speaking assistant.**

**Chinese I (25615)**  
**Full Year, one credit**  
**Grade(s): 9-12**

*Prerequisite: None*

Students develop the ability to communicate about themselves and their immediate environment using simple sentences containing basic language structures. This communication is evidenced in all four language skills-listening, speaking, reading, and writing. This course emphasizes the development of listening and speaking skills. Students are introduced to pinyin and also learn simplified Chinese characters that relate to the themes and grammatical elements targeted at this level. Students learn to recognize characters correctly, not only for reading, but also with the goal of developing their writing and ability to communicate in text on computers and on other electronic devices. Students begin to explore and study the themes of personal and family life, school life, social life, and community life.

**Chinese II (25625)**  
**Full Year, one credit**  
**Grade(s): 9-12**

*Prerequisite: Successful completion of Chinese I with a grade of C or better, or equivalent proficiency as determined by the teacher*

Students continue to develop the ability to communicate about themselves and their immediate environment using simple sentences containing basic language structures. This communication is evidenced in all four language skills-listening, speaking, reading and writing-with emphasis on the ability to communicate orally. Students continue to expand their study on the themes of personal and family life, school life, social life, and community life, which were introduced in level I. Students continue to refine their writing skills in simplified Chinese. Students learn to recognize characters correctly, not only for reading, but also with the goal of developing their writing and ability to communicate in text on computers and on other electronic devices. In addition to the characters learned in level I, students are introduced to new simplified Chinese characters that relate to the themes and grammatical elements targeted at this level.

**Chinese III (25630)**  
**Full year, one credit**  
**Grade(s): 9-12**

*Prerequisite: Successful completion of Chinese II with a grade of C or better, or equivalent proficiency as determined by the teacher*

Students continue to develop and refine their proficiency in all four language skills-listening, speaking, reading and writing-with emphasis on the ability to interact orally. They communicate using more complex language structures on a variety of topics, moving from concrete to more abstract concepts. At this level, students comprehend the main ideas of the authentic materials that they read and hear, and they can identify significant details when the topics are familiar. Students gain a deeper understanding of the world around them while studying rights and responsibilities, future plans and choices, teen culture, environment, and humanities while revisiting themes and topics from previous levels. However, the spiral character of the theme-based instruction requires students to demonstrate their communicative skills and sophistication at a new developmental level and understand announcements and messages connected to daily activities. Students present reports orally and/or in writing on topics being studied. They can write descriptions of people and objects from their everyday environment and school. Students also acquire information from a variety of sources about topics being studied. Student work will be required outside of class time.

**Chinese IV (25640)**  
**Full year, one credit**  
**Grade(s): 9-12**

*Prerequisite: Successful completion of Chinese III with a grade of C or better, or equivalent proficiency as determined by the teacher*

Students continue to develop and refine their proficiency in all four language skills-listening, speaking, reading, and writing-with emphasis on the ability to interact orally and in writing. They communicate using more complex language structures on a variety of topics, focusing on abstract concepts. At this level, students comprehend the main ideas of the authentic materials that they read and hear, and they are able to identify significant details when the topics are familiar. Students gain a deeper understanding of the world around them while studying Beijing, facets of China's traditional culture, social life, hobbies, the environment, work, and college. Some familiar themes and topics from levels I, II, and III may reoccur at the same time. However, the spiral character of the theme-based instruction requires students to demonstrate their communicative skills and sophistication at a new developmental level. Students will be introduced to the Advanced Placement Chinese Language course and the College Board examination.



**Chinese Language & Culture, AP (35860)****Full year, one credit****Grade(s): 9-12**

*Prerequisite: Successful completion of Chinese IV with a grade of B or better in the preceding level or teacher recommendation*

This course is designed to prepare high school students for the AP exam in May. It is a rigorous college level course equivalent to a fourth semester college course in Mandarin Chinese. Students will demonstrate proficiency in presentational, interpersonal and interpretative communication through listening, speaking, reading and writing; explore contemporary and historical Chinese cultures; study a variety of themes related to the Chinese Language and Culture as outlined by the College Board; broaden their global perspectives and compare Chinese cultures with their own environment. Students who are enrolled in a Virtual Virginia World Language course will be required to take a nationally recognized examination in their language as part of this course. *Students not taking the exam will not receive the quality point (25860).*

**French I (25110)****Full year, one credit****Grade(s): 9-12**

*Prerequisite: None*

Students learn sounds, stress patterns, and intonation of the language. Basic structures and vocabulary are learned through practice in listening, speaking, reading, and writing with emphasis on using language to communicate orally. Students express themselves both orally and in writing by recombining the vocabulary and language structures creatively. Students comprehend and read simple questions and statements about daily activities and interests. Students also learn basic information about the geography, customs, and culture of the French speaking countries.

**French II (25120)****Full year, one credit****Grade(s): 9-12**

*Prerequisite: Successful completion of French I with a grade of C or better, or equivalent proficiency as determined by the teacher*

Students continue to develop their skills listening, speaking, reading, and writing with an emphasis on oral communication. They participate in simple conversations about familiar topics using the vocabulary and grammatical patterns they learn. They read familiar material and write short, guided compositions on topics within their vocabulary and grammatical control. They expand their knowledge of the customs and culture of the French speaking countries to include social patterns, activities, and roles.

**French III (25130)****Full year, one credit****Grade(s): 9-12**

*Prerequisite: Successful completion of French II with a grade of C or better, or equivalent proficiency as determined by the teacher*

Students continue to develop their proficiency in the target language in all four skills: listening, speaking, reading, and writing. They understand short conversations and can be understood by natives accustomed to dealing with foreigners. Emphasis is on consistent use of the language for classroom activities. Students recount uncomplicated events and experiences orally, read short authentic material for main idea, and write about familiar topics using more complex grammatical structures. A deeper insight into the target culture is developed.

**French IV (25140)****Full year, one credit****Grade(s): 9-12**

*Prerequisite: Successful completion of French III with a grade of C or better or equivalent proficiency as determined by the teacher*

Level IV students focus on increased accuracy and appropriateness of speech in formal presentations and spontaneous conversations when narrating, describing, seeking and giving information. Students read authentic material, particularly on familiar subjects, and discuss contemporary subjects. They also write about these topics in some detail. A broader knowledge of cultural contributions in the arts, historical and current events in the francophone culture is developed.

**French V, (25150)****Full year, one credit****Grade(s): 9-12**

*Prerequisite: Successful completion of French IV with a grade of C or better, or equivalent proficiency as determined by the teacher*

Students can discuss current events and to understand authentic material (from media, literary excerpts by native speakers, etc.). They read, write, and converse with some depth about selected topics on the culture, history, and literature of the target language and begin to extend comprehension beyond the literal level. The course also includes some analysis of literature in the target language.

**Advanced Studies in French (25160)****Full year, one credit**

*Prerequisite: Grade of "B" or better in the preceding level or teacher recommendation*

**Grade(s): 9-12**

This course is designed for students who demonstrate a high level of fluency in the target language. The focus of the curriculum is on developing strong conversational and communicative skills by discussing contemporary topics that provide the background through which students engage in inquiry and rich discussions. Students will be able to understand

authentic material from the Francophone world utilizing various media sources. They will read, write, and engage in conversations about selected topics on the literature, cinema, history, and popular culture of the cultures in which the target language is spoken.

### **French Language & Culture, AP (35165)**

**Full year, one credit + 1.0 quality point**

**Grade(s): 9-12**

*Prerequisite: Grade of "B" or better in the preceding level or teacher recommendation*

This course is designed for students who demonstrate a high level of fluency and can understand material on concrete and abstract topics. This course prepares students for the Advanced Placement examination in French. Students will demonstrate their abilities in all language skills (listening, speaking, reading, and writing) in various ways, such as writing coherent summaries, descriptions, narrations, and essays. They will comprehend, analyze, and discuss a variety of spoken and written texts, representing literary works, contemporary life, and popular culture. Students will continue to refine syntax and mechanics of French both orally and in writing, demonstrating a more advanced control of language and also a deeper understanding and use of idiomatic expressions. *Students are required to take the AP exam associated with this course. Students not taking the exam will not earn the additional quality point. (25165).*

### **German I (25210)**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite: None*

Students learn sounds, stress patterns, and intonation of the language. Basic structures and vocabulary are learned through practice in listening, speaking, reading, and writing with emphasis on using language to communicate orally. Students express themselves both orally and in writing by recombining vocabulary and language structures creatively. Students comprehend and read simple questions and statements about daily activities and interests. Students also learn basic information about the geography, customs, and culture of the German speaking countries.

### **German II (25220)**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite: Successful completion of German I with a grade of C or better, or equivalent proficiency as determined by the teacher*

Students continue to develop their skills listening, speaking, reading, and writing with an emphasis on oral communication. They participate in simple conversations about familiar topics using the vocabulary and grammatical patterns they learn. They read familiar material and write short, guided compositions on topics within their vocabulary and grammatical control. They expand their knowledge of

the customs and culture of the German speaking countries.

### **German III (25230)**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite: Successful completion of German II with a grade of C or better, or equivalent proficiency as determined by the teacher*

Students continue to develop their proficiency in the language in all four skills: listening, speaking, reading, and writing. They understand short conversations and can be understood by native speakers accustomed to dealing with non-native speakers of German. Emphasis is on consistent use of the language for classroom activities. Students recount uncomplicated events and experiences orally, read short authentic material for main idea, and write about familiar topics using more complex grammatical structures. Cultural information is expanded.

### **Japanese I (25910)**

**Full Year, one credit**

**Grade(s): 9-12**

*Prerequisite: None*

Students begin to acquire skills in understanding and speaking the Japanese language. Basic grammar and vocabulary used in daily living, practical conversations, and discussions of Japanese culture are studied. Hiragana, the Japanese syllabary writing system, and Katakana, the Japanese syllabary for foreign words are taught. A limited number of Kanji, Chinese characters, are also introduced. Through the language, students study Japanese history, geography, culture, and customs.

### **Japanese II (25920)**

**Full Year, one credit**

**Grade(s): 9-12**

*Prerequisite: Successful completion of Japanese I with a grade of C or better, or equivalent proficiency as determined by the teacher*

Students continue to increase their skills in understanding, speaking, reading, and writing Japanese. About 100 kanji characters are taught. Students are introduced to additional vocabulary and grammar in order to engage in more complex conversations. History, geography, culture, and customs of Japan are emphasized.

### **Japanese III (25930)**

**Full Year, one credit**

**Grade(s): 9-12**

*Prerequisite: Successful completion of Japanese II with a grade of C or better, or equivalent proficiency as determined by the teacher*

Japanese III is designed to further enhance students' speaking, reading, and writing skills. The course will teach new skills through the study of topics related to contemporary life in Japan. About 100 new kanji characters will be introduced. By the end of the course,

students will be able to discuss and express opinions and feelings in various speech styles.

### **Latin I (25310)**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite: None*

In this first Latin course, students are introduced to the language and life of the ancient Romans. A basic Latin vocabulary and the primary elements of grammar are learned, and students learn to read aloud with expression and enjoyment. Roman culture is introduced, especially family life, and Greek and Roman mythology. A special emphasis is placed on English word formation and vocabulary building from Latin roots.

### **Latin II (25320)**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite: Successful completion of Latin I with a grade of C or better, or equivalent proficiency as determined by the teacher*

This course continues the program set forth in Latin I. The Latin readings become gradually longer and more complex as students work into the reading of real Latin texts. Roman culture, history, and mythology are studied in depth to round out students' knowledge of the Classical World. Grammatical principles are reviewed and consolidated as students are introduced to Latin prose and poetry.

### **Latin III (25330)**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite: Successful completion of Latin II with a grade of C or better, or equivalent proficiency as determined by the teacher*

Students complete the study of Latin grammar and enlarge their vocabularies, exhibiting increased knowledge of derivatives. They can identify and interpret syntax common to each author read. They continue to read Latin aloud and interpret selected passages through critical analysis, responding to the work as an art form.

### **Latin IV (25340)**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite: Grade of C or better in the preceding level or teacher recommendation*

Students review grammar in context, read, and continue to enlarge their vocabularies and knowledge of derivatives. They identify and interpret the syntax of each author with increased facility and practice the skill of critical analysis. Students synthesize the cultural and historical contexts of the work read.

### **Latin V (25350)**

**Full year, one credit**

*(This course may be combined with Latin, AP.)*

**Grade(s): 9-12**

*Prerequisite: Grade of B or better in the preceding course or teacher recommendation*

Students review grammar in the context of the work, read, and continue to enlarge their vocabularies and knowledge of derivatives. They identify and interpret the syntax of each author with increased facility and practice the skill of critical analysis. Students synthesize the cultural and historical contexts of the work read.

### **Latin, AP (35350)**

**Full year, one credit + 1.0 quality point**

*(This course may be combined with Latin V.)*

**Grade(s): 9-12**

*Prerequisite: Grade of B or better in the preceding course or teacher recommendation*

This course is designed for students who are fully conversant with Latin grammar and syntax and are able to analyze original texts, both literally and figuratively, preparing them for the Advanced Placement examination in Latin. The curriculum exposes students to some of the finest examples of Latin literature, comprising of both poetry and prose. Examining both Vergil's poetry and Caesar's prose, students will study the literature and civilization of those authors in great depth and will demonstrate their proficiency through analytic essays that show a firm grasp of the nuances of those authors' respective literary genres with a particular focus on critical reading and analytical writing. In addition, the course approaches the study of classical literature through various cultural contexts, allowing students to draw connections between the ancient texts they read and a variety of other disciplines, as well as their own personal life experiences. *Students are required to take the AP exam associated with this course. Students not taking the exam will not receive the quality point (25351).*

### **Advanced Studies in Latin (25360)**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite: Grade of B or better in previous course or teacher recommendation*

This course, recommended as a post AP experience, is designed for students who are fully conversant with Latin grammar and syntax and are able to analyze original texts, both literally and figuratively. Students review grammar in the context of the works they read in class and continue to enlarge their vocabularies and knowledge of derivatives. Students identify and interpret the syntax of each author read in class with increased facility, and practice critical analysis skills. Students synthesize the cultural and historical contexts of the works they read.

**Spanish I (25510)**  
**Full year, one credit**  
**Grade(s): 9-12**

*Prerequisite: None*

Students learn sounds, stress patterns, and intonation of the language. Basic structures and vocabulary are learned through practice in listening, speaking, reading, and writing with emphasis on using language to communicate orally at the novice level. Students express themselves both orally and in writing by recombining vocabulary and language structures creatively. Students comprehend and read simple questions and statements about daily activities and interests. Students also learn about the geography, customs, and culture of Spanish speaking countries.

**Spanish for Fluent Speakers I (25517)**  
**Full year, one credit**  
**Grade(s): 9-12**

*Prerequisite: Demonstrated oral fluency in Spanish as determined by the teacher*

This course is designed for students who have oral fluency in Spanish but have not mastered basic reading and writing skills. Students develop communication skills in reading, writing, and speaking and begin the study of Spanish grammar. Students develop a deeper understanding of perspectives and practices of the Hispanic culture.

**Spanish II (25520)**  
**Full year, one credit**  
**Grade(s): 9-12**

*Prerequisite: Successful completion of Spanish I with a grade of C or better, or equivalent proficiency as determined by the teacher*

Students continue to develop their skills in listening, speaking, reading, and writing with an emphasis on oral communication at the novice level. They participate in simple conversations about familiar topics using the vocabulary and grammatical patterns they learn. They read familiar material and write short, guided compositions on topics within their vocabulary and grammatical control. They expand their knowledge of cultural perspectives and practices.

**Spanish for Fluent Speakers II (25527)**  
**Full year, one credit**  
**Grade(s): 9-12**

*Prerequisite: Successful completion of Spanish for Fluent Speakers Level I with a grade of C or better, or equivalent proficiency in the language*

This course is designed for students who already know how to read and write in Spanish at a basic level. Students improve spelling and mechanics and write short compositions. They read original works and begin to interpret and/or analyze narratives and poetry. The study of grammar is continued. Students improve their oral communication skills through class presentations and other interpersonal activities. Cultural perspectives and practices are explored, and a

deeper understanding is developed through the context of literature.

**Spanish III (25530)**  
**Full year, one credit**  
**Grade(s): 9-12**

*Prerequisite: Successful completion of Spanish II with a grade of C or better, or equivalent proficiency as determined by the teacher*

Students continue to develop their proficiency in the language in all four skills: listening, speaking, reading, and writing. They understand short conversations and can be understood by native speakers accustomed to dealing with non-native speakers of Spanish. Emphasis is on consistent use of the language for classroom activities. Students recount uncomplicated events and experiences orally, read short authentic material for main idea, and write about familiar topics using more complex grammatical structures. Knowledge of cultural perspectives and practices is expanded.

**Spanish for Fluent Speakers III (25537)**  
**Full year, one credit**  
**Grade(s): 9-12**

*Prerequisite: Successful completion of Spanish for Fluent Speakers Level II with a grade of C or better, or equivalent proficiency as determined by the teacher*

This course is designed for students who know how to read and write at a more advanced level. Students will be able to write letters, compositions, and reports, and interpret and/or analyze more complex and longer narratives. In addition, students will present oral and written reports on a variety of topics. Cultural perspectives and practices are shared, and a deeper understanding is developed through the context of literature. Upon successful completion of Spanish for Fluent Speakers III, students are encouraged to enroll in Spanish Language and Culture, AP.

**Spanish IV (25540)**  
**Full year, one credit**  
**Grade(s): 9-12**

*Prerequisite: Successful completion of Spanish III with a grade of C or better, or equivalent proficiency as determined by the teacher*

Level IV students focus on increased accuracy and appropriateness of speech in formal presentations and spontaneous conversations when narrating, describing, seeking, and giving information. Students read authentic material, particularly on familiar subjects, and discuss contemporary subjects within a cultural context. They also write about these topics in more detail. A deeper understanding of cultural perspectives and practices is developed through literature and authentic materials.

**Spanish V, (25550)**  
**Full year, one credit**  
**Grade(s): 9-12**

*Prerequisite: Successful completion of Spanish IV with a grade of C or better, or equivalent proficiency as determined by the teacher*

Students are able to discuss current events and to understand authentic material (from media, literature excerpts from native speakers, etc.). They read, write, and converse with some depth about selected topics on the culture, history, and literature of the language, and begin to extend comprehension beyond the literal level. The course also includes some analysis of literature in the target language.

**Advanced Studies in Spanish (25560)**  
**Full year, one credit**

*Prerequisite: Grade of "B" or better in the preceding level or teacher recommendation*

**Grade(s): 9-12**

This course is designed for students who demonstrate a high level of fluency in the target language. The focus of the curriculum is on developing strong conversational and communicative skills by discussing contemporary topics that provide the background through which students engage in inquiry and rich discussions. Students will be able to understand authentic material representing the richness of the Spanish speaking countries utilizing various media sources. They will read, write, and engage in conversations about selected topics on the literature, cinema, history, and popular culture of the target language.

**Spanish Language & Culture, AP (35565)**  
**Full year, one credit + 1.0 quality point**  
**Grade(s): 9-12**

*Prerequisite: Grade of "B" or better in the preceding level or teacher recommendation*

This course is designed for students who demonstrate a high level of fluency and can understand material on concrete and abstract topics. This course prepares students for the Advanced Placement examination in Spanish Language. Students will demonstrate their abilities in all language skills; (listening, speaking, reading, and writing,) in various ways, such as writing coherent summaries, descriptions, narrations, and essays. They will comprehend, analyze, and discuss a variety of spoken and written texts, representing literary works, contemporary life, and popular culture. Students will continue to refine syntax and mechanics of Spanish both orally and in writing, demonstrating a more advanced control of language and also a deeper understanding and use of idiomatic expressions. *Students are required to take the AP exam associated with this course. Students not taking the exam will not earn the additional quality point (25555).*

**Spanish Literature, AP (35580)**  
**Full year, one credit + 1.0 quality point**  
**Grade(s): 9-12**

*Prerequisite: Grade of "B" or better in the preceding level or teacher recommendation*

This course is designed for students who demonstrate a high level of fluency and can understand material on concrete and abstract topics, including literary texts representing various genres and literary styles. This course prepares students for the Advanced Placement examination in Spanish Literature, AP. The curriculum exposes students to a wide range of literature from across Spanish speaking countries. Students will study literature and civilization in greater depth and will demonstrate proficiency in Spanish across all language skills, with a particular focus on a critical reading and analytical writing. In addition, this course approaches the study of literature through various cultural contexts, allowing students to understand the literary texts they read while at the same time relating this content to many other areas of learning and connecting it to their own life. *Students are required to take the AP exam associated with this course. Students not taking the exam will not earn the additional quality point. (25580)*

## World Languages Sequences of Study<sup>1</sup>

### American Sign Language

7 <sup>th</sup> grade	8 <sup>th</sup> grade	9 <sup>th</sup> grade	10 <sup>th</sup> grade	11 <sup>th</sup> grade	12 <sup>th</sup> grade
Level 1	Level 2	Level 3	Level 4		
	Level 1	Level 2	Level 3	Level 4	
		Level 1	Level 2	Level 3	Level 4
			Level 1	Level 2	Level 3
				Level 1	Level 2

### Arabic

7 <sup>th</sup> grade	8 <sup>th</sup> grade	9 <sup>th</sup> grade	10 <sup>th</sup> grade	11 <sup>th</sup> grade	12 <sup>th</sup> grade
Level 1	Level 2	Level 3	Level 4	Level 5/IB I	IB II
	Level 1	Level 2	Level 3	Level 4	Level 5
		Level 1	Level 2	Level 3	Level 4

### Chinese

7 <sup>th</sup> grade	8 <sup>th</sup> grade	9 <sup>th</sup> grade	10 <sup>th</sup> grade	11 <sup>th</sup> grade	12 <sup>th</sup> grade
Level 1	Level 2	Level 3	Level 4	Chinese Language & Culture AP/IB I	IB II
	Level 1	Level 2	Level 3	Level 4	Chinese Language & Culture, AP
		Level 1	Level 2	Level 3	Level 4

### French

7 <sup>th</sup> grade	8 <sup>th</sup> grade	9 <sup>th</sup> grade	10 <sup>th</sup> grade	11 <sup>th</sup> grade	12 <sup>th</sup> grade
Level 1	Level 2	Level 3	Level 4	Level 5 or French Language & Culture, AP or IB I*	French Language & Culture, AP or Advanced Studies in French or IB II
	Level 1	Level 2	Level 3	Level 4	Level 5 or French Language & Culture, AP
		Level 1	Level 2	Level 3	Level 4
			Level 1	Level 2	Level 3
				Level 1	Level 2
					Level 1

### German

7 <sup>th</sup> grade	8 <sup>th</sup> grade	9 <sup>th</sup> grade	10 <sup>th</sup> grade	11 <sup>th</sup> grade	12 <sup>th</sup> grade
		Level 1	Level 2	Level 3	
			Level 1	Level 2	Level 3
				Level 1	Level 2
					Level 1

### Japanese

7 <sup>th</sup> grade	8 <sup>th</sup> grade	9 <sup>th</sup> grade	10 <sup>th</sup> grade	11 <sup>th</sup> grade	12 <sup>th</sup> grade
		Level 1	Level 2	Level 3	
			Level 1	Level 2	Level 3
				Level 1	Level 2
					Level 1

<sup>1</sup> This sequence is for regular programs. For a complete description of the International Baccalaureate language offerings, please see pages 117-121

## Latin

7 <sup>th</sup> grade	8 <sup>th</sup> grade	9 <sup>th</sup> grade	10 <sup>th</sup> grade	11 <sup>th</sup> grade	12 <sup>th</sup> grade
Level 1	Level 2	Level 3	Level 4	Level 5 or Latin, AP or IB I	Latin, AP or Advanced Studies in Latin or IB II
	Level 1	Level 2	Level 3	Level 4	Level 5 or Latin, AP
		Level 1	Level 2	Level 3	Level 4
			Level 1	Level 2	Level 3
				Level 1	Level 2
					Level 1

## Spanish

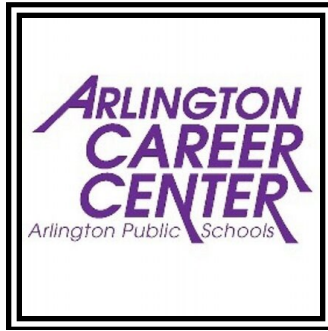
7 <sup>th</sup> grade	8 <sup>th</sup> grade	9 <sup>th</sup> grade	10 <sup>th</sup> grade	11 <sup>th</sup> grade	12 <sup>th</sup> grade
Level 1	Level 2	Level 3	Level 4	Level 5 or Spanish Language & Culture, AP or IB I	Spanish Language & Culture, AP or Spanish Literature, AP or Advanced Studies in Spanish or IB II
	Level 1	Level 2	Level 3	Level 4	Level 5 or Spanish Language & Culture, AP
		Level 1	Level 2	Level 3	Level 4
			Level 1	Level 2	Level 3
				Level 1	Level 2
					Level 1

## Spanish for Fluent Speakers

7 <sup>th</sup> grade	8 <sup>th</sup> grade	9 <sup>th</sup> grade	10 <sup>th</sup> grade	11 <sup>th</sup> grade	12 <sup>th</sup> grade
Level 1	Level 2	Level 3	Spanish Language & Culture, AP	Spanish Literature, AP	Advanced Studies in Spanish
	Level 1	Level 2	Level 3	Spanish Language & Culture, AP	Spanish Literature, AP or Advanced Studies in Spanish
		Level 1	Level 2	Level 3	Spanish Language & Culture, AP
			Level 1	Level 2	Level 3
				Level 1	Level 2
					Level 1

### Notes:

1. German, and Japanese are only offered at the high school level.
2. Excepting Washington Liberty High School, Chinese at the high schools is only offered through an online provider with the assistance of a native Chinese-speaking assistant.
3. An AP exam is not available in American Sign Language or Arabic.
4. IB level languages are only available at Washington Liberty High School
5. An AP course is not offered in either German or Japanese.
6. APS students who demonstrate strong proficiency in one or more foreign languages may earn up to 4 credits (Level 1-4) by participating successfully in the Credit by Exam. Please see [www.apsva.us/worldlanguages](http://www.apsva.us/worldlanguages) for more information. Duplicate credits are not allowed.



## **ARLINGTON CAREER CENTER 2022-23**

The Arlington Career Center serves all high school students in Arlington Public Schools by offering academic programs, Career and Technical Education (CTE) programs, and now dual-enrolled college courses through the Governor’s Career & Technical Academy of Arlington. The mission of the Career Center is to instill a passion for learning by doing. In addition, the Career Center provides enhanced opportunities in four areas: 1) Project based curriculum; 2) industry certifications; 3) college credit; and 4) work-based learning experiences such as internships and client projects.

The Governor’s Career and Technical Academy of Arlington (GCTAA) builds programs around “Relationships, Relevance and Rigor,” with opportunities for high level, integrated projects, and dual enrollment opportunities with Northern Virginia Community College (NOVA). Students have opportunities to take course in Business and Information Technology, Computer Science, Cyber Security, Communications and Industry and Engineering, Health and Human Services, and Education and Government pathways. Any student who enrolls in a dual-enrolled CTE course at the Arlington Career Center is part of the (GCTAA) Academy. They also may take NOVA’s one-credit orientation course (SDV 100) on the Career Center campus. For more information about the Arlington Career Center and its programs, please call 703-228-5800, or visit our website at <https://careercenter.apsva.us/>

### **Program Offerings**

#### **SEQUENCE OPTIONS OF THE CAREER & TECHNICAL EDUCATION COURSES AT THE ARLINGTON CAREER CENTER**

#### **CAREER & TECHNICAL COURSES AT THE ARLINGTON CAREER CENTER**

#### **ADDITIONAL COURSES OFFERED AT THE ARLINGTON CAREER CENTER**

#### **INTERNSHIP OPTIONS**

#### **ARLINGTON TECH**

#### **THE ACADEMIC ACADEMY**

#### **ENGLISH LEARNER INSTITUTE**

#### **PROGRAM FOR EMPLOYMENT PREPAREDNESS (PEP)**



## Sequence Options of the Career & Technical Education Courses at the Arlington Career Center

Graduation requirements for the Standard Diploma require a least two sequential electives. In CTE this requirement may be fulfilled using one of the options listed below. In some cases, the option is a two credit, two period course for which a student earns the sequence. Please see your counselor for more details.

<b>I. Business &amp; Communication</b>				
<b>Arts, A/V Technology &amp; Communications</b>	<u>Sequence Option 1:</u> Photo & Video I (28625) & Photo & Video II (28626)	<u>Sequence Option 2:</u> Digital Animation (28457) & Graphic Communications System (28458)	<u>Sequence Option 3:</u> Television Production I (28689) (98689W) & Television & Multimedia Production II (28690) (98690W) DE Television & Multimedia Production III (28691) (98691) DE	
<b>Information Technology: Cybersecurity/Networking</b>	<u>Sequence Option 1:</u> Introduction to Information Technology (26116) & Computer Information Systems (26614)	<u>Sequence Option 2:</u> <b>Cybersecurity Level I:</b> Cybersecurity Fundamentals (96659W) & Cybersecurity Network Systems (96667W) DE  <i>(all above courses taken concurrently)</i>	<u>Sequence Option 3:</u> <b>Cybersecurity Level II:</b> Computer Software Network Operations (96657W) DE & Cybersecurity II: Cybersecurity Software Operations (96662W) DE  <i>(all above courses taken concurrently)</i>	<u>Sequence Option 4:</u> <b>Cybersecurity Level III:</b> Computer Software Network Operations, Advanced (96658W) DE & Cybersecurity III: Cybersecurity Software Operations Advanced (96663W) DE  <i>(all above courses taken concurrently)</i>
<b>Information Technology: Computer Programming</b>	<u>Sequence Option 1:</u> Computer Programming (26638) (96638W) DE	<u>Sequence Option 2:</u> Computer Programming Intensified, DE (96644W)	<u>Sequence Option 3:</u> Computer Programming Advanced (96643W) DE	
<b>Information Technology: Web Page Design or Database Administration</b>	<u>Sequence Option 1:</u> Web Page Design & Multimedia I (26646) (96646W) DE. Web Page Design & Multimedia II, Advanced (26631) (96631W) DE	<u>Sequence Option 2:</u> Web Page Design & Multimedia (26646) (96646W) DE. Database Design & Management (26664) (96660W) DE		
<b>II. Industry &amp; Engineering</b>				
<b>Transportation, Distribution, and Logistics</b>	<u>Sequence Option 1:</u> Automotive Technology I (98509W) DE & Automotive Technology II (98507W) DE **	<u>Sequence Option 2:</u> Automotive Collision Repair I (28677) & Automotive Collision Repair II (28678) & Automotive Collision Repair III (28680)		
<b>Architecture and Construction</b>	<u>Sequence Option 1:</u> Computer Assisted Architectural Drawing (98408W) DE & Construction Technology (28512)	<u>Sequence Option 2:</u> Materials & Processes & Renewable Technologies (28460)	<u>Sequence Option 3:</u> Electricity I (28534) & Electricity II (28535)	

<b>Science, Technology, Engineering and Mathematics</b>	<u>Sequence Option 1:</u> Engineering I: Intro & Engineering II: Principals of Engineering (28492)	<u>Sequence Option 2:</u> Computer Assisted Technical Drawing (28439) & Computer Assisted Architectural Drawing (28408) DE	<u>Sequence Option 3:</u> Computer Assisted Technical Drawing (28439) DE & Computer Assisted Engineering Drawing (28438)	<u>Sequence Option 4:</u> Digital Electronics (26671) & Engineering Capstone: Design & Development (28494) & Computer Integrated Manufacturing Engineering (28493)
<b>III. Health &amp; Human Services</b>				
<b>Agriculture, Food &amp; Natural Resources</b>	<u>Sequence Option 1:</u> Veterinary Science I (28064) & Veterinary Science II (28061)	<u>Sequence Option 2:</u> Small Animal Care I (28062) & Small Animal Care II (28063)		
<b>Health Sciences</b>	<u>Sequence Option 1:</u> Health Sciences (28303) & Medical Terminology (98383W) DE**	<u>Sequence Option 2:</u> Health Sciences (28303) & Pharmacy Technician (28305)	<u>Sequence Option 3:</u> Health Sciences (28303) & Physical Therapy/Sports Medicine (28332)	<u>Sequence Option 4:</u> Health Sciences (28303) & Emergency Medical Technician I (28334) (98334W) DE
<b>Hospitality &amp; Tourism</b>	<u>Sequence Option 1:</u> Culinary Arts & Sciences I (28522) & Culinary Arts and Sciences II (28523)			
<b>Human Services</b>	<u>Sequence Option 1:</u> Early Childhood Education I (98235W) DE & Early Childhood Education II (28236)	<u>Sequence Option 2:</u> Cosmetology I (28528) Cosmetology II (28529) & Cosmetology III (28530)	<u>Sequence Option 3:</u> Barbering I (28531) & Barbering II (28532) & Barbering III (28526)	
<b>IV. Education &amp; Government</b>				
<b>Government &amp; Public Administration</b>	<u>Sequence Option 1:</u> Space Force Junior ROTC I (29911) & Space Force Junior ROTC II (29912)	<u>Sequence Option 2:</u> Space Force Junior ROTC III (29913) & Space Force Junior ROTC IV (29914)		
<b>Law, Public Safety, Corrections and Security</b>	<u>Sequence Option 1:</u> Forensic Technology with application in Biotechnology (28325) & Biotechnology in Health & Medical Science (28326)			

S – Course provides science credit.

DE – Course is also available for qualified students to earn dual-enrolled credit. Please see course description or more information.

\*\*Additional levels of some sequences are available.

- All courses fulfill the Career and Technical/Fine Arts requirement for high school graduation.
- Students may earn a selected verified credit upon completion of a CTE sequence and successfully passing a state approved industry certification for that sequence.
- Each CTE course provides an opportunity for industry certification for students entering high school in 2013-2014 and beyond to fulfill the career and technical certification required for the Standard Diploma graduation requirement.

## **CAREER & TECHNICAL COURSES** **AT THE ARLINGTON CAREER CENTER**

*All courses qualify for the Career and Technical/Fine Arts credit.*

*Each Career and Technical course offer the opportunity to earn the career and technical credential required for the Standard Diploma graduation requirement. Please see your counselor for more information.*

*Note: Courses that have fewer than 15 students may not be offered based on student interest and budget considerations. In some cases, additional budget considerations may require that courses may not be offered in any given year and impacted students should select an alternative course. Additionally, courses with insufficient enrollment may be offered through distance learning or online learning.*

### **Aerospace Engineering (28498)**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite: Engineering I: Introduction to Engineering (28491)*

In this specialized course students are taught about aerodynamics, astronautics, space-life sciences, and systems engineering through hands-on engineering problems and projects.

### **Space Force Junior ROTC I (29911)**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite: Students must be least 14 years of age*

The focus of SFJROTC is to develop citizens of character dedicated to serving their nation and community. This is accomplished through development of self-discipline, respect, customs & courtesies, character, integrity, service, and leadership. Enrollment in SFROTC does not obligate a student to military service.

SFJROTC courses include Aviation History, Leadership, Global Studies, Space Exploration, Cadet Health and Wellness, and Management of the Cadet Corps. As a I and II level cadet, students will learn about dynamic followership, teamwork and professionalism and will be assigned to positions in the cadet squadron.

### **Space Force Junior ROTC II (29912)**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite(s): SFJROTC I and students must be least 14 years of age and comply with USAF grooming*

The focus of SFJROTC is to develop citizens of character dedicated to serving their nation and community. This is accomplished through the development of self-discipline, respect, customs & courtesies, character, integrity, service, and leadership. Enrollment in SFROTC does not obligate a student to military service.

SFJROTC courses include Aviation History, Leadership, Global Studies, Space Exploration, Cadet Health and Wellness, and Management of the Cadet Corps. As a I and II level cadet, students will learn about dynamic followership, teamwork and professionalism and will be assigned to positions in the cadet squadron.

### **Space Force Junior ROTC III (29913)**

**Full year, one credit**

**Grade(s): 10-12**

*Prerequisite(s): Completion of SFJROTC I & II, compliance with USAF grooming standards*

The focus of SFJROTC is to develop citizens of character dedicated to serving their nation and community. This is accomplished through development of self-discipline, respect, customs & courtesies, character, service, integrity, service, and leadership. Enrollment in SFJROTC does not obligate a student to military service.

SFJROTC classes include Aviation History, Leadership, Global Studies, Space Exploration, Cadet Health and Wellness, Management of the Cadet Corps. As a III and IV level cadet, students will learn about leadership and be assigned leadership positions in the cadet squadron.

### **Space Force Junior ROTC IV (29914)**

**Full year, one credit**

**Grade(s): 10-12**

*Prerequisite(s): Completion of SFJROTC I, II & III compliance with USAF grooming standards, and concurrently enrolled in SFJROTC III*

The focus of SFJROTC is to develop citizens of character dedicated to serving their nation and community. This is accomplished through development of self-discipline, respect, customs & courtesies, character, service, integrity, service, and leadership. Enrollment in SFJROTC does not obligate a student to military service.

SFJROTC courses include Aviation History, Leadership, Global Studies, Space Exploration, Cadet Health and wellness, Management of Cadet Corps. As a III and IV level cadet, students will learn about leadership and be assigned leadership positions in the cadet squadron.

### **Automotive Collision Repair I (28677)**

**Full year, one credit**

**Grade(s): 10-12**

*Prerequisite(s): None*

In the global automotive repair industry, there is a growing demand for qualified auto body technicians. In this course, students are taught non-structural analysis, damage repair, and welding. Students work with a variety of materials, using metal finishing and body filling techniques to prepare surfaces and repair panels. In addition, students practice shop safety and gain career skills.

### **Automotive Collision Repair II (28678)**

**Full year, two periods, two credits**

**Grade(s): 10-12**

*Prerequisite(s): Automotive Collision Repair I.*

This program is designed to prepare students for employment in the auto body field. There are two areas of specialization: auto painting and collision work. Although students obtain experience in both, it is possible to specialize in one area. Most of the time is spent in practical "hands-on" experience.

- **Certification:** Upon successful completion of level II, students can take the Automotive Service Excellence (ASE)/Skills USA Automotive Technicians test for paint and refinishing.

### **Automotive Collision Repair III (28680)**

**Full year, two periods, two credits**

**Grade(s): 11-12**

*Prerequisite(s): Automotive Collision Repair I (28677) & II (28678)*

This course allows students to further apply the tasks/competencies learned in Automotive Collision Repair I and II. This course may also be used as a capstone course in which students may perfect their auto body skills and move toward employment in the industry. Students who successfully complete the program sequence will be prepared to take and pass their respective ASE/NATEF exam and will be prepared the postsecondary education opportunities.

### **Automotive Maintenance & Light Repair (28675)**

**Full year, one-credit**

**Grade(s): 9-12**

*Prerequisite(s): None. This course can be taken concurrently with Automotive Collision Repair I (28677)*

In this course, students explore, handle, and perform basic functions in engine repair, automatic transmission and transaxle, manual drive train and axles, suspension and steering systems, and brakes. Students who successfully complete the Automotive Technology program may be eligible to take the Automotive Service Excellence (ASE) Student Certification examination. The ASE Student Certification is the first step in building a career as a service professional in the automotive industry.

### **Automotive Technology I (28509) (98509W)**

**Full year, two periods, two credits + 1.0 quality**

**point**

**Grade(s): 9-12**

*Prerequisite(s): None*

Automotive Technology I is the beginning courses in the Advanced Automotive Technology program sequence at the Career Center. It may also be taken as a general interest course. Students are introduced to career opportunities in the automotive field and how the Automotive Youth Education System (AYES) can help them find employment in an automotive career path.

Students will develop competencies in many of the ASE certified areas of automotive technology including brakes and engine repair. Students also will learn how to work with tools and perform vehicle maintenance. Most of this course is hands-on, and allows students to work on cars, including their own.

- **College Credit:** This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details.

### **Automotive Technology II (28507) (98507W)**

**Full year, two periods, two credits + 1.0 quality**

**point**

**Grade(s): 10-12**

*Prerequisite(s): Automotive Technology I (28509)*

Automotive Technology II involves "real world training" in an on-the-job type of facility. Training in the most up-to-date technologies enables a student to gain experience in this exciting and fast-growing industry. Use of modern specialized equipment with emphasis on "hands-on" training makes this course beneficial to future technicians, as well as automobile owners. This course is a prerequisite for Automotive Technology III.

- **College Credit:** This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details.
- **Certification:** ASE/AYES/SkillsUSA Automotive Technician End-of-Program Examinations

### **Automotive Technology III (28508) (98508W)**

**Full year, two periods, two credits + 1.0 quality**

**point**

**Grade(s): 11-12**

*Prerequisite(s): Automotive Technology II*

Automotive Technology III is the culmination of the three-year sequence in Advanced Automotive Technology. Students continue to build competencies in ASE-certified areas of automotive technology, including specialized areas such as computer-controlled systems, fuel injection and front wheel alignment. Use of sophisticated testing devices and other modern equipment prepares students with job skills required for success in the automotive industry. In the spring semester, students can participate in the Career Center's nationally recognized internship program, where students interview for paid internships at local automotive dealerships and independent service facilities. During the summer, most of these internships turn into full-time, paid positions.

- **College Credit:** This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements

*must be met before registering. Please consult with your school counselor for more details.*

- **Certification:** ASE/AYES/SkillsUSA Automotive Technician End-of-Program Examinations

### **Aviation Technology I (28731)**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite(s): Students must be fifteen years old prior to completion of the course.*

Aviation Technology introduces the world of aviation and the aerospace industry. It is designed for students who intend to pursue either pilot training or aviation related career fields. This is one of only four courses in the Commonwealth of Virginia in which students get to fly real airplanes. Course content includes careers in aviation and aerospace, aviation history, principles of flight, aircraft systems and performance, meteorology for pilots, interpreting weather data, basic navigation, electronic navigation, aviation physiology, flight planning and decision making. Students receive flight training in full motion and stationary flight simulators and participate in two actual aircraft flights at a local airport. The curriculum is enriched with field trips to the Smithsonian Air and Space Museum, Reagan National Airport and Lockheed Martin's Flight Demonstration Center.

- **Certification:** *Students will take the Federal Aviation Administration (FAA) aeronautical knowledge written examination for a private pilot license.*

### **Aviation Technology II (28732)**

**Full year, two periods, two credits**

**Grade(s): 10-12**

*Prerequisite(s): Students must be fifteen years and have successfully completed Aviation Technology I (28731)*

Students continue to participate in flight training, ground school, and simulator instruction to support the flight syllabus while studying meteorology, aerodynamics, navigation, physiology, airfield and flight environments, aircraft maneuvers, and aircraft weight and balance. Students continue to receive flight training in full motion and stationary flight simulators and participate in two actual aircraft flights at a local airport. The curriculum is enriched with field trips to the Smithsonian Air and Space Museum, Reagan National Airport and Lockheed Martin's Flight Demonstration Center.

- **Certification:** *Students will take the Federal Aviation Administration (FAA) aeronautical knowledge written examination for a private pilot license.*

### **Barbering I (28531)**

**Full year, two credits, two periods**

**Grade(s): 10-11**

*Prerequisite: None*

Barbering is the study of hair, scalp, and skin. Student study and prepare in a clinical lab setting, using mannequins and live models for manipulative practice. The program emphasizes safety and sanitation, communication, and management skills. Related areas of study include psychology, ethics, and professional image. Competency completions prepare the student to work or apprentice in a local shop or beauty salon.

### **Barbering II (28532)**

**Full year, two credits, two periods**

**Grade(s): 10-11**

*Prerequisite: Barbering I*

Students apply their knowledge of barbering skills in a clinical lab setting, using mannequins and live models for manipulative practice. The program emphasizes safety and sanitation, communication skills, and management of a barber shop or beauty salon. Related areas of study include psychology, ethics, and professional image. Competency completions prepare the students for the Virginia state licensing exam.

### **Barbering III (28526)**

**Full year, two credits, two periods**

**Grade(s): 10-11**

*Prerequisite: Barbering I & II (28531, 28532)*

In this advanced course, students build on their theoretical foundation of general sciences and practices in barbering to increase proficiency in hair cutting and styling on live models, with attention to professionalism, client consultation, safety, and infection control. Students are trained in safe chemical processes related to chemical texture services and advanced hair coloring techniques. They also develop artistic skills with wigs and hair additions. An advanced business management unit focuses on managing the shop. Competency completion prepares the student for the Virginia State Licensing Exam. Students can combine classroom instruction and supervised on-the-job training in an approved position or internship with continuing supervision throughout the school year.

- **Certifications:** *Virginia State Board of Barbers and Cosmetology Examination (once students have completed Barbering I, II & III).*

### **Biotechnology Foundations in Health & Medical Sciences (28326)**

**Full year, one credit**

**Grade(s): 10-12**

*Prerequisite(s): Biology (24310) and concurrent enrollment with Forensic Technology w/Application in Biotechnology (28325)*

This course focuses on various cutting-edge technologies and techniques relevant in the field of

health and medical sciences. Students will explore the interconnected health of all organisms and the environment. Students will explore deoxyribonucleic acid (DNA) analysis, bioinformatics, and ethical considerations in biotechnology. Students will gain insight and understanding about biotechnology career fields in health and medical sciences.

- **Additional high school credit:** A credit earned in this course will satisfy the third lab science credit for the standard diploma or the fourth lab science credit for the advanced diploma. In addition to the science credit, students will receive a second credit for fine/practical arts

### **Career Investigations (22010)**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite: None*

This course consists of an in-depth study of career clusters through a variety of investigative activities. Students observe, analyze, and report on the demand for workers, worker qualifications, organizational structures, quality control measures, selected policies and regulations, ethical issues, and rewards of work. Students analyze career assessment results, compare various educational options, and develop or revise a plan related to their academic and career-related goals.

### **Carpentry I (28519)**

**Full year, one credit**

**Grade(s): 10-12**

*Prerequisite: None*

Carpentry I is foundational for achieving high-level construction industry skills that can result in an exciting and lucrative career. With an emphasis on safety, students are taught to use hand and power tools, cut stock, apply construction mathematics, interpret blueprints, and understand basic rigging. Students will become proficient in identifying types of residential construction components to frame walls, floors, ceilings, roofs, doors, and windows. All students will obtain the required Construction Industry OSHA 10 safety credential.

### **Computer Assisted Technical Drawing (28439) (98439W)**

**Full year, one period, one credit + 1.0 quality point**

**Grade(s): 10-12**

*Prerequisite(s): None*

This is a beginning level mechanical drawing class which introduces the skills required to communicate effectively using graphic language. Students use three methods of graphic representation: freehand sketching, mechanical drafting, and computer-assisted drawing. The course content includes career opportunities in the field of technical drawing, freehand sketching, lettering techniques, line types, geometric constructions, multi-view drawings, dimensioning, sectional views, auxiliary views, and computer assisted design. This

course is especially recommended for future engineers, architects, or home builders, including students involved in the construction trades.

- **College Credit:** This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details.
- **Certification:** Student-selected verified credit can be earned by passing the course-related industry certification.

### **Computer Assisted Architectural Drawing (28408) (98408W)**

**Full year, one period, one credit + 1.0 quality point**

**Grade(s): 10-12**

*Prerequisite(s): Computer Assisted Technical Drawing (28439) (98439W) or Concurrent Enrollment.*

This is a drawing course which focuses on the practices of the fields of architecture and construction by mechanical drafting and computer assisted drawing. These documents include floor plans, electrical plans, wall sections, elevations, and renderings. Students build scale models and reports on various building materials and their individual properties. This class provides information helpful for the homeowner and is especially beneficial to the future architect, interior designer, or contractors, including students involved in the construction trade skill classes. Computer aided drafting using AutoCAD and Revit are components of this course.

- **College Credit:** This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details.
- **Certification:** Student-selected verified credit can be earned by passing the course-related industry certification.

### **Computer Assisted Engineering Drawing (28438)**

**Full year, one period, one credit**

**Grade(s): 9-12**

*Prerequisite: Computer Assisted Technical Drawing (28439) (98439W) or Concurrent Enrollment*

This is a drawing course which focuses on the practices of the fields of engineering and design. Students prepare working drawings necessary in the design and manufacturing of components and assemblies by mechanical drafting and computer assisted drawing programs. These documents include isometric and orthographic drawings as well as models of the drawings. Students also study building materials and their individual properties. This class teaches essential programs for the future engineer and is especially beneficial for college bound STEM students. Computer

aided drafting using AutoCAD and Inventor are a critical part of this course.

- **Certification:** Student-selected verified credit can be earned by passing the course-related industry certification.

Computer Information Systems Sequence: 26614 and or 26646.

**Computer Information Systems (26614) (96614W)**  
**Full year, one credit + 1.0 quality point**  
**Grade(s): 9-12**

*Prerequisite: none*

Students apply problem solving skills to real-life situations through word processing, spreadsheets, databases, multimedia presentations, and integrated software applications. Students work individually and in groups to explore computer concepts, operating systems, networks, telecommunications, and emerging technologies. Work experience is available for this course (*Optional*). Students combine classroom instruction and supervised on-the-job training at an approved work site with continuing supervision throughout the school year. With this course student can meet the career and technical industry certification graduation and the online course graduation requirement.

- **College Credit:** This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details.
- **Certification:** Student-selected verified credit can be earned by passing the course-related industry certification.

Computer Information Systems Advanced Sequences: 26614 and 26649.

**Computer Information Systems, Advanced (26649) (96649W)**  
**Full Year, one credit + 1.0 quality point**  
**Grade(s): 10-12**

*Prerequisite(s): Introduction to IT, Computer Information Systems, or permission of instructor, and/or concurrently enrollment with another Business & Information Technology*

Students apply problem-solving skills to real-life situations through advanced integrated software applications, including printed, electronic, and Web publications. Students work individually and in groups to explore advanced computer maintenance activities, Web site development, programming, networking, emerging technology, and employability skills.

- **College Credit:** This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details.
- **Certification:** Student-selected verified credit can be earned by passing the course-related industry certification.

**Criminal Justice I (28702)**

**Full year, one credit**

**Grade(s): 10-11**

*Prerequisite(s): None*

Students are introduced to the legal foundations and processes, and the principles, techniques, and practices for exploring careers within the criminal justice system.

- **Certification:** Student-selected verified credit can be earned by passing the course-related industry certification.

**Criminal Justice II (28703)**

**Full year, one credit**

**Grade(s): 11-12**

*Prerequisite(s): Criminal Justice I (28702)*

Students learn the legal foundations and processes, the principles, and practices for exploring careers within the criminal justice system, and the history of terrorism in the United States. Students combine classroom instruction and supervise, practical experience throughout the school year.

- **Certification:** Student-selected verified credit can be earned by passing the course-related industry certification.

**Introduction to Information Technology (26116) (96116W)**

**Full year, one credit + 1.0 quality point**

**Grade(s): 9-12**

*Prerequisite(s): None*

This course is an essential foundation class for all students interested in computers, networking, and web-based application and programming. Students who are interested in Information Technology (IT) or Cyber Security careers and would like to learn to set up home computer networks, or to learn about how computers work should take this course. Included technologies are computer home network setups, and computer solutions used personally and in business. Students can also prepare for highly recognized industry certifications. Eligible students can earn dual enrollment credit.

- **College Credit:** This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details.

- **Certification:** Student-selected verified credit can be earned by passing the course-related industry certification.

### **Computer Programming (26638) (96638W)**

**Full year, one credit + 1.0 quality point**

**Grade(s): 10-12**

*Prerequisite(s): For Dual Enrollment: Successful completion of Algebra II & Concurrent enrollment in the DE Pre-Calculus & a passing score on the NOVA Math Pre-Calculus test.*

*Prerequisite(s): For Non-Dual Enrollment: Successful completion of Algebra I.*

Students learn to use the JAVA and Python programming language to code and compile programs in an open source or Windows environment. Course content includes program design and problem solving, control structures, functions, parameter passing, data structures, arrays, and file processing. Emphasis is on program design.

- **College Credit:** This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details.
- **Certification:** Student-selected verified credit can be earned by passing the course-related industry certification.

### **Computer Programming Intensified (96644W) (26637)**

**Full year, one credit +1.0 quality point**

**Grade(s): 10-12**

*Prerequisite: For Dual Enrollment: Successful completion of DE Computer Programming & successful completion of DE Pre-Calculus & a Passing Score on the NOVA Math Test for DE Calculus; concurrent enrollment DE Calculus.*

This course focuses around developing computer program to solve a problem. Students will also learn about program design principles that will allow them to write programs that are understandable, adaptable, and reusable. Students will also learn other important computer science concepts and protocols including the development and analysis of algorithms, the development and use of fundamental data structures using various programming languages.

- **College Credit:** This course is dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details.
- **Certification:** Student-selected verified credit can be earned by passing the course-related industry certification.

### **Computer Programming Advanced (26643) (96643W)**

**Full year, one credit + 1.0 quality point**

**Grade(s): 10-12**

*Prerequisite: For Dual Enrollment: Successful completion of DE Computer Programming Intensified & Concurrent enrollment in DE Calculus with Analytic Geometry.*

*Prerequisite: For Non-Dual Enrollment: Successful Completion of Computer Programming (26638).*

Advanced computer programming builds on the foundation of programming skills. Advanced Programming students use object-oriented programming concepts, I/O control structures, functions and/or methods, data abstractions, data structures to develop database applications, interactive multimedia applications including game applications, mobile applications, and Web applications. The course discusses computer network architecture and the function of computer hardware, including networks and operating systems, data organization, algorithms, and software engineering. Students continue to develop their employability skills as they research pathways for continuing education and careers in the information technology and computer sciences industries and engage in various career building activities.

- **College Credit:** This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details.
- **Certification:** Student-selected verified credit can be earned by passing the course-related industry certification.

### **Construction Technology (28512)**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite: None*

In this course, students learn about structures and the related industries to investigate such jobs as architects, civil engineers, carpenters, electricians, plumbers, surveyors, contractors, masons, and construction and environmental management. Students develop and use carpentry skills to build model structures, plan site preparation, design structures and infrastructure projects, and utilize computer software and other appropriate tools used in such industries.

- **Certification:** Student-selected verified credit can be earned by passing the course-related industry certification.

### **Sustainable and Renewable Technologies (28460)**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite: None*

This course introduces students to the historic, economic, political, environmental, and cultural issues



that impact the global community and its' future. Students will address issues affecting the health of our environment and explore solutions offered by sustainable agriculture, energy efficient building design, and renewable energy sources. Students will enhance their carpentry skills as they learn about and build structural models and/or prototypes with an emphasis on materials science, renewable energy systems and sustainable technologies, and the related industries. Students will investigate relevant jobs in architecture, architectural engineering, civil engineering, carpentry, electricity, plumbing, heating and air conditioning, surveying, contract management, masonry, and construction engineering and construction management, and environmental management. Students build and test scale-model structures, plan site preparation, design structures and infrastructure projects, and utilize computer software and other appropriate tools used in these careers.

- **Certification:** *Student-selected verified credit can be earned by passing the course-related industry certification.*

### **Cosmetology I (28528)**

**Full year, two credits**

**Grade(s): 10-12**

*Prerequisite(s): None*

Cosmetology I is designed for students interested in becoming licensed cosmetologists. Students learn the science and art of being a professional cosmetologist by investigating the past, analyzing the present and concluding with a total beauty result. Students gain knowledge in the foundations of professional ethics, bacteriology, anatomy/physiology, basic chemistry/electricity, properties of hair and scalp, principles of hair design, shampooing/conditioning, haircutting, hairstyling, facials, manicuring and pedicuring. Instruction is designed to prepare students to meet the qualifications for Cosmetology II (28529). Cosmetology kits are provided for student use, or they may purchase their own (approximate cost \$170).

### **Cosmetology II (28529)**

**Full year, two periods, two credits**

**Grade(s): 10-12**

*Prerequisite(s): Cosmetology I.*

Students build on Cosmetology I by learning through a scientific approach to the art of cosmetology. Students learn how to braid with extensions, make wigs, permanent waving, chemical hair relaxers, soft curl-perms, theory and application of color, skin care, hair removal, facial makeup, nail care, advanced nail techniques, and the business of cosmetology. As part of their training, students also will work in the lab on clients to gain real salon experience, attend beauty shows, and work with senior citizens at various local community centers. Cosmetology kits are provided for student use, or they may purchase their own (approximate cost \$170).

### **Cosmetology III (28530)**

**Full year, two periods, two credits**

**Grade(s): 11-12**

*Prerequisite(s): Cosmetology II*

Cosmetology III is an advanced level course designed for those students who have successfully completed Cosmetology II. Students will continue to learn through the scientific approach on how to become a Professional Cosmetologist. Students will begin a rigorous training in preparation for the Virginia State Board of Barbers and Cosmetology Exam thereby increasing their proficiency in all practical skills. Also, students manage the school salon while developing expertise in the business. Additionally, students will work in the industry as salon interns. Upon completion of the program, students will be qualified to take the Virginia State Board of Cosmetology Exam, work in the industry as shampoo assistant, stylist assistant, receptionist, sales representative, and/or state board investigator. Supplies for this course will be according to the needs of the students at their expense.

- **Certifications:** *Virginia State Board of Barbers and Cosmetology Examination (once students have completed Cosmetology I, II & III).*

### **Culinary Arts & Sciences I (28522)**

**Full year, two periods, two credits**

**Grade(s): 10-12**

*Prerequisite(s): Students must submit a chest x-ray or negative TB skin test.*

In this course, students will begin learning the knowledge, skills, and work habits required for success in the food services industry. Using the Career Center's commercial kitchen and dining room, students will learn basic safety and sanitation, as well as fundamental cooking techniques such as frying, sautéing, and roasting of meats and vegetables. In addition, students will gain an introduction to baking, and an understanding of how to properly prepare rice, pasta, and fresh salads. Students will be exposed to real-life industry scenarios which will assist them in career decision-making.

- **Certification:** *Student-selected verified credit can be earned by passing the course-related industry certification.*

### **Culinary Arts & Sciences II (28523)**

**Full year, two, periods, two credits**

**Grade(s): 10-12**

*Prerequisite(s): Culinary Arts & Sciences I and submission of a chest x-ray or negative TB skin test*

Culinary Arts & Sciences II presents an intense curriculum designed to prepare students for post-secondary education or entry-level employment in the food service industry. This course focuses on the following: cook-to-order entrées; correct cooking of meats, fish and vegetables; pizza and bread making;

business entrepreneurship; and food sciences and nutrition.

Students work in a real-world kitchen environment preparing meals for real customers. In addition, advanced baking skills are taught with an emphasis on production costs, profits and loss, scaling formulas, and successfully running a small business. Qualified students may compete in the SkillsUSA competitions, where they can win scholarships and other valuable awards.

Culinary Arts and Sciences II covers the fundamental chemistry, mathematics and technologies required of the successful culinarian. Students will practice scaling formulas and recipes; extrapolating service requirements for banquets; as well as varying essential combinations of ingredients (acids, bases, proteins, and fats) to control their effects on the final products.

- **Certification:** Student-selected verified credit can be earned by passing the course-related industry certification.

### **Culinary Arts III: Baking & Pastries (28524)**

**Full year, one credit**

**Grade(s): 11-12**

*Prerequisite(s): Concurrent enrollment in Culinary Arts III: Catering Banquet (28525). Culinary Arts & Sciences I (28522) & II (28523).*

The Culinary Arts Baking and Pastries specialization course provides students with skills and knowledge to pursue careers in the food service industry. In a hands-on environment, students apply nutritional principles, plan menus, use business and mathematics skills, select, and maintain food service equipment, and adhere to safety and sanitation standards.

- **Certification:** Student-selected verified credit can be earned by passing the course-related industry certification.

### **Culinary Arts III: Catering/Banquet (28525)**

**Full year, one credit**

**Grade(s): 11-12**

*Prerequisite(s): Concurrent enrollment in Culinary Arts III: Baking & Pastries (28524). Culinary Arts & Sciences I (28522) & II (28523)*

The Culinary Arts Catering and Banquet Specialization curriculum provides students with continuing opportunities to obtain comprehensive knowledge of the food service industry as well as to expand their technical skills in a food service specialty. Students explore careers and refine their skills in implementing safety and sanitation standards, applying nutritional principles, planning menus, using business and math skills, and selecting and maintaining food service equipment.

- **Certification:** Student-selected verified credit can be earned by passing the course-related industry certification.

*Cybersecurity courses have concurrent enrollment requirements.*

Cybersecurity Year 1: 26659 & 26667.

Cybersecurity Year 2: 26657 & 26662.

### **Cybersecurity I: Cybersecurity Fundamentals (26659) (96659W)**

**Full year, one credit + 1.0 quality point**

**Grade(s): 10-12**

*Prerequisite:* Concurrent enrollment with *Cybersecurity Networks Systems (26667) (96667W)*

Students will be introduced to the principles of cybersecurity, explore emerging technologies, examine threat and protective measures, and investigate the diverse high-skill, high-wage, and high-demand career opportunities in the field of cyber security. This course also introduces student to network design and cyber security process and procedures for personal and enterprise networks. Students follow a standard design process to expand and upgrade each network, which includes requirements gathering proof-of-concept, and project management. Focuses instruction on the installation, configuration, and administration of the Windows and/or Linux operating system and emphasizes the use of Linux as a network client and workstation. This course develops the student's skills needed to become network technicians, computer technicians, and entry level cyber security careers. It provides a hands-on introduction to networking and the internet, using tools and hardware commonly found in home and small business environments.

- **College Credit:** This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details.
- **Certification:** Student-selected verified credit can be earned by passing the course-related industry certification.

### **Cybersecurity Network Systems (26667) (96667W)**

**Full year, one credit, + 1.0 quality point**

**Grade(s): 10-12**

*Prerequisite(s): Concurrent enrollment with Cybersecurity I: Cybersecurity Fundamentals (26659) (96659W).*

This course introduces students to network design and cybersecurity process and procedures for personal and enterprise networks. Students follow a standard design process to expand and upgrade each network, which includes requirements gathering, proof-of-concept and project management. Focuses instruction on the installation, configuration, and administration of the Window and/or Linux operating system and emphasizes the use of Linux as a network client and workstation. Thus, course develops the student's skills needed to become entry level cybersecurity professionals, systems administrators, network

technician's computer technicians, cable installers, and help-desk-technicians. It provides a hands-on introduction to networking and the internet, using tools and hardware commonly found in home and small business environments. Labs include PC installation, internet connectivity, wireless connectivity, file and print sharing, and installation of game consoles, scanners, and cameras. Additionally, students will become proficient in Microsoft Office, which includes word processing, spreadsheet database, and presentation software to demonstrate skills required for digital literacy.

- **College Credit:** *This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details.*
- **Certification:** *Student-selected verified credit can be earned by passing the course-related industry certification.*

**Cybersecurity II: Cybersecurity Software Operations (26662) (96662W)**  
**Full year, one credit + 1.0 quality point**  
**Grade(s): 10-12**

*Prerequisite: Concurrent enrollment with Cybersecurity II: Computer Software Network Operations (26657) (96657W).*

This course is designed to teach many aspects of computer support and network administration. Students learn networking concepts, from usage to components, and create peer-to-peer network systems and client server networks. Students learn how to install and configure network cards and connect them to networks to install the operating systems; to create, set up, and manage accounts to load software-based network administration. This course provides students instruction and the basic overview of routing and remote access, addressing, and security. It also familiarizes students with servers that provide email services, Web-space, security, and authenticated access. Students learn about the soft skills required for system administration and basic hardware configuration. Includes specially designated instruction to give a student a basic knowledge of hardware and software configurations and cybersecurity, College Credit.

- **College Credit:** *This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details.*
- **Certification:** *Student-selected verified credit can be earned by passing the course-related industry certification.*

**Cybersecurity II: Computer Software Network Operations (26657) (96657W)**

**Full year, one credit + 1.0 quality point**  
**Grade(s): 10-12**

*Prerequisite: Students must have completed Cybersecurity Level I courses, or permission of instructor and concurrent enrollment in Cybersecurity II: Cybersecurity Software Operations (26662) (96662W).*

This course is designed to teach many aspects of computer support and network administration. Students learn networking concepts, from usage to components, and create peer-to-peer network systems and client server networks. Students install and configure network cards and connect them to networks. Students learn how to install operating systems, set up and manage accounts, load software, and establish and implement security plans. This course may cover software-based network operating systems, such as Windows Server or Linux.

- **College Credit:** *This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details.*
- **Certification:** *Student-selected verified credit can be earned by passing the course-related industry certification.*

**Cybersecurity III: Computer Software Network Operations Advanced (26658) (96658W)**

**Full year, one credit + 1.0 quality point**  
**Grade(s): 10-12**

*Cybersecurity II: Cybersecurity Software Operations (26662) (96662W); Cybersecurity II: Computer Software Network Operations (26657) (96657W) and Concurrent enrollment with Cybersecurity III: Cybersecurity Software Operations, Advanced (26663) (96663W), or permission of instructor.*

This course teaches the fundamental concepts, architectures and protocols related to network security. Students will learn network administration, focusing on the management and support of network users and systems. Students learn communication protocols, troubleshooting techniques for systems and client-server networks, web site management, and other advanced networking topics. Topics covered include overview of network security; basics of cryptology and encryption; threat models, authentication and authorization mechanisms and standards; public key infrastructure; electronic mail security; transport layer and web security; packet filtering, firewalls, intrusion detection, and virtual operating systems, set up and manage accounts, load software, and create and implement security plans are taught. This course may provide instruction about software-based network operating systems, such as Windows Server or Linux.

Instruction will emphasize preparation for industry certification.

- **College Credit:** *This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details.*
- **Certification:** *Student-selected verified credit can be earned by passing the course-related industry certification.*

**Cybersecurity III: Cybersecurity Software Operations, Advanced (26663) (96663W)**  
**Full year, one credit + 1.0 quality point**  
**Grade(s): 10-12**

*Prerequisite: Prerequisite: Cybersecurity II: Cybersecurity Software Operations (26662) (96662W);*

*Cybersecurity II: Computer Software Network Operations (26657) (96657W) and Concurrent enrollment with Cybersecurity III: Computer Software Network Operations Advanced (26658) (96658W)*

Cyber security level III courses continue to teach aspects of network administration, focusing on the management and support of network users and systems. The topics covered include understanding the responsibilities of computer professionals, training end users, evaluating new technology, developing system policies, troubleshooting workstations, managing network services and protocols, and effectively using email and business communications. Students learn communication protocols, troubleshooting techniques for systems and client server networks, website management, and other advanced networking topics. Techniques that are used to install operating systems, set up and manage accounts, load software, and create and implement security plans are taught. Additional topics include overview of network security; basics of cryptology and encryption threat models, authentication and authorization mechanisms and standards; public key infrastructure, electronic mail security; transport layer and web security; packet filtering firewalls, intrusion detection, and virtual operating systems, set up and manage accounts, load software, and create and implement security operating systems, such as Windows Server or Linux. Instruction will emphasize orientation for industry certification.

- **College Credit:** *This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details.*
- **Certification:** *Student-selected verified credit can be earned by passing the course-related industry certification.*

**Database Design & Management (26664) (96660W)**  
**Full Year, one credit + 1.0 quality point**  
**Grade(s) 10-12**

*Prerequisite: Introduction to Information Technology (26116)*

This course includes database design and Structured Query Language (SQL) programming. Students study database fundamentals, including database development, modeling, design, and normalization. In addition, students are introduced to database programming. Students gain the skills and knowledge needed to use features of database software and programming to manage and control access to data. Students will prepare for the first of two certification exams.

- **College Credit:** *This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details.*
- **Certification:** *Student-selected verified credit can be earned by passing the course-related industry certification.*

**Digital Animation (28457)**  
**Full year, one credit**  
**Grade(s): 10-12**

*Prerequisite: Concurrent enrollment in Graphic Communications System (28458)*

Students gain experiences related to computer animation by using graphics and design concepts. Students solve problems involving 3-D object manipulation, storyboarding, texturing/mapping, lighting concepts, and environmental geometry. Students create a variety of animations that reflect real-world applications and are introduced to interactive and 3-D animation software. Production of a portfolio showcasing examples of original student work is included.

- **Certification:** *Student-selected verified credit can be earned by passing the course-related industry certification.*

**Graphic Communications System (28458)**  
**Full year, one credit**  
**Grade(s): 10-12**

*Prerequisite: Concurrent enrollment in Digital Animation (28457)*

Graphic Communications System focuses on creating computer graphic images for display on the World Wide Web. Students acquire knowledge regarding the difference between Web graphics and print graphics. Through class projects, students create work using a variety of image-making software. By developing quality art images, students learn the highly transferable skills of visual communication. These skills are increasingly in demand in our web-connected world.

Students create a professional digital portfolio of completed work.

- **Certification:** *Student-selected verified credit can be earned by passing the course-related industry certification.*

**Early Childhood Education I (28235) (98235W)**  
**Full year, two periods, two credits+ 1.0 quality point**  
**Grade(s): 10-12**

*Prerequisite(s): A tuberculosis screening or a chest x-ray may be required.*

Early Childhood Education I is designed for students interested in preparing to be early childhood teachers in childcare occupations and elementary education. Students receive classroom instruction and practical experience working with infant, toddler, preschool, elementary and special needs children. Students learn basic principles of child growth and development, explore the characteristics of early childhood programs and implementation of early childhood curriculum.

- **College credit:** *This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details*
- **Certification:** *Student-selected verified credit can be earned by passing the course-related industry certification.*

**Early Childhood Education II (28236) (98236W)**  
**Full year, two periods, two credits + 1.0 quality point**  
**Grade(s):11-12**

*Prerequisite(s): Early Childhood Education I, or Child Development & Parenting; also, a tuberculosis screening or a chest x-ray may be required*

This course continues to improve students' skills in teaching young children. Students become familiar with the full range of occupational opportunities in the Early Childhood Education field. Students implement a variety of Early Childhood curriculum activities through field work placements and student teaching experiences. Students take the ParaPro assessment, a step in becoming a teacher's aide or teacher assistant.

- **College Credit:** *This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details.*
- **Certifications:** *Completion of Early Childhood Education I & II will assist students in achieving the Child Development Associate (CDA) National Credential.*

**Electricity I (28534)**  
**Full year, one period, one credit**  
**Grade(s): 10-12**

*Prerequisite(s): None*

Electricity I enable students to develop electrical skills in working in residential (home) construction. Students are taught the proper use of common electrical tools, wiring techniques, the building and analyzing of electrical circuits, reading of electrical plans, and electrical problem-solving. Students are introduced to commercial new construction and communication wiring. Instruction is based on the National Electric Code. Most of the instruction is practical and hands-on. Safety and good work habits are emphasized.

- **Certification:** *Student-selected verified credit can be earned by passing the course-related industry certification.*

**Electricity II (28535)**  
**Full year, two periods, two credits**  
**Grade(s): 10-12**

*Prerequisite(s): Electricity I*

Electricity II provides instruction in the wiring methods of commercial construction and communications cabling, including telephone wiring, cable television wiring, BICSI/RBT Systems Copper based Network Cabling and Fiber Optic Network Cabling. The Occupational Safety and Health Administration (OSHA) Construction is also offered. Seniors may be eligible for a work-study program in the electrical supplies' distribution field. The commercial wiring is taught to the standards of the National Electrical Code. The network cabling is taught to the BICSI/RBT Systems standard and meets the TIA/EIA 568A standard. Students will study communications wiring standards, wiring methods and techniques, network and cabling history and terminology. Those students who complete all network cabling instruction and meet all state, local, and instructor requirements will have an opportunity to take the exam for the BICSI/RBT certification, which is nationally recognized by the telecommunications industry.

- **Certifications:** *OSHA-10 Construction Safety card; BICSI/RBT Systems Copper-based Network Cabling and Fiber Optic Network Cabling Certifications (given in English only).*
- **Certification:** *Student-selected verified credit can be earned by passing the course-related industry certification.*

**Emergency Medical Technician I (28334) (98334W)**  
**Full year, one credit + 1.0 quality point**  
**Grade(s): 11-12**

*Prerequisite(s): Concurrent with Emergency Medical Technician II (28335) (98335). Biology (24310) and students must meet all Virginia Department of Health, Office of Emergency Medical Services regulatory eligibility requirements to attend an EMT program,*

including must be at least 16 years of age at the start of the course; have parental permission if under age 18; be proficient in reading, writing, speaking, and understanding the English language as determined by Arlington Public Schools.

This program is a college-level course taught to the National Highway Transportation Safety Agency/US Department of Transportation 1994 Emergency Medical Technician-Basic (EMT-B) National Standard curriculum. This program is ideal for the student interested in the medical field or any career requiring First Aid certification. Students will study anatomy, physiology, introduction to emergency medical care, airway management, patient assessment, medical emergencies, obstetrical/gynecological emergencies, care of the trauma patient, pediatric emergencies, and ambulance operations. Students will also complete the American Heart Association Basic Life Support for the healthcare provider and a first aid course. Students will also be provided the opportunity to assist and observe in a hospital emergency department or ride-along on an emergency ambulance.

- **Additional high school credit:** A credit earned in this course satisfies the third lab science credit for the standard diploma or the fourth lab science credit for the advanced diploma. Students receive one credit for laboratory science and a second credit for fine/practical arts.
- **College Credit:** This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details. This allows a pathway for the student to obtain an AAS degree in EMS with an automatic acceptance to George Washington University's on-line bachelor's in health sciences degree program at reduced tuition.
- **Certification:** Student-selected verified credit can be earned by passing the course-related industry certification.

### **Emergency Medical Technician II (28335) (98335W)**

**Full year, one credit + 1.0 quality point**

**Grade(s): 11-12**

*Prerequisite(s): Concurrent with Emergency Medical Technical I*

The tasks for this course represent the National and Virginia Emergency Medical Services (EMS) Educational Standards. Students build on their knowledge and skills for providing basic life support by focusing on the areas of EMS operations, medical emergencies, and management of special patient populations. Supervised field experience that includes at least 10 patient contacts outside of school hours is required. Successful completion of this second course

in the sequence will earn the student CTE completer status. Successful completion of all course requirements and instructor endorsement may lead to eligibility to take the Virginia State Psychomotor Exam and the National Registry of Emergency Medical Technicians (NREMT) cognitive exam. Students must meet the requirements of the Functional Position Description for the Basic Life Support Provider (refer to EMS.TR.14B and 12VAC5-31-1501 in the Code of Virginia). Students must complete a minimum of 85 percent of the didactic and lab aspects of the course, per 12VAC5-31-1501 in the Code of Virginia.

NOTE: Students must be at least 16 years old prior to the first day of EMT instruction. All students will need to undergo a criminal background check that includes fingerprinting and drug screening.

- **Additional high school credit:** A credit earned in this course satisfies the third lab science credit for the standard diploma or the fourth lab science credit for the advanced diploma. Students receive one credit for laboratory science and a second credit for fine/practical arts.
- **College Credit:** This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details. This allows a pathway for the student to obtain an AAS degree in EMS with an automatic acceptance to George Washington University's on-line bachelor's in health sciences degree program at reduced tuition.
- **Certification:** Student-selected verified credit can be earned by passing the course-related industry certification.

### **Emergency Medical Technician III (28336)**

**Full year, one credit**

**Grade(s): 11-12**

*Prerequisite(s): Emergency Medical Technical II*

This course is intended for students who have completed Emergency Medical Technician (EMT) I and II, obtained instructor approval, and who may have obtained EMT certification from the Virginia Office of Emergency Medical Services (OEMS). Students will strengthen the skills mastered in the basic courses as they acquire skills to assist advanced life support (ALS) providers, build on the foundations of emergency medical services (EMS) education, and meet education requirements for certification or recertification. Students also learn to coordinate with other public health and safety services, such as fire control, law enforcement, and emergency management. The course includes mentored as well as instructional experiences.

Students must complete a minimum of 85 percent of the didactic and lab aspects of the course.

- **Certification:** *Student-selected verified credit can be earned by passing the course-related industry certification.*

### **Energy and Power (26448)**

**Full year, one credit**

**Grade(s): 10-12**

*Prerequisite(s): None*

In this course, students analyze energy sources and explore the generation, transmission, and distribution of electricity using the Energy Industry Fundamentals modules from the Center for Energy Workforce Development (CEWD). The course provides math, science, and technical writing skills through hands-on application. Students have an opportunity to take the energy Industry Fundamentals Certificate Assessment.

### **Project Lead the Way (PLTW)**

*“Project Lead the Way” is a nationally recognized sequence of courses for orienting students to engineering and preparing them for success in college engineering programs. Students entering this program of study must be enrolled in a college prep sequence of math and science.*

### **Engineering I: Intro to Engineering Design (28491)**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite(s): None*

Engineering I emphasize the development of engineering design. Students use computer software to produce, analyze, and evaluate models of project solutions. They study the design concepts of form and function, and then use state-of-the-art technology to translate conceptual design into reproducible products. This course teaches students to understand and apply the design process, apply adaptive design concepts to develop sketches, solve design problems while they develop, create, and analyze product models using solid modeling computer design software.

- **Certification:** *Student selected verified credit can be earned by passing the course-related industry certification.*

### **Engineering II: Principles of Engineering (28492)**

**Full year, one credit**

**Grade(s): 10-12**

*Prerequisite: Engineering I*

This course provides an overview of engineering technology. Students develop problem-solving skills by tackling real-world engineering problems. Through theory and practical hands-on experiences, students address the emerging social and political consequences of technological change. Some of the topics covered will be an overview and perspective of engineering, the

design process, communication and documentation, and engineering systems, statics, materials and materials testing, and thermodynamics

- **Certification:** *Student-selected verified credit can be earned by passing the course-related industry certification.*

### **Digital Electronics (26671)**

**Full Year, one credit**

**Grade(s): 10-12**

*Prerequisite: Engineering: I Intro to Engineering (28491) and Engineering II: Principles of Engineering (28492)*

This pre-engineering course is designed to follow two core courses (Principles of Engineering and Intro to Engineering Design) as part of a national engineering program. Students use computer simulations to learn about the logic of electronics as they design, test, and construct circuits and devices. They apply control systems programming and explore sequential logic and digital circuitry fundamentals. Topics in computer circuitry are also presented.

Engineering II Sequence: 28493 and 28494. Must enroll in both classes at the same time.
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### **Computer Integrated Manufacturing Engineering (28493)**

**Full year, one credit**

**Grade(s): 10-12**

*Prerequisite: Engineering II (28492)*

In this specialization course, students are taught concepts of robotics and automated manufacturing by creating 3-D designs with computer modeling software and producing computer-controlled models of their designs.

- **Certification:** *Student-selected verified credit can be earned by passing the course-related industry certification.*

### **Engineering Capstone: Design and Development (28494)**

**Full year, one credit**

**Grade(s): 10-12**

*Prerequisite: Engineering I (28491) & II (28492)*

In this 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.

### **Forensic Technology with application in Biotechnology (28325)**

**Full year, one credit**

**Grade(s): 10-12**

*Prerequisite(s): Biology (24310)*

Forensic Technology with application in Biotechnology is designed for students seriously interested in any of the forensic sciences as a career field, particularly ones involving biotechnology. It is a challenging course because of the amount of college-level material. Students will learn how to process crime scenes, perform DNA analysis, complete refractive index tests on glass samples, analyze blood spatter patterns, and participate in seminars which are designed to discuss case studies. Students will be required to perform standard laboratory protocols and follow the scientific method in all analyses. Students will learn various techniques used in the different forensic sciences, for example, entomology, osteology, anthropology, forensic botany, toxicology, and DNA analysis. This course is especially recommended for students who have a strong science background.

- **Certification:** *Student-selected verified credit can be earned by passing the course-related industry certification.*

### **Health Sciences (28303)**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite: None*

This course introduces the student to a variety of healthcare careers and develops basic skills required in all health and medical sciences. It is designed to help students understand the key elements of the U.S. healthcare system and to learn basic healthcare terminology, anatomy and physiology for each body system, pathologies, diagnostic and clinical procedures, therapeutic interventions, and the fundamentals of traumatic and medical emergency care. Throughout the course, instruction emphasizes safety, cleanliness, asepsis, professionalism, accountability, and efficiency within the healthcare environment. Students also begin gaining job-seeking skills for entry into the health and medical sciences field. In addition, instruction may include the basics of medical laboratory procedures, pharmacology fundamentals, biotechnology concepts, and communication skills essential for providing quality patient care.

- **Certifications:** *Student-selected verified credit can be earned by passing the course-related industry certification.*

### **Medical Terminology (28383) (98383W)**

**Full year, one credit + 1.0 quality point**

**Grade(s): 10-12**

*Prerequisite: None*

Medical Terminology is designed to help students learn health care language. Topics are presented in logical order, beginning with each body system's anatomy and

physiology, and progressing through pathology, diagnostic procedures, therapeutic interventions, and finally pharmacology. Students learn concepts, terms, and abbreviations for each topic.

- **College Credit:** *This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details.*
- **Certifications:** *Student-selected verified credit can be earned by passing the course-related industry certification.*

### **Materials & Processes Technology (28433)**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite(s): None*

Students focus on physical materials, and processes as they fabricate usable products and conduct experiments. Learning experiences include career analysis as well as the use of tools and equipment related to analysis, testing, and processing of metals, plastics, woods, ceramics, and composite materials. This single period laboratory course is recommended for students interested in technical careers and other wishing to improve their consumer knowledge and technological literacy.

- **Certifications:** *Student-selected verified credit can be earned by passing the course-related industry certification.*

### **Pharmacy Technician (28305)**

**Full year, two credits**

**Grade(s): 10-12**

*Prerequisite(s): None*

This certificate program is designed to provide students with the basic skills and knowledge to begin work as a pharmacy technician. The coursework will fulfill the requirements of the Board of Pharmacy and prepare students to take either the state examination or the national examination administered by the Pharmacy Technician Certification Board. Trained, experienced pharmacy technicians who can demonstrate the right skills and knowledge would be able to pursue many exciting and respected career options or postsecondary study in the pharmacy field.

- **Certifications:** *Pharmacy Exam for the Certification of Pharmacy Technicians (ExCPT)*

Photo & Video Technology Sequence: 28625 and 28626. Must enroll in both classes at the same time.

### **Photo & Video Technology I (28625)**

**Full year, one credit**

**Grade(s): 10-12**



*Prerequisite: Concurrent enrollment in Photo and Video Technology II (28626)*

Imaging Technology introduces students to the basic principles of photography while providing a strong emphasis on digital imaging. Students study the development of photography as a communication medium and its evolution into the digital realm. Students learn to use image-editing software to manipulate digital images.

- **Certifications:** Student-selected verified credit can be earned by passing the course-related industry certification.

### **Photo and Video Technology II (28626)**

**Full year, one credit**

**Grade(s): 10-12**

*Prerequisite: Concurrent enrollment in Photo and Video Technology I (28625)*

This course offers students a hands-on opportunity to study all aspects of video and media production. Students will conceptualize, plan, and contribute through all production phases: preproduction, production, and postproduction. In addition, students will practice various methods of gathering and recording information and creating novel content to create a variety of video and media productions while operating studio editing software and video and audio equipment.

### **Physical Therapy/Sports Medicine Technology (28332)**

**Full year, two periods, two credits (Optional: 105 clinical hours for three credits)**

**Grade(s): 10-12**

*Prerequisite(s): Biology (24310) and a chest X-ray or tuberculin skin test is required if participating in the optional 3<sup>rd</sup> credit- Clinical Observation.*

Physical Therapy/Sports Medicine Technology is designed for students interested in all aspects of rehabilitative medicine such as physical therapy, athletic training, exercise physiology, occupational therapy, and sports medicine. It is a very challenging course because of the substantial amount of college-level material and competency-based curriculum. Students will study anatomy and physiology, cardiovascular stress testing, therapeutic exercise, body composition, ambulation, effects of ultrasound/electrical stimulation, hydrotherapy, and goniometry. They become skilled in the evaluation of athletic injuries, initial emergency medical assessment and care, modality application, formation of rehabilitative exercise programs and taping. In addition, students will receive certification in American Red Cross CPR/AED and Standard First Aide for healthcare providers. An integral part of the program is the “hands-on” experience students can gain while assisting and treating patients under the supervision of licensed physical therapists, certified athletic trainers, orthopedic physicians, and exercise physiologists during clinical internships.

- **Additional high school credit:** A credit earned in this course will satisfy the third lab science credit for the standard diploma or the fourth lab science credit for the advanced diploma.
- **Certifications:** Student-selected verified credit can be earned by passing the course-related industry certification.

### **Robotic Design (28421)**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite(s): None*

Students engage in the study of computers and microprocessors and their applications to manufacturing, transportation, and communication systems. Topics include computer equipment and operating systems, robotics, programming, control systems, and social/cultural impact of these technologies. Problem-solving activities challenge students to design, program, and interface devices with computer systems. Learning activities include robotics, computer-aided design, computer-aided manufacturing and design, and control of electromechanical devices. Students will be eligible for certification through both the Robotics and Automation Technology Exam and Workplace Readiness Exam.

- **Certifications:** Student-selected verified credit can be earned by passing the course-related industry certification.

Small Animal Care Sequence: 28062 and 28063. Must enroll in both classes at the same time.
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### **Small Animal Care I (28062)**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisites: Biology (24310) and Concurrent enrollment in Small Animal Care II (28063)*

Small Animal Care I combine the hands-on skills needed to succeed in animal related careers, including but not limited to veterinary science, with the theoretical knowledge to prepare students for further study of the field through postsecondary education. Students focus on small companion animals. Their handling, feeding, maintenance and grooming are practiced daily. Students learn about behavior and train the various lab animals. Students can become certified in cat and dog first aid through the American Red Cross. Students interact with the wide range of small companion animals housed at the animal science facility including dogs, cats, rabbits, mice, rats, and gerbils. Through this program’s strong partnership with local animal related businesses, successful students have the opportunity to participate in internships.

- **Certification:** Student selected verified credit can be earned by passing the course-related industry certification

### Small Animal Care II (28063)

Full year, one credit

Grade(s): 10-12

Prerequisite: Biology I-Concurrently enrollment in Small Animal Care I (28062)

Students expand their knowledge of animal science and the care of animals, including comparative anatomy, disease prevention, parasitology, genetics, and breeding. Students will focus on handling the small and exotic animals in the lab such as parakeets, cockatoos, snakes, lizards, turtles, frogs, fish, and arthropods. Additional technical skills in veterinary assisting will be introduced and practiced. Students may earn 3 articulation credits for ZOO 276 - Animal Management Internship 2, from State University New York - Jefferson Community College towards an Associate of Applied Science Degree in Zoo Technology.

- **Additional high school credit:** A credit earned in this course will satisfy the third lab science credit for the standard diploma or the fourth lab science credit for the advanced diploma. In addition to the science credit, students will receive a second credit for fine/practical arts. This course also counts as a sequence for the standard diploma.
- **Certification:** Student selected verified credit can be earned by passing the course-related industry certification

Veterinary Science Sequence: 28064 and 28061.  
Must enroll in both classes at the same time.

### Veterinary Science I (28064)

Full year, one credit

Grade(s): 9-12

Prerequisite: Biology (24310) & Concurrent Enrollment in Veterinary Science II (28061)

Students learn how to care for and manage small animals, focusing on instructional areas in animal health, nutrition, management, reproduction, and evaluation. Course content also includes instruction in tools, equipment, and facilities for small animal care, and provides activities to foster leadership development.

- **Certifications:** Student-selected verified credit can be earned by passing the course-related industry certification.

### Veterinary Science II (28061)

Full year, one credit

Grade(s): 9-12

Prerequisite: Biology (24310) & Concurrent enrollment in Veterinary Science I (28064)

Veterinary Science enables students to acquire the employability and technical knowledge and skills needed to succeed in postsecondary education as well as in a career in veterinary medicine or a related occupation. Students work with the wide variety of domestic and exotic animals housed at the Animal Science facility. Course content integrates application of academics, development of career competencies, and instruction in course specific knowledge and skills, such as business management, the use of tools, equipment, and facilities related to veterinary medicine. The program's strong partnerships with local animal related businesses allows for opportunities to build leadership skills and participate in internships. Students enrolled in the course should have a strong background in math and science and should be familiar with small animal care. Students may earn 3 articulation credits for ZOO 276- Animal Management Internship 2, from State University New York – Jefferson Community College towards an Associate of Applied Science Degree in Zoo Technology.

- **Additional high school credit:** A credit earned in this course will satisfy the third lab science credit for the standard diploma or the fourth lab science credit for the advanced diploma. In addition to the science credit, students will receive a second credit for fine/practical arts. This course also counts as a sequence for the modified standard diploma.
- **Certifications:** Student-selected verified credit can be earned by passing the course-related industry certification.

### Television Production I (28689) (98689W)

Full year, two periods, two credits + 1.0 quality point

Grade(s): 9-12

Prerequisite(s): None

Television Production I cover the theory and practice of digital media production. Students develop skills through “hands-on” projects in the Career Center’s Digital Media Production Facility, one of the best of its kind in Virginia. Production assignments range across the fields of television, radio, and the internet, and include public service announcements (PSAs), music videos, independent short films, radio spots, websites, and animation. Television Production students routinely earn local, state and even national prizes through many opportunities for competitions and client work afforded by this course. Students work individually and in groups to produce original pieces, which they take with them as professional digital portfolios at the end of the class.

- **College Credit:** This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details.

- **Certifications:** Student-selected verified credit can be earned by passing the course-related industry certification.

### Television & Multimedia Production II (28690) (98690W)

Full year, two periods, two credits + 1.0 quality point  
Grade(s): 10-12

*Prerequisite:* Television I or permission of instructor  
Television & Multimedia Production II is an intense, hands-on course that prepares students to function as professional media producers. The class models a commercial production company, giving students multiple opportunities to produce creative projects in the Career Center's impressive Digital Media Production Facility. Projects may be produced for competitions, clients and community partners. Students also are given the opportunity to produce independent projects, such as original short films or documentaries. These projects teach students the media production business while helping them to build professional portfolios that will set them apart from their peers. This advantage leads to awards, internships, scholarships, and successful higher education and career paths.

- **College Credit:** This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details.
- **Certifications:** Student-selected verified credit can be earned by passing the course-related industry certification.

### Television & Multimedia Production III (28691) (98691W)

Full year, two periods, two credits+ 1.0 quality point  
Grade(s): 11-12

*Prerequisite:* Television & Multimedia Production II  
Students will demonstrate mastery of media production knowledge and skills. They will function as media producers by creating original productions as they develop and market programs for target audiences. Students will assemble a professional digital portfolio to advance postsecondary and career goals. They will investigate the dynamic media production industry and identify opportunities for real-world experiences (e.g., internship, job shadowing). Students will research postsecondary opportunities and formulate strategies for both college and career success.

- **College Credit:** This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details
- **Certifications:** Student-selected verified credit can be earned by passing the course-related industry certification.

## ADDITIONAL NON-CTE COURSES OFFERED AT THE ARLINGTON CAREER CENTER

### Anatomy/Physiology I, Dual Enrollment (28085) (98085W)

Full year, one credit, + 1.0 quality point  
Grade(s):11, 12

*Prerequisite(s):* Biology (24310)

This is an introductory course to human body structure and designed for students interested in the health and medical pathway. This course will examine body structure and function at the cellular, tissue, organ, and organ system levels with emphasis on normal anatomy and physiology throughout the course.

- **College Credit:** This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details.

### Pre-Calculus, Dual Enrollment (93162W)

Full year, one credit, + 1.0 quality point  
Grade(s): 10-12

*Prerequisite(s):* Qualifying score on the VPT (pass all 9 units, up to Algebra II content)

NOVA MTH 161 presents college algebra, matrices, and algebraic, exponential, and logarithmic functions. NOVA MTH 162 presents trigonometry, analytic geometry, and sequences and series. This course prepares the student for MTH 263/264 Calculus I/II.

- **College Credit:** This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details.

### Calculus, Dual Enrollment (93176W)

Full year, one credit, + 1.0 quality point  
Grade(s):11-12

*Prerequisite(s):* MTH 163 or MTH 164 or two units of Algebra, one unit of Geometry, and one-half unit each of Trigonometry and Pre-Calculus

Presents analytic geometry of algebraic and transcendental functions including the study of limits, derivatives, differentials, and an introduction to integration along with their applications. Designed for mathematical, physical and engineering science program.

- **College Credit:** This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details.

**Calculus, Dual Enrollment I/II (93179W)****Full year, one credit, + 1.0 quality point****Grade(s):11-12**

*Prerequisite(s): Pre-Calculus, dual enrollment (93162W) or Pre-Calculus/Trigonometry (23162) or Pre-Calculus, Intensified (23164) – grade of C or higher*

Presents concepts of limits, derivatives, differentiation of various types of functions and use of differentiation rules, application of differentiation, antiderivatives, integrals, and applications of integration. Additionally, students will learn the calculus of algebraic and transcendental functions including rectangular, polar, and parametric graphing, indefinite and definite integrals, methods of integration, vector functions, volumes, sequences, and power series along with applications. Proofs of key theorems are also emphasized. Features instruction for mathematical, physical, and engineering science programs.

***College Credit:** This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with you school counselor for more details.*

**Calculus with Analytic Geometry, Dual Enrollment (93173W)****Full Year, one credit, +1.0 quality point****Grade(s): 11-12**

*Prerequisite(s): “C” or better in Precalculus, Intensified and teacher recommendation or “C” or better in NOVA MTH 163/164 and teacher recommendation or “B” or better in Precalculus with teacher recommendation or “A” in Mathematical Analysis/Trigonometry and teacher recommendation.*

The course presents analytic geometry and the calculus of algebraic and transcendental functions including the study of limits, derivatives, differentials, and an introduction to integration along with their applications. Designed for mathematical, physical, and engineering science programs.

- ***College Credit:** This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details.*

**Economics, Dual Enrollment (92801W)****Full Year, one credit, +1.0 quality point****Grade(s): 10-12**

*Prerequisite(s): Students must meet the NOVA entrance requirements*

This course provides college credit and is equivalent to those of an introductory year in economics at the college freshman level, Students enrolled in this course will take a semester of Macro Economics which focuses on a thorough understanding of the principles of economics that apply to an economic system. In addition, students will take a semester of

Microeconomics which focuses on the principles of economics that apply to the functions of individual decision makers, both consumers and producers within the economic system. *Successful completion of this course will meet the Economics and Personal Finance graduation requirement for students.*

- ***College Credit:** This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details.*

**General Biology, Dual Enrollment (94310W)****Full year, one credit, +1.0 quality point****Grade(s): 11-12**

*Prerequisite(s): Biology and Chemistry*

This course provides an in-depth exploration of biological concepts that include topics in cellular structure, metabolism, genetics, diversity of life, anatomy and physiology of organisms, and ecosystem organization and processes in an evolutionary context. The course will emphasize laboratory work involving quantitative data collection and analysis.

- ***College Credit:** This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details.*

**General College Physics I, Dual Enrollment (94501W)****Full year, one credit, +1.0 quality point****Grade(s): 11-12**

*Prerequisite(s): Precalculus, DE (93162W) & satisfactory placement score for ENG 111*

Teaches fundamental principles of physics. Covers mechanics, thermodynamics, wave phenomena, electricity, optics, magnetism, and selected topics in modern physics. Part I of II.

- ***College Credit:** This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details.*

**General College Physics II, Dual Enrollment (94502W)****Full year, one credit, +1.0 quality point****Grade(s): 11-12**

*Prerequisite(s): General College Physics I, Dual enrollment (94501W)*

Teaches fundamental principles of physics. Covers mechanics, thermodynamics, wave phenomena, electricity, optics, magnetism, and selected topics in modern physics. Part II of II.

- ***College Credit:** This course may be dual enrolled at Northern Virginia Community*

*College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details.*

**General Environmental Science, Dual Enrollment (94270W)**

**Full year, one credit, +1.0 quality point**

**Grade(s): 11-12**

*Prerequisite(s): Biology and Chemistry*

The introductory course focuses on the fundamental components and interactions that make up the natural systems of the earth. The course covers basic scientific concepts in the disciplines of biological, chemical, and earth sciences that are necessary to understand and address environmental issues.

- **College Credit:** *This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details.*

**Intermediate Spanish I/II, Dual Enrollment (95501W)**

**Full year, one credit, +1.0 quality point**

**Grade(s): 11-12**

*Prerequisite(s): Successful completion of Spanish IV or equivalent proficiency as determined by the teacher and readiness to enroll in a college level paced course*  
Students can discuss current events and to understand authentic material including the study and analysis of literary works. They read, write, and converse with some depth about selected topics on the culture, history, and literature of the language and extend comprehension beyond the literal level. Lessons are infused with a cultural framework to analyze the perspectives that derive the products and practices of the Spanish speaking world. This course is designed to increase Spanish proficiency above the intermediate-mid level as defined by the ACTFL (American Council on the Teaching of Foreign Languages) Proficiency Guidelines.

- **College Credit:** *This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details.*

**Statistics I/II, Dual Enrollment (93163W)**

**Full year, one credit, +1.0 quality point**

**Grade(s): 11-12**

*Prerequisite(s): Satisfactory score on an appropriate proficiency exam or MTH152 or MTH163 or MTH182*  
Covers descriptive statistics, elementary probability, probability distributions, estimation, and hypothesis testing. Continues the study of estimation and hypothesis testing with emphasis on correlation and regression, analysis of variance. Chi-squared tests, and nonparametric methods.

- **College Credit:** *This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details.*

**Teachers for Tomorrow II, Dual Enrollment (29063) (99063W)**

**Full year, one credit + 1.0 quality point**

**Grade(s): 11-12**

*Prerequisite: Teachers for Tomorrow I (99062W)*

Students continue to explore careers in the Education and Training Cluster and pathways. This course provides the opportunity for students to prepare for careers in education as they research postsecondary options, learn about the process of teacher certification in Virginia, and participate in a practicum experience.

- **College Credit:** *This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details.*

**Virginia & United States History, Dual Enrollment (92360W)**

**Full year, one credit, +1.0 quality point**

**Grade(s): 11-12**

*Prerequisite(s): Student must meet the NOVA entrance requirements.*

This course surveys the general history of Virginia and the United States from the earliest times to the present and allows students to reach a basic understanding of the characteristic features of the United States' historical development. Students will learn about the important political, economic, social, intellectual, cultural, and religious changes that shaped the development of Virginia and the United States from earliest times. There is an end-of-course SOL Examination. Passing the SOL test and the course earns a verified credit.

- **College Credit:** *This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details.*

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**INTERNSHIP PROGRAMS**

**PRIME (Professional Related Intern-Mentorship Experience) (29060)**

**Full year, one credit**

**Grade(s): 11-12**

*Prerequisite(s): Students must be 16 years of age and able to provide their own transportation*

PRIME is an internship program for students who have been identified for gifted services and/or have completed at least one year in a CTE class with the expectation to continue to the next level. It is designed

to provide students with an opportunity to be placed as interns in professional organizations that relate to their fields of interest. Students are assigned a mentor with whom they spend 140 hours during the summer for credit. Please check the Career Center website for more information and forms.

### **School to Work Transition/Internship (29828)**

**Full year, two periods, two credits**

**Grade(s): 11-12**

*Prerequisite(s): Minimum 16 years of age; completion of Career Center CTE program (full program series) with a grade of "C" or better; plus, a written recommendation from CTE Skills teacher*

This course is designed for students who have completed a Career & Technical Education (CTE) program sequence and wish to further their education and skills by either working in a job related to their career choice or continuing their training through mastery of advanced skills in their chosen skill area. Students will receive internship referral assistance from the CTE instructor and the internship coordinator. Students must be at the internship site a minimum of 280 hours per school year to earn two credits. Students are evaluated by the internship supervisor twice per quarter to determine the quarter grade.

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## **ACADEMIC PROGRAMS**

### ***Arlington Tech at the Career Center***

**Grade(s): 9-12**

*Prerequisite(s): Completion of Algebra I and Geometry with one verified math credit before entry in the 10<sup>th</sup> grade.*

Arlington Tech is a rigorous project-based learning program that prepares students to succeed in college and in the workplace through collaborative problem solving. Students learn how to effectively combine their interdisciplinary core academic knowledge with their developed skills in Career Technical Education (CTE) to solve real-world problems and provide services to the local community.

*Note: Algebra I /Geometry Combined Block – This block is offered at Arlington Tech. Students who have not completed Algebra I upon entry will have the opportunity to enroll in an Algebra I/Geometry block. This block offering combines Algebra I and Geometry into a one-year course that culminates with the student taking the Algebra I SOL for a verified graduation credit and will also earn 2 standard credits to graduate.*

Arlington Tech provides the opportunity for students to explore and become certified in a variety of CTE programs and to get a jump start on college by earning Early College Credits through dual enrollment with

Northern Virginia Community College. As a culmination of the project-based learning experience, Arlington Tech students will complete a year-long senior capstone project in which they would be employed as an intern, a consultant, or act as an independent researcher. Learning at Arlington Tech is active (through inquiry), authentic (through projects), and motivated by the students' interests.

### **Arlington Tech Capstone Experience (28955)**

**Full year, 1 credit for classroom instruction and additional variable work experience credits\***

**Grade(s): 12**

*Prerequisite(s): Previous career and technical education (CTE) coursework in the student's career pathway of interest and demonstrated entry workplace readiness skills. Students must be enrolled in the 12<sup>th</sup> grade.*

*\*Credits: 1-3 Variable work experience credits per academic year, based on documented hours (1 credit=280 hours, 2 credits=560 hours, 3 credits=840) Any hours acquired during the summer will be applied to the upcoming fall school term.*

Arlington Tech Capstone Experience is the culmination of an Arlington Tech student's cross-curricular project-based learning and career development. Capstone Experience provides the student a gateway to apply and to advance her or his knowledge, technical expertise, and research skills learned in Career and Technical Education (CTE) courses within an authentic real-world business and industry settings. Students may complete the Capstone Experience in one or three ways:

1. As paid or unpaid intern in a job placement relevant to the student's career pathway (working on-the-job site), (1 to 3 variable credits based on hours worked) \*
2. As a project manager/consultant working for a client to deliver a product or to solve a problem (working on-the-job site or at school)
3. As a research assistant at a university, government organization, or non-profit (working on-the-job site or at school)

Capstone Experience continues to develop the student's knowledge and skill in their chosen career path, or to further research study within her or his area of interest. Students are responsible for securing a Capstone placement during the 11<sup>th</sup> grade year with the support of the Capstone Coordinator. A work-based training plan is then developed by the student, Capstone Coordinator, and workplace mentor to guide the student's work-based learning experiences and assist in evaluating achievement and performance. The Capstone Coordinator and the student's mentor facilitate the

student's work-based learning experience and assist in evaluating her or his achievement and performances during the 12<sup>th</sup> grade year. When the student enrolls in the Capstone Experience course, the parent or legal guardian, workplace mentor, student, and APS staff signs an MOU that grants full legal consent that the student has permission to participate in all aspects of the Capstone Experience. It is recommended that student has one to two work release periods at the end of the school day to facilitate Capstone Experience job placement. This will be a requirement for Arlington Tech students.

### **The Academic Academy**

#### **Grade(s): 9-12**

*Prerequisite(s): Admission to the Academic Academy is made by the Program's Coordinator*

The Academic Academy is a program designed for students as an alternative to the comprehensive high school to provide individualized student-centered interventions. Students in grades 9 through 12 are served.

This program is designed with small class settings, low teacher/student ratio, individualized teacher mentoring, and structured academics. Curriculum areas include English, math, social studies, and science. In addition to academics, students have the option of enrolling in one of the many Career and Technical Education (CTE) elective classes offered at the Career Center. The Academy integrates comprehensive counseling into the program which focuses on coping skills and social emotional growth. Students may attend the Academy for five periods and return to the comprehensive high school for an additional two classes, or students may choose to spend the entire academic day at the Career Center.

The Academic Academy is located at the Arlington Career Center, 816 South Walter Reed Drive, Arlington, Virginia. The Program Coordinator can be reached at 703-228-5790.

### **English Learner Community**

#### **Grade(s): 9-12**

*Prerequisite(s): Admission to the English Learner Community (ELC) is made by the Program's Coordinator*

ELC is designed for the older English Learner (EL) students (ages 16-21) who would benefit most from a small and structured academic environment, integrated with a career and technical component. Students who are selected for ELC enroll in a two-period integrated block of language instruction in reading, writing and grammar. They also take three additional credits in math, science, and social studies. Finally, students enroll in a two-period Career & Technical Education (CTE) elective class at the Career Center. Students who attend the program benefit by working toward their high school diplomas while obtaining certifications or

licenses in their selected professional areas, and/or receiving college credits for their technical classes.

### **Leadership Capstone (28956)**

#### **Full year, one credit**

#### **Grade(s): 10-12**

*Prerequisite(s): Concurrently enrolled in any CTE course*

Work Based Learning Capstone (WBLC) is the culminating course in a student's logical sequence of courses within a chosen career area of interest. In this course, students can apply their knowledge, technical skills, leadership, and workplace readiness skills acquired in their Career and Technical Education (CTE) elective courses in a real-world business and industry settings. Student will need to have taken at least two previous career and technical education (CTE) courses listed in the Program of Studies in their chosen career areas of interest.

The WBL Capstone continues to develop the student's skills and knowledge in their chosen career path, or further their study within their areas of interest. A work-based training plan is developed by the student, teacher, and workplace mentor to guide the student's work-based learning experiences and assist in evaluating achievement and performance. There are several models of Work Based Learning (WBL): the credit bearing cooperative "co-op" (requires concurrent classroom instruction and on-the-job training"), and the non-credit bearing service-based learning, internship, and school-based enterprise (entrepreneurship programs). The student will coordinate with the WBL coordinating teacher to determine the appropriate WBL match for the student. Parental or legal guardian consent is required for student participation. It is recommended that students have on to two WBL release periods at the end of the school day to facilitate WBL, job placement.

### **Program for Employment Preparedness (PEP)**

#### **Full year, all day program; 6-8 credits**

#### **Grade(s): 12 and post-graduate**

*Prerequisite(s): The referral process must begin with the Transition Coordinator at the comprehensive high school.* Besides having a current Individual Education Program (IEP), PEP students must be close to ending their home school academic experiences; be able to function independently or with only some assistance from staff; and be capable of taking public transportation independently or with minor assistance, after minimal training; and be able to function independently or with some assistance in the community at career internships. Student can be enrolled in CTE classes, provided they can independently, or with minor assistance, assimilate with the curriculum rigor required for each individual class,

at the Career Center. The PEP Program provides a combination of office technology, paid or unpaid career internships, as well as occupational knowledge, and offers personal finance and social skills both at the Career Center, and the community at large. There are some academic courses that can be offered based on each student's individual needs. A student's week includes three to four-hour days at internship sites and may include exploration of non-SOL related academic course work. Supervision can be provided for some students at their internships, as students are expected to reach a certain level of independence with training.



PEP provides students with a combination of academic instruction paid and unpaid career exploration at internship sites throughout the community. A typical student's schedule includes two full days of academic classes at the Career Center and three four-hour days at an internship site. Most students will explore two or three different careers during the school year. PEP students earn academic credits required for a high school diploma or certificate, as well as elective credits.

### **Occupational Knowledge (20998)**

**Full year, one credit**

**Grade(s): 12 and post-graduate**

*Prerequisite(s): Enrollment in PEP*

Students in PEP meet with their case carriers two days per week for academic instruction related to the world of work. Students are encouraged to analyze their placements and evaluate their own performance. They consider how the demands and satisfactions of a particular type of work mesh with their abilities and needs. Each student compiles a transition notebook. This course may be taken more than once.

### **Occupational Exploration (20999)**

**Full year, two credits**

**Grade(s): 12 and post-graduate**

*Prerequisite(s): Enrollment in PEP*

PEP students intern at various community sites three days a week for a total of approximately 12 hours. PEP staff develop and analyze potential sites prior to student placement. Sites are assigned based on student interest and abilities, as well as the demands of available sites. At independent internship sites, regular employees serve as mentors and oversee student progress. Students receive written evaluation of their work-related performance, skills, and behavior. At group internship sites (typically between 3-5 students with a job coach), a PEP staff member works with and assesses student progress. All PEP students will create a professional portfolio during their time with PEP that includes journal entries, recommendation letters, resume, samples of work, pictures of themselves at internship sites, All About Me presentation, and more



## ARLINGTON COMMUNITY HIGH SCHOOL

Arlington Community High School is a county-wide school of choice for students age 16 and older completing their high school diploma. As an accredited high school of enrollment, diplomas are awarded under the Arlington Community High School name. It is distinguished by offering courses required for a high school diploma on a semester basis (day classes – up to 8 credits per year) and on a year-long basis (evening classes – up to 2 electives and 2 core classes per year). Classes operate in both the day and evening hours, from 8:00 a.m. to 9:10 p.m. Courses are offered through a competency-based model, allowing students to individually demonstrate learning mastery.

Arlington Community High School's extremely diverse student population is focused on earning a high school diploma, while preparing themselves for college, work, and their future. In addition to offering courses for all diploma requirements, opportunities exist for completing Career and Technical courses through both day and evening schedules and dual enrollment college credits with Northern Virginia Community College. Students interested in enrolling in Arlington Community High School should contact the school directly or see their current school counselor for enrollment information.

### ADDITIONAL Non-AP COURSES OFFERED AT ARLINGTON COMMUNITY HIGH SCHOOL

#### **Career Investigations (22010)**

**Full year, one credit**

*Prerequisite: None*

This course consists of an in-depth study of career clusters through a variety of investigative activities. Students observe, analyze, and report on the demand for workers, worker qualifications, organizational structures, quality control measures, selected policies and regulations, ethical issues, and rewards of work. Students analyze career assessment results, compare various educational options, and develop or revise a plan related to their academic and career-related goals.

#### **English 11 Strategies (21151)**

**Full Year, one credit**

**Grade(s): 9-12**

*Prerequisite: None*

This course is the initial course of enrollment for students working towards completion of an English 11 credit. The English 11 curriculum is followed using a personalized, competency-based approach, with additional enrichment to support learning and build content knowledge. As students achieve mastery of 80% or more of English 11 content is achieved, students move to the full English 11 course and credit.

#### **ELD Grammar Development (20891)**

**Full year, one credit**

**Grade(s): 9-12**

*Prerequisite(s): Enrollment in English Learner (EL) services.*

This elective course will provide an opportunity for English learner (EL) students to receive focused instruction and practice in specific areas of grammar according to their needs.

#### **Introduction to Biology (24301)**

**Full year, one credit**

**Grade(s): 9-12**

This course is the initial course of enrollment for students working towards completion of a Biology credit. The Biology curriculum is followed using a personalized, competency-based approach, with additional enrichment to support learning and build content knowledge. As students achieve mastery of 80% or more of Biology content is achieved, students move to the full Biology course and credit.

#### **Introduction to Earth/Science (24201)**

**Full year, one credit**

**Grade(s): 9-12**

This course is the initial course of enrollment for students working towards completion of Earth Science credit. The Earth Science curriculum is followed using a personalized, competency-based approach, with additional enrichment

to support learning and build content knowledge. As students achieve mastery of 80% or more of Earth Science content is achieved, students move to the full Earth Science course and credit.

**Introduction to Virginia & United States History (22202)**

**Full year, one credit**

**Grade(s): 9-12**

This course is the initial course of enrollment for students working towards completion of a United States and Virginia History credit. The VA/US History curriculum is followed using a personalized, competency-based approach, with additional enrichment to support learning and build content knowledge. As students achieve mastery of 80% or more of VA/US History content, students move to the full VA/US History course and credit.

**Introduction to World Geography (22201)**

**Full year, one credit**

**Grade(s): 9-12**

This course is the initial course of enrollment for students working towards completion of a World Geography credit. The World Geography curriculum is followed using a personalized, competency-based approach, with additional enrichment to support learning and build content knowledge. As students achieve mastery of 80% or more of World Geography content, students move to the full World Geography course and credit.

**Introduction to World History & Geography (22203)**

**Full year, one credit**

**Grade(s): 9-12**

This course is the initial course of enrollment for students working towards completion of a World History and Geography credit. The World History and Geography curriculum is followed using a personalized, competency-based approach, with additional enrichment to support learning and build content knowledge. As students achieve mastery of 80% or more of World History and Geography content, students move to the full World History and Geography course and credit.

# **WAKEFIELD HIGH SCHOOL**

## **Special Programs for All Students**

**2022 - 23**

**FOUNDATION PROGRAM for ACADEMIC EXCELLENCE  
(Grade 9)**

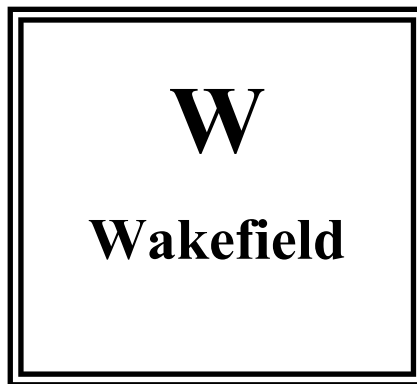
**SENIOR PROJECT GRADUATION REQUIREMENT  
(Grade 12)**

**AP CAPSTONE DIPLOMA**

**ADDITIONAL COURSE OFFERINGS AT WAKEFIELD**

**IMMERSION PROGRAM**

**ADVANCED PLACEMENT NETWORK**



**Arlington, VA**

# FOUNDATION PROGRAM FOR ACADEMIC EXCELLENCE

## GRADE 9

Grade nine students come to high school ready for the important challenge of passing through adolescence to adulthood, preparing themselves for a successful entrance into the post-high school world of higher education, job and career commitment, and social maturity. Our program for ninth graders is designed to prepare students for success in the intellectual, social, and physical domains of adulthood.

In our Foundation for Academic Excellence Program, we provide ninth grade students who have just exited their middle school as young teenagers, with what we consider the fundamental intellectual and learning tools to succeed academically in all areas of their high school experience. They will acquire skills, content knowledge, and intellectual acumen to master intensive blocks of advanced level subject area instruction.

The Foundation for Academic Excellence Program provides students with a rigorous offering in math, English, science, and social studies that infuses technology into the curriculum, allowing for a greater and more robust academic experience for all students. The program provides for Advanced Placement, intensified and regular level sections of English 9, World History, Biology, and mathematics. The houses also offer co-taught sections of core courses to accommodate the learning needs of special education students.

## PROGRAM CHARACTERISTICS

### Personalized Instruction

Students are grouped into academic teams, or “*Houses*”, for a portion of their school day. They are taught by a team of teachers who get to know each student. The teachers are able to differentiate instruction and provide enrichment, remediation, and acceleration as appropriate.

### Interdisciplinary Learning

The House organization allows for the team of teachers to plan together and develop interdisciplinary units. These units allow students to see connections between content areas and transfer knowledge and learning to real life experiences. Technology is taught as a tool to support learning in all areas.

### Student Responsibility for Learning

Students acquire the skills and intellectual tools to learn to take responsibility for their own learning, to develop confidence in their own growing abilities to set personal goals, and to manage time and commitments to meet these goals. They also begin to establish long-term goals in post-high school and career plans.

## STUDENT ASSESSMENT

All students are expected to demonstrate mastery of the four core areas (English, mathematics, science, and social studies) as specified by the curriculum objectives for each subject based on APS curricula and Virginia Standards of Learning. Forms of assessment include traditional tests, daily assignments, exhibits, group and individual projects, and interdisciplinary multi-media presentations.

Student progress is monitored on a continual basis by each teacher in the house and reviewed with the student. At the mid-term of the second marking period, each student is assigned a parent - student-teacher conference appointment during the Foundation Program conference day. This provides parents and students with an overview of achievement during the first semester, goals for the second semester, and answers to questions concerning course selection for the tenth grade. Additional opportunities for conferences are provided during the year as needed.

## INSTRUCTION

### Curriculum

The county-approved curriculum is followed in the core subjects of science, (Biology, Intensified Biology, or Immersion Intensified Biology), English (English 9 or English 9 Intensified), and social studies (World History 1500 to the present or Intensified World History 1500 to the present). Students who enter Grade 9 ready to take

AP World History may take the class(es) out of the House. Math classes for our ninth-grade students are cross-housed, meaning there are students from more than one House in the math classes.

Students receive a MacBook Air in the beginning of the school year and are exposed to a variety of computer programs and applications such as word processing, spreadsheets, databases, publishing, graphics, web page creation, and visual basic programming. Students also learn how to use audio, visual, and video technology to design presentations.

### **Gifted Differentiation**

The curriculum presented in all intensified and upper-level courses include explicit and extended instruction in creative and critical thinking, problem solving, seminar discussion skills and research methods. The pacing of instruction and the expectations of performance are aimed to meet the intellectual aptitude of the gifted student.

### **Acceleration/Remediation**

Each house operates in a flexible and differentiated manner which facilitates varied levels of learning. Opportunities for advanced learning are provided to students as they demonstrate need and desire. Grouping within the House exists to accommodate students who demonstrate their readiness for an accelerated program. The House structure provides differentiated opportunities for student support through individual remediation and strengthening.

### **Special Education Students**

The Foundation Program includes opportunities for inclusion of Special Education students.

## **ORGANIZATION AND SCHEDULE**

- Each House has a team of core teachers and a counselor(s) who share the same group of students.
- Each House includes students who are identified for gifted services, students who receive Special Education services, and students who are English Language Learners.
- Students take their math and elective classes out of the House. These electives include Health and PE I, world language courses, and fine and performing arts.

## **SENIOR PROJECT GRADUATION REQUIREMENT**

### **Grade 12**

#### **Senior Project Seminar**

**Full year, one credit (20190)**

**Semester, one half credit (20195)**

**Grade 12**

#### **Senior Project Independent Study (20191)**

**Full year, one credit**

**Grade 12**

The Senior Project is an independently researched and prepared product completed by each 12th grader on a topic of his/her choice. The Senior Project is an opportunity for the student to demonstrate his/her ability to select, research, write and produce a significant product which is presented to an assessment panel including a faculty member, a peer, an expert consultant, and another adult. The Senior Project includes a proposal, an authentic journal of progress over time, an expository essay and an oral presentation with visual aids. Each senior works under the guidance of a faculty advisor and a consultant in the preparation and presentation of this project. The Senior Project can serve as a piece for review by future employers, as well as for review by college and university personnel, and may also serve as a basis for continued research beyond high school. *Because this represents a capstone experience for our Wakefield students, a challenge for which they have been prepared in 9th, 10th and 11<sup>th</sup> grades, Senior Project is a graduation requirement.* Students will receive one credit upon satisfactory completion of the Senior Project. Students may complete the Senior Project as an independent study (20191) or by enrolling in a Senior Project Seminar class (20190) for a full year or in the second semester of his/her senior year (21095) for .5 credit.

## AP CAPSTONE DIPLOMA

AP Capstone™ is a College Board program that equips students with the independent research, collaborative teamwork, and communication skills that are increasingly valued by colleges. It cultivates curious, independent, and collaborative scholars and prepares them to make logical, evidence-based decisions.

AP Capstone is comprised of two AP courses — AP Seminar and AP Research — and is designed to complement and enhance the discipline-specific study in other AP courses. Participating schools can use the AP Capstone program to provide unique research opportunities for current AP students, or to expand access to AP by encouraging students to master the argument-based writing skills that the AP Capstone program develops.

Students who undertake these courses are AP Capstone candidates, a distinction recognized by colleges and university across the country. Students receive the AP Capstone Certificate after successful completion of both courses. Capstone candidates who have also passed four other AP exams in any areas receive the AP Capstone Diploma.

### **Seminar, AP (22110) (32110)**

**Full year, one credit, +1.0 quality point**

**Grade(s): 10-12**

AP Seminar is a foundational course that engages students in cross-curricular conversation that explore the complexities of academic and real-world topics and issues by analyzing divergent perspectives. Using an inquiry framework, students practice reading and analyzing articles, research studies, and foundational literary and philosophical texts; listening to and viewing speeches, broadcasts, and personal accounts; and experiencing artistic works and performances. Students learn to synthesize information from multiple sources, develop their own perspectives in research-based written essays, and design and deliver oral and visual presentations, both individually and as part of a team. Ultimately, the course aims to equip students with the power to analyze and evaluate information with accuracy and precision to craft and communicate evidence-based arguments.

*Students are required to take the AP exam associated with this course. Students not taking the exam will not earn the additional quality point for this course (22110).*

### **Research, AP (22112) (32112)**

**Full year, one credit, +1.0 quality point**

**Grade(s): 11, 12**

*Prerequisite: Successful completion of Seminar, AP*

AP Research allows students to deeply explore an academic topic, problem, or issue of individual interest. Through this exploration, students design, plan, and conduct a year-long research-based investigation to address a research question. In the AP Research course, students further their skills acquired in the AP Seminar course by understanding research methodology; employing ethical research practices; and accessing, analyzing, and synthesizing information as they address a research question. Students explore their skill development, document their processes, and curate the artifacts of the development of their scholarly work in a portfolio. The course culminates in an academic paper of approximately 4000-5000 words (accompanied by a performance or exhibition of product where applicable) and a presentation with an oral defense. *Students are required to take the AP exam associated with this course. Students not taking the exam will not earn the additional quality point for this course (22112).*

## ADDITIONAL ADVANCED PLACEMENT COURSES OFFERED AT WAKEFIELD

### **Environmental Science, AP (34270)**

**Full year, one credit + 1.0 quality point per credit upon completion of both credits and AP exam, double periods, concurrent enrollment with (34271)**

**Grade(s): 11-12**

*Prerequisite: Successful completion of two lab sciences (one life and one physical); however, students may be concurrently enrolled in Chemistry IF they have completed 2 lab sciences (one life and one physical); satisfactory completion of or concurrent enrollment in Algebra II or an equivalent class, concurrent enrollment in Selected Topics in Environmental Science and permission of the instructor*

Advanced Placement Environmental Science is a college level course designed to provide students with the scientific principles, concepts and methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems both natural and human-made, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving and/or preventing them.

*Students are required to take the AP exam associated with the two required courses. Students not taking the exam will not earn the additional quality point for either course. (24270) (24271)*

### **Selected Topics in Environmental Science, AP (34271)**

**Full year, one credit, double period**

**Grade(s): 11-12**

*Prerequisite: Concurrent enrollment in AP Environmental Science*

These topics will provide students with the opportunity to conduct extensive laboratory investigations in several areas on environmental science. Field experiences combined with laboratory research will allow the students to learn about the environment through firsthand observations. Interdependence of earth systems, population dynamics, and renewable/nonrenewable resources will be covered the first semester. Environmental quality, global change, and environment and society will be covered the second semester.

*This course will count as a general elective credit. In addition, design, and completion of an individual or small-group research project is required.*

## ADDITIONAL Non-AP COURSES OFFERED AT WAKEFIELD

### **American Civilization: English (21176) & Social Studies, Intensified (22376)**

**Full year, two periods, two credits (one credit in English & credit in Virginia & United States History)**

*Prerequisite: None*

This course is designed to parallel the literature, language, and composition study of eleventh grade English. Greater attention is given to the development of practical and fine arts, as well as the social and intellectual history of the United States. Correlations are drawn between literary and historical periods of United States history.

*There are three end-of-course Standard of Learning assessment: reading, writing, and Virginia & United States History. Passing the SOL tests and the course earns two verified credits.*

### **Anatomy/Physiology I/II, Dual Enrollment (94320W)**

**Full Year, one credit, +1.0 quality point**

**Grade(s): 11, 12**

*Prerequisite: Biology and one additional laboratory science*

This is an introductory course to human body structure and designed for students interested in the health and medical pathway. This course will examine body structure and function at the cellular, tissue, organ, and organ system levels with emphasis on normal anatomy and physiology throughout the course.

- **College Credit:** *This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details.*

### **Earth Science, Part I (20045)**

**Full Year, one credit**

**Grade(s): 9-12**

*Prerequisite: Student must be identified as in need of Special Education services*

This course is a study of the fundamental concepts common to Earth Science to include geology, oceanography, meteorology, and astronomy. This is the first course of a two-part sequence and will include strategies to help students develop their skill in reading in the content area, study and organization, and interpretation of various forms of data. This course counts as a science credit for students seeking a Modified Standard Diploma. There is

no end-of-course SOL examination. This course may also count as a laboratory science credit for the Standard Diploma, with credit accommodations, if followed by Earth Science, Part II, and the Earth Science SOL exam.

### **Earth Science, Part II (20046)**

**Full Year, one credit**

**Grade(s): 9-12**

*Prerequisite: Student must be identified as in need of Special Education services and must have successfully completed Earth Science, Part I*

This course is a continued study of the fundamental concepts common to Earth Science to include greater depth of study in geology, oceanography, meteorology, and astronomy. This is the second of a two-course sequence and will include strategies to help students continue to develop their skills in reading in the content area, study and organization, and interpretation of various forms of data. There is an end-of-course SOL Examination Students who complete this course and pass the Earth Science end-of-course SOL Examination will earn one verified science credit.

### **Earth Science II: Oceanography (24220)**

**Full Year, one credit**

**Grade(s): 11, 12**

*Prerequisite: Earth Science and one additional laboratory science*

This course introduces students to the major topic areas of Oceanography. This course describes the role of the oceans on our earth, why they are important to us, and what influence the oceans have on the history of civilization. Oceanography deals with geography a biological oceanography and covers such topics as the geology and geography of ocean basis, physical properties of sea water, marine chemistry, marine biology, salinity and density circulation in the oceans, waves, tides, and oceanographic instruments, tolls, and methods. The course is designed to be an in-depth treatment of oceanography concepts.

### **Film Study II (21447)**

**One semester, one-half credit**

**Grade(s): 11, 12**

*Prerequisite: Completion of Film Study I or permission of instructor*

Film Study II will continue to expand upon the concepts taught in Film Study I. Students will more completely sample the genre and sample film making as a part of understanding film viewing. In addition to practicing oral and written communication skills, Film Study II will explore director studies, actor studies, ethnic film, screenwriting, filmmaking practice, mysteries, and film noir.

### **Health, Physical & Driver Education II (27410)**

**Full Year, one credit**

**Grade(s): 10**

*Prerequisite: Health & Physical Education I, parent, and student attendance at required driver education safety meeting (state law).*

Students will demonstrate health and wellness knowledge and skills and complete the driver education classroom instruction. Areas of instruction include emotional, mental, social, and environmental health, safety and emergency preparedness, relationships, substance abuse and disease prevention, family life education, and health/medical career promotion. Students will understand principles of exercise physiology, biomechanics, and anatomy in a variety of lifetime activities. This course emphasizes lifetime physical fitness through individual, group, dance and recreational pursuits. It emphasizes lifetime physical fitness by designing, implementing, self-assessing, and modifying a personal fitness plan. Classroom driver education instruction will focus on safe driving attitudes, skill development, risk awareness, driver alertness, driver distractions, the social and economic consequences of driving, occupant protection, positive interactions with other roadway users, and the physical and psychological conditions that affect driver performance. Students and their parents/guardians are required by state law (§22.1-205; HB1782) to attend the parent student driver education component meeting. Wakefield will conduct two meetings per semester. Successful completion of this course and attendance at the meeting entitles the student to a Driver Education Certificate (DEC-1). Successful course completion is partial prerequisite to obtain a Virginia driver's license for students less than 19 years-of-age (student will still need to successfully complete the in-car instruction).



**Intermediate Orchestra (29243)****Full year, one credit****Grade(s): 9-12***Prerequisite: Previous Orchestra experience or permission from the instructor*

Intermediate orchestra provides students preparation for Chamber Orchestra placement. Extensive training in intermediate instrumental technique, ensemble performance and sight-reading is included in rehearsals, along with contextual theoretical and historical information. Attendance at numerous schools, community and traveling performance engagements is required.

**Advanced Theatre Studies (21432)****Full year, one credit****Grade(s): 12***Prerequisite: Advanced Theatre IV*

In Advanced Theatre Study students will continue with the work of Advanced Theatre IV where students conceptualize and oversee the entire production process for several theatrical events. By directing, producing, and managing plays or shows, students will synthesize and apply all previously learned technical elements, acting, and directing techniques, and group dynamic skills. This course has more emphasis on independent projects. Out-of-class rehearsals may be necessary to complete these activities.

**World Literature (21518)****Full year, one credit****Grade(s): 12***Prerequisite: Teacher recommendation*

World Literature is designed to parallel English 12 in language and composition. Studies include extensive reading in comparative literature from Europe, Africa, Asia, South and Central America, focusing on the development of modern thought. Students initiate independent study projects to present to the class, participate in panel discussions and seminars, and write many short papers. Recommended for the highly motivated, disciplined student.

## WAKEFIELD IMMERSION

The Immersion Program at Wakefield is designed to continue and expand on the study of Spanish language and culture begun in the middle school. Students are provided advanced level course work in the target language and have the option to take content area courses in Spanish. Immersion students may also complete all or part of their Senior Project in Spanish.

### **Spanish Immersion 9 (25511)**

**Full year, one credit**

**Grade(s): 9**

*Prerequisite: Successful completion of 8<sup>th</sup> grade immersion at Gunston.*

Students continue developing Spanish language skills in an experiential setting. A focus on reading and writing skills prepares students for upper-level Spanish courses such as AP Language and Culture as well as AP Spanish Literature. Students relate the study of the Spanish language to experiences in other curricular areas and make interdisciplinary connections. They continue the development of cultural knowledge of the Spanish-speaking world and apply their knowledge beyond the classroom.

### **Spanish Immersion 10 (25521)**

**Full year, one credit**

**Grade(s): 10-12**

*Prerequisite: Successful completion of Spanish Immersion 9 (25511).*

Students continue their study of the Spanish language and the culture of the Spanish-speaking world with a continued emphasis on reading, grammar, writing, listening, and speaking skills through the study of literature and thematic content area units. It is a continuation of the Immersion 9 course for those students wishing further training for eventual enrollment in the AP Spanish Language and AP Spanish Literature course.

### **Intensified Biology Laboratory Course-Immersion (24319)**

**Full year, one credit**

**Grade(s): 9**

*Prerequisite: Enrollment in the Immersion Program*

This course is designed for the capable and motivated student seeking a rigorous and comprehensive secondary science experience. Topics covered include molecular biology, cytology, genetics, cell physiology, ecology, and a survey of the biological kingdoms. Extensive laboratory technique, experimentation, and analysis are emphasized. *There is an end-of-course SOL Examination. Passing the SOL test and the course earns a verified credit.*

### **Intensified Chemistry- Immersion (24416)**

**Full year, one credit**

**Grade(s): 10-12**

*Prerequisite: Completion or concurrent enrollment in Algebra II or permission of the instructor*

This course aims to prepare students for college-level work in chemistry. The course provides a thorough introduction to the structure and behavior of atoms and molecules and the principles governing chemical reactions. Laboratory work, stressing analysis of quantitative data, is emphasized. There is an end-of-course SOL Examination. Passing the SOL test and the course earns a verified credit.

### **Economics and Personal Finance-Immersion (22211)**

**Full year, one credit**

**Grade(s):10-12**

*Prerequisite: Enrollment in the Immersion Program*

The content/instruction of this course is provided in Spanish. This course explores the general scope of economics and personal finance. The course explores the American enterprise system, economic principles, economics of supply/demand, labor and industry, the Federal Reserve System, governmental fiscal policies, and the comparison of economic systems of major countries and economics philosophies to develop an understanding of the impact of global trade. Students learn the major areas in financial and investment planning, stock market, annuities, return on investments, retirement and estate planning, consumer credit and money management, budgeting, financial statements, insurance and risk management, home ownership, planning for college education, payroll taxes, consumer protection laws and financial responsibilities. ***Segments of this course will be taught online, thereby satisfying the graduation requirement for a virtual course. The WISE Financial Literacy Test may be administered for students to earn the graduation requirement of a Career and Technical credential. The course incorporates all economics and financial literacy graduation requirements. Students who successfully complete this course and a CTE course may qualify for completer status. This course may be used as a social studies, family and consumer sciences, or business credit for graduation. Consult with your school counselor for more information.***



# THE ADVANCED PLACEMENT (AP<sup>®</sup>) NETWORK

## *Building Bridges to Your Student's Future*



Wakefield High School, Arlington, VA - 703.228.6700 - [www.apsva.us/wakefield](http://www.apsva.us/wakefield)

### *What Is Advanced Placement (AP<sup>®</sup>)?*

The **Advanced Placement Program (AP<sup>®</sup>)**, sponsored by the College Board (i.e., “the SAT people”) offers high school students the opportunity to take **college-level courses in high school and receive credit, advanced placement, or both when they enter college**. Currently, AP<sup>®</sup> exams are offered in 36 subjects. When the Advanced Placement (AP<sup>®</sup>) Program began in 1955, 1,229 students took AP<sup>®</sup> exams. In 2015, over 2.5 million students took more than 4.5 million exams, and over 2,000 universities worldwide use the AP<sup>®</sup> Program to some extent.

### *What Is The Wakefield High School Advanced Placement (AP<sup>®</sup>) Network?*

Stemming from *Wakefield's commitment to the notion that AP<sup>®</sup> courses are designed for prepared and not just “gifted” students*, the **Wakefield AP<sup>®</sup> Network** began as an Exemplary Project approved by the Arlington County School Board in the spring of 2004. The Wakefield Advanced Placement Network is a county - wide program meaning that students who reside in Arlington but who live outside of Wakefield's attendance zone can request an academic transfer to participate in the program.

Once enrolled at Wakefield, a student's participation in the AP Network can begin as early as ninth grade. Freshman can enroll in AP World History or other Pre-AP intensified classes that are offered in the 9<sup>th</sup> grade Foundation program. As part of their freshman experience, students work with their counselors to create a four-year academic plan. This plan is tailored to the students' strengths and areas of interest. All students are encouraged to take as rigorous a course load as possible to best prepare them for their future.

Many of these challenging courses are taught as AP courses, of which Wakefield offers 30 of the 37 AP courses authorized by the College Board. As one of the first public high schools in the United States to open enrollment in AP courses to all students, Wakefield recognized the need to support students as they took on the academic and personal challenges that these courses present. The AP Network was created to provide this support and continues to do so through a variety of academic and counseling initiatives, including the following:

- The **Wakefield AP Summer Bridge Program** – a 3-day series of workshops and class sessions for AP students to attend in August to better prepare them for AP courses they will be taking in the coming school year.
- **AP Consult** –a class designated to allow students time to complete course work, study independently, and if available, meet with the teacher(s) of their AP course(s) .
- **AP Capstone** –a series of elective AP courses—AP Seminar and AP Research—that lead to the AP Capstone Certificate or AP Capstone Diploma.
- Collaboration with **Wakefield's Cohort for Minority Males** and **United Minority Girls programs** to address the achievement gap between white and non-white students.
- Faculty participation in AP vertical team training and AP content course training at College Board-sponsored events.
- Faculty identification and recruitment of students, Grades 8 through 12, who have the potential to succeed in advanced, intensified, and AP level courses.
- Faculty-conducted workshops and evening presentations that explain the advantages of intensified and AP classes.

# The International Baccalaureate Program at Washington-Liberty High School

The International Baccalaureate (IB) program is an internationally recognized program of studies available at Washington-Liberty to highly motivated 11th and 12th grade students. This program provides the rigor, the structure, and the experience necessary to challenge academically talented and motivated students. The IB program comprises a holistic philosophy of learning that seeks to address the intellectual, philosophical, and social development of the student.



The IB is a two-year program of studies across the disciplines. The components of the program are as follows:

- *Successful completion of six academic courses in different subject areas*
- *Completion of an external examination in each area*
- *Participation in CAS (Creativity, Activity, and Service)*
- *Enrollment in the Theory of Knowledge course*
- *The writing and submission of an Extended Essay in an area of interest to the student*

The International Baccalaureate Organization of Geneva, Switzerland awards an IB Diploma to students who complete all the above components and perform successfully on the six external examinations. Frequently, the diploma serves as an academic passport to universities around the world. Many U.S. colleges and universities have also extended official recognition to the diploma and/or to the subject certificates earned in the partial fulfillment of it. (A complete listing of such recognition policies is available from the Counseling department and the IB Coordinator or by Internet at [www.ibo.org/](http://www.ibo.org/)) Students may choose to select certain IB courses without earning the full IB Diploma. See pages 6 for requirements for earning an Advanced Studies Diploma. The prerequisites for all courses are listed in this addendum to the Program of Studies.

## COMPONENTS OF THE IB DIPLOMA PROGRAM

Areas of study are grouped according to the following:

Group 1: Studies in Language and Literature –

- English A Literature
- English A Language & Literature
- Spanish A Language and Literature

Group 2: Language Acquisition –

- Arabic AB/B
- Chinese Mandarin AB/B
- French AB/B
- Latin
- Spanish AB/B

Group 3: Individuals and Societies –

- Business & Management
- Economics
- Geography
- History of the Americas (year 1) /Topics in Twentieth Century World History (year 2)
- Information Technology in a Global Society
- Philosophy
- Psychology
- Social Anthropology

- Group 4: Experimental Sciences –
- Biology
  - Chemistry
  - Computer Science
  - Design Technology
  - Environmental Systems & Societies
  - Physics
  - Sports, Exercise, & Health Science
- Group 5: Mathematics –
- Math: Applications & Interpretation
  - Mathematics: Analysis & Approaches
- Group 6: The Arts –
- Film
  - Music
  - Theatre Arts
  - Visual Arts
- The core: Theory of Knowledge, Extended Essay, and CAS (Creativity, Activity, and Service)

## The IB Learner Profile

The aim of all IB programmes is to develop internationally minded people who, recognizing their common humanity and shared guardianship of the planet help to create a better and more peaceful world.

IB learners strive to be:

<b>Inquirers</b>	They develop their natural curiosity. They acquire the skills necessary to conduct inquiry and research and show independence in learning. They actively enjoy learning, and this love of learning will be sustained throughout their lives.
<b>Knowledgeable</b>	They explore concepts, ideas and issues that have local and global significance. In so doing, they acquire in-depth knowledge and develop understanding across a broad and balanced range of disciplines.
<b>Thinkers</b>	They exercise initiative in applying thinking skills critically and creatively to recognize and approach complex problems, and make reasoned, ethical decisions.
<b>Communicators</b>	They understand and express ideas and information confidently and creatively in more than one language and in a variety of modes of communication. They work effectively and willingly in collaboration with others.
<b>Principled</b>	They act with integrity and honesty, with a strong sense of fairness, justice, and respect for the dignity of the individual, groups, and communities. They take responsibility for their own actions and the consequences that accompany them.
<b>Open-minded</b>	They understand and appreciate their own cultures and personal histories, and are open to the perspectives, values and traditions of other individuals and communities. They are accustomed to seeking and evaluating a range of points of view and are willing to grow from the experience.
<b>Caring</b>	They show empathy, compassion and respect towards the needs and feelings of others. They have a personal commitment to service, and act to make a positive difference to the lives of others and to the environment.
<b>Risk-takers</b>	They approach unfamiliar situations and uncertainty with courage and forethought, and have the independence of spirit to explore new roles, ideas, and strategies. They are brave and articulate in defending their beliefs.
<b>Balanced</b>	They understand the importance of intellectual, physical, and emotional balance to achieve personal well-being for themselves and others.
<b>Reflective</b>	They give thoughtful consideration to their own learning and experience. They can assess and understand their strengths and limitations in order to support their learning and personal development.

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## Washington-Liberty High School International Baccalaureate Curriculum

IB Group	Grade 9	Grade 10	Grade 11	Grade 12
<b>Group 1 Language A</b>	English 9*	English 10*  AP Spanish Fluent Speakers	IB English Literature HL part 1 IB English Language and Literature SL part 1 IB Spanish Language and Literature HL (Fluent Speakers - bilingual diploma) part 1	IB English Literature HL part 2 IB English Language and Literature SL part 2 IB Spanish Language and Literature HL (Fluent Speakers - bilingual diploma) part 2
<b>Group 2 Language Acquisition</b>	Spanish III or FS II French III Chinese III Latin III	Spanish IV or FS III French IV Chinese IV Latin IV	IB Spanish B SL/HL part 1 IB French SL/HL part 1 IB Mandarin/Chinese SL/HL part 1 IB Latin SL/HL part 1 IB Arabic SL part 1	IB Spanish B SL/HL part 2 IB French SL/HL part 2 IB Mandarin /Chinese SL/HL part 2 IB Latin SL/HL part 2 IB Arabic SL part 2
<b>Group 3 Individuals and Societies</b>	World History**	AP Government for Sophomores	IB History of the Americas HL part 1 IB Business & Management SL (one year) IB Economics SL (one year) IB Geography SL (one year) IB ITGS SL (one year) IN Philosophy SL (one year) IB Psychology SL (one year) or HL part 1 IB Social Anthropology SL (one year) or HL part 1	IB Topics in 20 <sup>th</sup> Century World History HL part 2 IB Business and Management SL (one year) IB Economics SL (one year) IB Geography SL (one year) IB ITGS SL (one year) IB Philosophy SL (one year) IB Psychology SL (one year) or HL part 2 IB Social Anthropology SL (one year) or HL part 2
<b>Group 4 Experiential Sciences</b>	Biology*	Chemistry*	IB Biology SL (one year) or HL part 1 IB Chemistry HL part 1 IB Computer Science SL part 1 or HL part 1 IB Design Technology SL part 1 IB Environmental Systems SL (one-year, double block) IB Physics SL part 1 IB Sports, Exercise & Health Science SL part 1	IB Biology SL (one year) or HL part 2 IB Chemistry HL part 2 IB Computer Science SL part 1 or HL part 2 IB Design Technology SL part 2 IB Environmental Sys. SL (one-year, double block) IB Physics SL part 2 IB Sports, Exercise & Health Science SL part 2
<b>Group 5 Mathematics</b>	Geometry* or Algebra II*	Algebra II* or IB Mathematics SL part 1(accelerated)	Algebra III IB Mathematics: Analysis & Approaches SL part 1 (Pre-Calculus) IB Mathematics: Analysis & Approaches SL part 2 / HL part 1 (BC Calc)	IB Math: Applications & Interpretation SL (one year) IB Mathematics: Analysis & Approaches SL part 2 (AB or BC Calculus) IB Mathematics: Analysis & Approaches HL part 2
<b>Group 6 and Electives</b>	Elective	Elective	IB Film SL part 1 or HL part 1 IB Music SL (one year) IB Theatre SL (one year) or Theatre HL part 1 IB Visual Arts HL part	IB Film SL part 2 or HL part 2 IB Music SL (one year) IB Theatre SL (one year) or Theatre HL part 2 IB Visual Arts SL (one year) or Visual Arts HL part 2
<b>Other</b>	Health/PE I	Health PE II	Elective/Generals Period/ TOK	Elective/Generals Period /TOK

Note: \*Intensified recommended. \*\* Intensified or AP recommended.

HL means Higher Level and requires a minimum of 240 hours of instruction. All HL courses are taught over two years. SL means Standard Level and requires a minimum of 150 hours of instruction. Full IB diploma students must take one subject from each subject group. A student may earn a bilingual diploma by taking two group 1 subjects. Students may take up to two SL exams at the end of their junior year. Specific schedules in Grades 11 and 12 will reflect each student's personal options.

## CREATIVITY, ACTIVITY, SERVICE

Students will identify and design experiences for each component of creativity, activity, and service (CAS) drawing from their own interests. Many experiences can be designed around curricular and extra-curricular programs. Each diploma candidate must participate in CAS experiences, during the last two years (including summer) of high school. A portion of these experiences must be services oriented. Service may be rendered individually or in groups. Information about service opportunities is available from the CAS Coordinator or the IB Office at W-L. The candidate must submit a proposal for these important experiences to the CAS Coordinator for approval prior to undertaking them.

## THEORY OF KNOWLEDGE

The interdisciplinary Theory of Knowledge (TOK) course is designed to provide coherence by exploring the nature of knowledge across disciplines, encouraging an appreciation of other perspectives.

## EXTENDED ESSAY

The extended essay (about 4,000 words) is defined as an in-depth study of a limited topic chosen from one of the six groups of the IB curriculum. It is designed to provide the candidate the opportunity to engage in independent research. Students are encouraged to pursue an area of special interest to them. During the junior year, the student decides on a topic and is assigned to a faculty supervisor. Students are expected to begin work on the project during the junior year and continue during the following summer under the supervision of a supervisor. While there is a set timeline for the extended essay components, the supervisor and student can work together to create a working timetable for the essay's completion, which takes into account the rising senior's academic load, college application process and other time constraints. The extended essay is submitted during the first semester of the senior year.

## INTERNATIONAL BACCALAUREATE COURSE OFFERINGS

### Group 1

#### *Language A*

<b>IB English Literature (HL)</b>	<b>Part I (31197) Part II (31198)</b>	<b>Two years, two credits (+1.0 quality point each year upon completion of both years)</b>
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**Grade(s): 11-12**

**Open to all Grade 11 and 12 W-L students who meet the prerequisites.**

*Prerequisite: English 10 Intensified or recommendation of the instructor*

The IB English Literature HL course is a two-year course of study, which meets the requirements of the IB program as well as those of the State of Virginia and the Arlington Public Schools. Within the context of the IB English Literature HL course, students focus on the study of literature according to the prescribed IB guidelines. At the same time, students develop their creative and critical thinking abilities, increasing the skills and knowledge necessary for contributing world citizens and life-long learners. *This course prepares students for the required High Level IB examination in English to be taken at the end of the senior year. Students not completing the Internal Assessment and/or not taking the exam will not earn the additional quality point (21197) (21198).* This IB course is weighted by applying an additional 1.0 quality point value assigned to the final grade upon completion of the course. Successful completion of this course and an additional Language A course qualifies the student for a Bilingual IB Diploma. *There is an SOL examination at the end of Part I. Passing the SOL test plus the course earns a verified credit.*



**IB English Language  
& Literature (SL)**

**Part I (31190)  
Part II (31191)**

**Two years, two credits  
(+1.0 quality point each year  
upon completion of both years)**

**Grade(s): 11-12**

**Open to all Grade 11 and 12 W-L students who meet the prerequisites.**

*Prerequisite: English 10 Intensified or recommendation of the instructor*

The IB English Language & Literature SL course is a two-year course of study, which meets the requirements of the IB program as well as those of the State of Virginia and the Arlington Public Schools. Within the context of the IB English Language & Literature SL course, students focus on the study of language and literature according to the prescribed IB guidelines. Students develop skills of textual analysis and the understanding that texts, both literary and non-literary, can relate to culturally determined reading practices, and are encouraged to question the meaning generated by language and texts. At the same time, students develop their creative and critical thinking abilities, increasing the skills and knowledge necessary for contributing world citizens and life-long learners. *This course prepares students for the required Standard Level IB examination in English to be taken at the end of the senior year. Students not completing the Internal Assessment and/or not taking the exam will not earn the additional quality point (21190) (21191).* This IB course is weighted by applying an additional 1.0 quality point value assigned to the final grade upon completion of the course. Successful completion of this course and an additional Language A course qualifies the student for a Bilingual IB Diploma. *There is an SOL examination at the end of Part I. Passing the SOL test plus the course earns a verified credit.*

**IB Spanish Language &  
Literature (HL)**

**Part I (35577)  
Part II (35587)**

**Two years, two credits  
(+1.0 quality point each year  
upon completion of both years)**

**Grade(s): 11-12**

**Open to all Grade 11 and 12 W-L students who meet the prerequisites.**

*Prerequisite: Spanish for Fluent Speakers III or AP Spanish and teacher recommendation*

The IB Spanish Language & Literature HL course is a two-year course of study which meets the requirements of the IB program. Within the context of the IB Spanish Language and Literature HL course, students focus on the study of language and literature according to the prescribed IB guidelines. At the same time, students further develop their creative and critical thinking abilities, increasing skills and knowledge necessary for them to be contributing world citizens and life-long learners. *This course prepares students for the required High Level IB examination in Spanish to be taken at the end of the senior year. Students not completing the Internal Assessment and/or not taking the exam will not earn the additional quality point (25577) (25587).* This IB course is weighted by applying an additional 1.0 quality point value assigned to the final grade upon completion of the course. Successful completion of this course and an additional Language A course qualifies the student for a Bilingual IB Diploma.

**Group 2**

***Language B***

**IB Arabic (SL)**

**Part I (35841)  
Part II (35845)**

**Two years, two credits  
(+1.0 quality point each year  
upon completion of both years)**

**Grade(s): 11-12**

**Open to all Grade 11 and 12 W-L students who meet the prerequisites.**

*Prerequisites: Arabic level IV and teacher recommendation*

The IB Arabic course is a two-year course of study which meets the requirements of the IB program. The focus of this course is on language acquisition and development of language skills. These language skills are developed through the study and use of a range of written and spoken material. Such material will extend from the everyday oral exchanges to literary texts. Thematic units include a variety of topics such as communication

and media, global issues, social relationships, cultural diversity, customs and traditions, health, leisure, science, and technology, as well as literary study. *This course prepares students for the required standard level IB examination in Arabic, which will be taken at the end of the 6th year of the language study. Students not completing the Internal Assessment and/or not taking the exam will not earn the additional quality point (25841) (25845).* This IB course is weighted by applying an additional 1.0 quality point value assigned to the final grade upon completion of the course.

<b>IB Mandarin Chinese ab initio (SL)</b>	<b>Part I (35815) Part II (35825)</b>	<b>Two years, two credits (+1.0 quality point each year upon completion of both years)</b>
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**Grade(s): 11-12**

**Open to all Grade 11 and 12 W-L students who meet the prerequisites.**

*Prerequisites: Chinese level IV and teacher recommendation*

The IB Mandarin Chinese course is a two-year language acquisition course of study which meets the requirements of the IB program. It is designed for students with limited previous exposure to the Mandarin. Students develop receptive, productive, and interactive skills while learning to communicate in Mandarin. Focus is on five themes: identities, experiences, human ingenuity, social organization and sharing the planet. *This course prepares students for the required standard level IB examination in Mandarin Chinese ab initio, which will be taken at the end of the 6<sup>th</sup> year of the language study. Students not completing the Internal Assessment and/or not taking the exam will not earn the additional quality point (25815) (25825).* This IB course is weighted by applying an additional 1.0 quality point value assigned to the final grade upon completion of the course.

<b>IB Mandarin Chinese B (SL)</b>	<b>Part I (35817) Part II (35827)</b>	<b>Two years, two credits (+1.0 quality point each year upon completion of both years)</b>
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**Grade(s): 11-12**

**Open to all Grade 11 and 12 W-L students who meet the prerequisites.**

*Prerequisites: Chinese level IV and teacher recommendation*

The IB Mandarin Chinese course is a two-year language acquisition course of study which meets the requirements of the IB program. It is designed for students with previous exposure to the target language. The focus of the course is on language acquisition and development of language skills. Students further develop their ability to communicate through the student of language, themes, and texts. Students learn to communicate in both familiar and unfamiliar contexts. Students taking this course hone their skills to a higher level than ab initio students as they delve deeper into the prescribed themes. *This course prepares students for the required standard level IB examination in Mandarin Chinese SL, which will be taken at the end of the 6<sup>th</sup> year of the language study. Students not completing the Internal Assessment and/or not taking the exam will not earn the additional quality point (25817) (25827).* This IB course is weighted by applying an additional 1.0 quality point value assigned to the final grade upon completion of the course.

<b>IB Mandarin Chinese (HL)</b>	<b>Part I (35816) Part II (35826)</b>	<b>Two years, two credits (+1.0 quality point each year upon completion of both years)</b>
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**Grade(s): 11-12**

**Open to all Grade 11 and 12 W-L students who meet the prerequisites.**

*Prerequisites: Chinese level IV and teacher recommendation*

The IB Mandarin Chinese course is a two-year course of study which meets the requirements of the IB program. The focus of this course is on language acquisition and development of language skills. These language skills are developed through the study and use of a range of written and spoken material. Such material will extend from the everyday oral exchanges to literary texts. Thematic units include a variety of topics such as communication and media, global issues, social relationships, cultural diversity, customs and traditions, health, leisure, science, and technology, as well as literary study. Both Mandarin/Chinese B SL and HL students learn to communicate in the target language in familiar and unfamiliar contexts. The distinction

between language B SL and HL can be seen in the level of competency the student is expected to develop in receptive, productive, and interactive skills. At HL the study of two literary works originally written in the target language is required and students are expected to extend the range and complexity of the language they use and understand to communicate. *This course prepares students for the required standard level IB examination in Mandarin Chinese, which will be taken at the end of the 6th year of the language study. Students not completing the Internal Assessment and/or not taking the exam will not earn the additional quality point (25816) (25826).* This IB course is weighted by applying an additional 1.0 quality point value assigned to the final grade upon completion of the course.

**IB French (SL)**

**Part I (35157)  
Part II (35167)**

**Two years, two credits  
(+1.0 quality point each year  
upon completion of both years)**

**Grade(s): 11-12**

**Open to all Grade 11 and 12 W-L students who meet the prerequisites.**

*Prerequisites: French level IV and teacher recommendation*

Students continue to develop proficiency in speaking, listening, reading, and writing, all with increasing accuracy. Grammatical structures are reviewed and refined, and emphasis is placed on vocabulary development and enrichment. Students draw their language and cultural knowledge from a variety of sources, including newspapers, magazines, recordings from radio and television programs and from literature (fiction and non-fiction), all built around the three major themes: change, groups, and leisure. *This course prepares students for the required Standard Level IB examination in French, which will be taken at the end of the 6<sup>th</sup> year of the language study. Students not completing the Internal Assessment and/or not taking the exam will not earn the additional quality point (25157) (25167).* This IB course is weighted by applying an additional 1.0 quality point value assigned to the final grade upon completion of the course.

**IB French B (HL)**

**Part I (35158)  
Part II (35168)**

**Two years, two credits  
(+1.0 quality point each year  
upon completion of both years)**

**Grade(s): 11-12**

**Open to all Grade 11 and 12 W-L students who meet the prerequisites.**

*Prerequisite: French Level IV and teacher recommendation*

At the end of the Language B course, Higher Level candidates are expected to demonstrate an ability to communicate clearly and effectively in a wide range of situations; show accuracy in the use and understanding of all essential oral and written forms of the language required in a range of styles and situations; understand a wide range of vocabulary and use a substantial part of it; select register and style which are generally appropriate to the situation, express ideas with general clarity and fluency; structure arguments in a clear, coherent and convincing way; understand and analyze fairly complex spoken and written material; assess subtleties of the language; and show an awareness of the culture (s) related to the language studied. *This course prepares students for the Higher Level IB examination in French to be taken at the end of the senior year. Students not completing the Internal Assessment and/or not taking the exam will not earn the additional quality point (25158), (25168).* This IB course is weighted by applying an additional 1.0 quality point value assigned to the final grade upon completion of the course.

**IB Latin (SL)**

**Part I (35357)  
Part II (35367)**

**Two years, two credits  
(+1.0 quality point each year  
upon completion of both years)**

**Grade(s): 11-12**

**Open to all Grade 11 and 12 W-L students who meet the prerequisites.**

*Prerequisites: Latin IV and teacher recommendation*

This two-year course of study builds on linguistic skills students have acquired during their previous years of study in Latin and focuses on texts written by classical authors in the original language. Candidates will be able to appreciate the broader aspects of classical texts (including the use of rhetorical devices, meter, vocabulary, and cultural context) and to make a personal response to them. Additionally, candidates will read

a wider range of literature in translation, and scholarly articles, as a complement to the study of texts in the original Latin, fostering the ability to collect and analyze relevant information and to deepen their understanding of classical civilization and its essential differences from and similarities to their own. The two-year course (syllabus active through spring 2022) will cover Ovid's *Metamorphoses* and the following authors and themes: Villains - Vergil, *Aeneid*, portions of book 10, Livy, *Ab Urbe Condita*, passages relating to Lucretia; Sallust, portions of *Bellum Catilinae*; History - Caesar, *De Bello Gallico*, portions of book VII. *This course prepares students for the required standard level IB examination in Latin, which will be taken at the end of the senior year. Students not completing the Internal Assessment and/or not taking the exam will not earn the additional quality point (25357) (25367).* This IB course is weighted by applying an additional 1.0 quality point value assigned to the final grade upon completion of the course.

**IB Latin (HL)**

**Part I (35362)  
Part II (35372)**

**Two years, two credits  
(+1.0 quality point each year  
upon completion of both years)**

**Grade(s): 11-12**

**Open to all Grade 11 and 12 W-L students who meet the prerequisites.**

*Prerequisites: Latin IV and teacher recommendation*

IB Latin HL is a two-year course of study, which meets the Group Two requirement of the IB program. This two-year course of study builds on linguistic skills students have acquired during their previous years of study in Latin and focuses on texts written by classical authors in the original language. Candidates will be able to appreciate the broader aspects of classical texts (including the use of rhetorical devices, meter, vocabulary, and cultural context) and to make a personal response to them. Additionally, candidates will read a wider range of literature in translation, and scholarly articles, as a complement to the study of texts in the original Latin, fostering the ability to collect and analyze relevant information and to deepen their understanding of classical civilization and its essential differences from and similarities to their own. The two-year course (syllabus active through spring 2022) will cover Ovid's *Metamorphoses* and the following authors and themes: **Villains** - Vergil, *Aeneid*, portions of book 10, Livy, *Ab Urbe Condita*, passages relating to Lucretia and Verginia; Sallust, portions of *Bellum Catilinae*; History - Caesar, *De Bello Gallico*, portions of book VII, Livy, *Ab Urbe Condita*, passages relating to the Battle of Lake Trasimene. This course prepares students for the required higher level IB examination in Latin, which will be taken at the end of the senior year. The HL Latin exam covers roughly 1/3 more material than the SL exam, and includes a short essay, written in English, that incorporates elements of the syllabus readings, external readings, and scholarly articles. *Students are also required to write an Internal Assessment in the form of a research dossier written in English on a topic of personal interest relating to the classical world (10-12 primary sources, 1,200-word limit).* *Students not completing the Internal Assessment and/or not taking the exam will not earn the additional quality point (25362) (25372).* This IB course is weighted by applying an additional 1.0 quality point value assigned to the final grade upon completion of the course.

**IB Spanish B (SL)**

**Part I (35575)  
Part II (35585)**

**Two years, two credits  
(+1.0 quality point each year  
upon completion of both years)**

**Grade(s): 11-12**

**Open to all Grade 11 and 12 W-L students who meet the prerequisites.**

*Prerequisites: Spanish level IV or Spanish for Fluent Speakers III and teacher recommendation*

Emphasis will be placed on developing speaking skills for communication as well as proficiency in listening, reading, and writing. A variety of resources, such as the media, theatre, and notable Hispanic professionals in the community, are drawn upon to enrich students' language acquisition. The three major themes: change, groups, and leisure are focal points for curriculum planning. *This course prepares students for the required Standard Level IB examination in Spanish, which will be taken at the end of the 6th year of the language study. Students not completing the Internal Assessment and/or not taking the exam will not earn the additional quality point (25575) (25585).* This IB course is weighted by applying an additional 1.0 quality point value assigned to the final grade upon completion of the course.

**IB Spanish B (HL)**

**Part I (35578)  
Part II (35588)**

**Two years, two credits  
(+1.0 quality point each year  
upon completion of both years)**

**Grade(s): 11-12**

**Open to all Grade 11 and 12 W-L students who meet the prerequisites.**

*Prerequisite: Spanish Level IV and teacher recommendation*

At the end of the Language B course, Higher Level candidates are expected to demonstrate an ability to communicate clearly and effectively in a wide range of situations; show accuracy in the use and understanding of all essential oral and written forms of the language required in a range of styles and situations; understand a wide range of vocabulary and use a substantial part of it; select register and style which are generally appropriate to the situation, express ideas with general clarity and fluency; structure arguments in a clear, coherent and convincing way; understand and analyze fairly complex spoken and written material; assess subtleties of the language; and show an awareness of the culture (s) related to the language studied. *This course prepares students for the Higher Level IB examination in Spanish to be taken at the end of the senior year. Students not completing the Internal Assessment and/or not taking the exam will not earn the additional quality point (25578) (25588).* This IB course is weighted by applying an additional 1.0 quality point value assigned to the final grade upon completion of the course.

### **Group 3**

#### ***Individuals and Societies***

**IB Business & Management  
(SL)**

**(36114)**

**Full year, one credit  
(+1.0 quality point)**

**Grade(s): 11 or 12**

**Open to all Grade 11 and 12 W-L students who meet the prerequisites.**

*Prerequisite: B average in previous math and science courses*

This course is designed to provide a rigorous and critical study of the ways in which individuals and groups interact in a dynamic business environment. It examines how business decisions are made, how these decisions make an impact on internal and external environments, and how these decisions foster international cooperation and responsible citizenship. The cooperative education method is available for this course. Students combine classroom instruction and supervise on-the-job training in an approved position with continuing supervision through the school year. *This course prepares students for the required Standard Level IB examination in Business and Management at the end of the course of study. Students not completing the Internal Assessment and/or not taking the exam will not earn the additional quality point (26114).* This course earns a Career and Technical/Fine Arts credit.

**IB Economics (SL)**

**(32802)**

**Full year, one credit  
(+1.0 quality point)**

**Grade(s): 11 or 12**

**Open to all Grade 11 and 12 W-L students who meet the prerequisites.**

*Prerequisite: Written recommendation of the previous social studies teacher or permission of the instructor*

Economics is a dynamic social science that looks at how and why resources are distributed the way they are. It combines elements of history, geography, psychology, sociology, politics, math, and science into an interesting and relevant study of how individuals, organizations, and nations organize themselves in pursuit of economic objectives. The focus of the class will be on applying theories to practical, real-world problems. Major topic areas include microeconomics, macroeconomics, international trade, and economic development. A number of the issues to be considered are: Should taxes be raised or lowered? Does a trade deficit matter? Is it possible to reduce unemployment? Can a future government afford to pay social security, and should it put a price tag on the environment? What are the arguments for the cancellation of developing countries' debt? Should the U. S. continue in NAFTA? *This course prepares students for the required Standard Level IB examination in Economics at the end of the course of study. Successful completion of this course will meet the Economics and*

*Personal Finance graduation requirement. Segments of this course will be taught online, thereby satisfying the graduation requirement for a virtual course. Students not completing the Internal Assessment and/or not taking the examination will not earn the additional quality point. (22802).* This IB course is weighted by applying an additional 1.0 quality point value assigned to the final grade upon completion of the course.

**IB Geography (SL)**

**(32210)**

**Full year, one credit  
(+1.0 quality point)**

**Grade(s): 11 or 12**

**Open to all Grade 11 and 12 W-L students who meet the prerequisites.**

*Prerequisites: Recommendation from the Social Studies Teacher or IB Coordinator*

This course is thematic in organization, human in focus, and comprehensive in coverage. At its core are the interrelated themes of population, resources and development including economic and quality of life principles. Accompanying the core is a series of options in physical geography, each stressing issue of human management and response. Strongly skill oriented and highlighting the distinctive use of mapping and similar techniques by geographers, the options seek to integrate the human and physical aspects of the subject through topographical maps, other maps and images. *This course prepares students for the required standard level IB examination in Geography at the end of the course study. Students not completing the Internal Assessment and/or not taking the exam will not earn the additional quality point (22210).* This IB course is weighted by applying an additional 1.0 quality point value assigned to the final grade upon completion of the course.

**IB History of the Americas (HL) Part I (32385)**

**Full year, one credit  
(+1.0 quality point upon  
completion of both years & HL  
IB examination)**

**Grade: 11**

**Open to all Grade 11 W-L students who meet the prerequisites.**

*Prerequisites: World History (Intensified recommended) & Completion of AP VA/US Government*

History of the Americas provides students with an in-depth thematic study of the Americas. This course introduces students to history as a discipline, and helps students understand the processes of historical inquiry. History of the Americas is a detailed study of the political, social, economic, and cultural history of the nations of the Americas, with emphasis placed on the history of the United States. Students are introduced to history as part science in its approach to evidence and part art in recording and communicating its findings. History is the attempt made by professional historians to record and reconstruct the past through the study of evidence derived from a variety of sources. It is concerned with individuals and societies in the widest context: political, social, economic, and cultural. Students understand the nature of history and are able to manipulate primary sources to interpret and make sense of the historical record. *This course, along with Topics in Twentieth Century World History, satisfies the Virginia State requirement in American History and prepares students for the required High Level IB examination in History taken at the end of the senior year. Students not completing the Internal Assessment and/or not taking the exam will not earn the additional quality point (22385).* This IB course is weighted by applying an additional 1.0 quality point value assigned to the final grade upon completion of the course.

Students choosing not to continue to Topics in Twentieth Century World History, who have passed the History of the Americas course and the VA/US SOL exam will receive credit for VA/US History; however, they will forfeit the quality point and their transcript will be changed to read US and Virginia History.

**IB Topics in 20<sup>th</sup> Century World History (HL)  
Part II (32386)**

**Full year, one credit  
(+1.0 quality point upon  
completion of both years & HL  
IB examination)**

**Grade: 12**

**Open to all Grade 12 W-L students who meet the prerequisites.**

*Prerequisite: IB History of the Americas (HL) Part I*

This course gives students an opportunity to study selected topics in Twentieth Century World History while concentrating on the History of the Americas as the regional emphasis. Major events and issues of Twentieth

Century history as they happened and/or influenced the Americas are explored through the study of individual case histories. *This course, along with History of the Americas, satisfies the Virginia State requirement in American History and prepares students for the required High Level IB examination in history to be taken at the end of the senior year. Students not completing the Internal Assessment and/or not taking the exam will not earn the additional quality point (22386).* This IB course is weighted by applying an additional 1.0 quality point value assigned to the final grade upon completion of the course.

**IB Information Technology in a Global Society (SL) (36623)**

**Full year, one credit  
(+1.0 quality point)**

**Grade(s): 11 or 12**

**Open to all Grade 11 and 12 W-L students who meet the prerequisites.**

*Prerequisite: None*

The Diploma Programme Information Technology in a Global Society (ITGS) course is the study and evaluation of the impact of information technology (IT) on individuals and society. It explores the advantages and disadvantages of the use of digitized information at the local and global level. ITGS provides a framework for the student to make informed judgments and decisions about the use of IT. *This course prepares students for the required Standard Level IB examination in ITGS at the end of the course of study. Students not completing the Internal Assessment and/or not taking the exam will not earn the additional quality point (26616).* This IB course is weighted by applying an additional 1.0 quality point value assigned to the final grade upon completion of the course.

**IB Philosophy (SL) (32600)**

**Full year, one credit  
(+1.0 quality point)**

**Grade(s): 11 or 12**

**Open to all Grade 11 and 12 W-L students who meet the prerequisites.**

*Prerequisite: Written recommendation of the previous social studies teacher or permission of the instructor*

The IB Philosophy course is a one-year course of study which meets the requirements of the IB program. Students will investigate fundamental questions about human existence: What am I? What am I here for? What is happiness? What is the meaning of life? Does life have a meaning? Do human beings have a responsibility towards the environment? Should we always obey the law, even if we believe it is a bad law? Students will be expected to show their understanding of philosophical statements and texts, to develop an argumentative strategy, to achieve sensitivity to the plurality of philosophical traditions, and to use concise, appropriate and coherent language in such a way that the intended meaning is clearly conveyed. *This course prepares the students for the required Standard Level IB examination in Philosophy at the end of the course of study. Students not completing the Internal Assessment and/or not taking the exam will not earn the additional quality point (22600).* This IB course is weighted by applying an additional 1.0 quality point value assigned to the final grade upon completion of the course

**IB Psychology (SL) (32901)**

**Full year, one credit  
(+1.0 quality point)**

**Grade(s): 11 or 12**

**Open to all Grade 11 and 12 W-L students who meet the prerequisites.**

*Prerequisite: Written recommendation of the previous social studies teacher or permission of the instructor*

This IB Psychology course is a one-year course of study which meets the requirements of the IB program. After studying the IB psychology program at Standard Level, students will be able to describe, compare, contrast and evaluate the key ideas of the three major perspectives of psychology: biological, cognitive, and the learning perspective. Students are required to complete one scientific experiment which leads to a research paper of 2000 -3000 words. Students will develop critical thinking skills and gain knowledge necessary for contributing world citizens and lifelong learners. *This course prepares students for the required standard level examination in Psychology at the end of the course of study. Students not completing the Internal Assessment and/or not taking the exam will not earn the additional quality point (22901).* This IB course is weighted by applying an additional 1.0 quality point value assigned to the final grade upon completion of the course.





## Group 4

### *Experimental Sciences*

**IB Biology (SL) (34378) Full year, one credit (+1.0 quality point)**

**Grade(s): 11 or 12**

**Open to all Grade 11 and 12 W-L students who meet the prerequisites.**

*Prerequisite: Biology (24310) and Chemistry*

This course will include a study of cells, molecular biology, genetics, ecology, evolution and biodiversity, and human physiology. In addition to this, SL students' study two out of a choice of seven option topics. Emphasis will be placed on critical thinking and understanding of scientific theories as well as experimentation. *This course prepares students for the required Standard Level IB examination in Biology to be taken at the end of the course of study. Students not completing the Internal Assessment and/or not taking the exam will not earn the additional quality point (24378).* This IB course is weighted by applying 1.0 quality point value assigned to the final grade upon completion of the course.

**IB Biology (HL) Part I (34376) Two years, two credits (+1.0 quality point each year upon completion of both years)**  
**Laboratory Class Part II (34377)**  
**Grade(s): 11- 12**

**Open to all Grade 11 and 12 W-L students who meet the prerequisites.**

*Prerequisite: Biology I and Chemistry*

IB Biology HL is an investigation-based science class that studies life at its varied levels, with an emphasis on written communications. Living systems are explored from the molecular level to the global level, including the biochemical processes for life, cellular structure and function, homeostasis, genetics and genetic engineering, evolution, taxonomy and comparative anatomy, reproduction and development, environment and ecosystems, population studies and the structure and function of human systems. Labs and an independent research project are required for this class. Using the first year as its foundation, the second year provides a greater in-depth study and application of the principles presented in Part I. Living systems continue to be explored from the molecular level to the global level. Investigations for the second year of the two-year course cover the biochemical processes for life, homeostasis, plant biology, evolution, taxonomy and comparative anatomy, reproduction and development, and the structure and function of human systems. Formal lab reports, to include statistical analysis and independent research, are required for this course. *This course prepares students for the required Higher Level IB examination in Biology to be taken at the end of the senior year. Students not completing the Internal Assessment and/or not taking the exam will not earn the additional quality point (24376) (24377).* This IB course is weighted by applying an additional 1.0 quality point value assigned to the final grade upon completion of the course and exam.

**IB Chemistry (HL) Part I (34476) Two years, two credits (+1.0 quality point each year upon completion of both years)**  
**Laboratory Class Part II (34477)**  
**Grade(s): 11- 12**

**Open to all Grade 11 and 12 W-L students who meet the prerequisites.**

*Prerequisites: Grade of B or better in regular or Intensified Chemistry; Grade of B or better in Algebra II or equivalent and/or permission of the instructor. Completion of the summer assignment by the beginning of Part I.*

Chemistry, the central science, is an experimental science that combines academic study with the acquisition of practical and investigational skills. This course is a two-year course of study which meets the aims of the IB program. It is designed for highly disciplined and curious students to provide them with ample opportunities to develop experimental skills and to analyze and evaluate scientific information. Topics of study include atomic theory, periodicity, bonding, energetics, kinetics, equilibrium, acids and bases, electrochemistry, organic chemistry, quantitative chemistry, and data processing. This course will include two additional topics such as Medicine and Drugs, Analytical Chemistry, Environmental Chemistry, Industrial Chemistry, Human Biochemistry, Food Chemistry or Further Organic Chemistry. Students are required to carry out an interdisciplinary Group 4 Project and an independent research project. During Part 2 of IB Chemistry (HL), students will study additional higher-level material on each of the chemistry topics and complete the International Baccalaureate Organization requirements. *The two parts of this course prepare the student for*

*the required High Level IB examination in Chemistry, which is taken at the end of the senior year. Students not completing the Internal Assessment and/or not taking the exam will not earn the additional quality point (24476) (24477). This IB course is weighted by applying an additional 1.0 quality point value assigned to the final grade upon completion of the course and the IB Chemistry exam. Students not taking the exam will not earn the additional quality point.*

**IB Computer Science (SL)**

**Part I (36540)  
Part II (36550)**

**Two years, two credits  
(+1.0 quality point each year  
upon completion of both years)**

**Grade(s): 11- 12**

**Open to all Grade 11 and 12 W-L students who meet the prerequisites.**

*Prerequisite: Completion of Algebra II with a grade of B or better before the junior year*

IB Computer Science is a two-year course designed to cover the beginning college level curriculum (CSI and CS2). Students will develop an understanding of the fundamental concepts of computational thinking as well as knowledge of how computers and other digital devices operate. *This course prepares students for the required Standard Level IB examination in Computer Science to be taken at the end of the senior year. Students not completing the Internal Assessment and/or not taking the exam will not earn the additional quality point (26540) (26550). This IB course is weighted by applying an additional 1.0 quality point value assigned to the final grade upon completion of the two-year course of study. This course earns a Career and Technical/Fine Arts credit. Segments of this course will be taught online, thereby satisfying the graduation requirement for a virtual course.*

**IB Computer Science (HL)**

**Part I (36560)  
Part II (36570)**

**Two years, two credits  
(+1.0 quality point each year  
upon completion of both years)**

**Grade(s): 11- 12**

**Open to all Grade 11 and 12 W-L students who meet the prerequisites.**

*Prerequisite: Completion of Algebra II with a grade of B or better before the junior year*

IB Computer Science is a two-year course designed to cover the beginning college level curriculum (CSI and CS2) recommended by the Association for Computer Machinery (ACM) and other societies in the American Federation of Information Processing Societies (AFIPS). The computer programming language Java is used to explore the curriculum. *This course prepares students for the required High Level IB examination in Computer Science to be taken at the end of the senior year. Students not completing the Internal Assessment and/or not taking the exam will not earn the additional quality point (26560) (26570). This IB course is weighted by applying an additional 1.0 quality point value assigned to the final grade upon completion of the two-year course of study. This course earns a Career and Technical/Fine Arts credit. Segments of this course will be taught online, thereby satisfying the graduation requirement for a virtual course.*

**IB Design Technology (SL)**

**Part I (38496)  
Part II (38497)**

**Two years, two credits  
(+1.0 quality point each year  
upon completion of both years)**

**Grade(s): 11- 12**

**Open to all Grade 11 and 12 W-L students who meet the prerequisites.**

*Prerequisite: None*

To design can be defined as “to conceive a mental plan for something.” Design consists of gathering information about the world around us, processing that information, and developing a plan to modify what is already there or introducing something new. The designer must be knowledgeable on material environment and also have an understanding of the political, social, and economic impact, which affect people’s priorities. Design technology is based on a model of learning which incorporates knowledge, skills, and design principles in problem solving contexts, while at the same time, maximizing the use of local and readily available resources. It assumes no previous experience in either design technology or designing. The design cycle is at the core of the course, and it is expected that students will use this process in the practical investigative work as well as theory. Students will be required to complete a design project, practical activities, and a logbook. *This course prepares students for the required standard level IB examination in Design Technology. Students not completing the Internal Assessment and/or not taking the exam will not earn the additional quality point (28496) (28497). This IB course is weighted by applying an additional 1.0 quality point value assigned to the final grade upon completion of the two-year course of study.*

**IB Environmental Systems and Societies (SL)** (34275)

**Full year, double block period,  
two credits (+1.0 quality point)**

**Laboratory Course**

**Grade(s): 11 or 12**

**Open to all Grade 11 and 12 W-L students who meet the prerequisites.**

*Prerequisites: B average in previous science courses, teacher recommendation and permission of the instructor*

The Environmental Systems and Societies course is a transdisciplinary (groups 3 and 4) Standard Level course. The purpose of this course is to provide students with a coherent perspective of the interrelationships between environmental systems and societies. Topics of study include systems and models, the ecosystem, human population, carrying capacity and resource use, conservation and biodiversity, pollution management, the issue of global warming, and environmental value systems. This course seeks to promote an understanding of environmental processes at a variety of scales, from local to global, provide a body of knowledge, methodologies and skills that can be used in the analysis of environmental issues at local and global levels, and enable students to apply the knowledge, methodologies and skills gained. Because the course is transdisciplinary it offers students requirements for both hexagon groups 3 and 4, leaving students the opportunity to study another subject from any group of hexagons including another subject from groups 3 or 4. *This course prepares students for the required Standard Level IB examination in Environmental Systems and Societies, which is taken at the end of the course of study. Students not completing the Internal Assessment and/or not taking the exam will not earn the additional quality point (24275).* This IB course is weighted by applying an additional 1.0 quality point value assigned to the final grade upon completion of the course.

**IB Physics (SL)**

**Part I (34576)**

**Two years, two credits**

**Laboratory Class**

**Part II (34577)**

**(+1.0 quality point each year**

**Grade(s): 11- 12**

**upon completion of both years)**

**Open to all Grade 11 and 12 W-L students who meet the prerequisites.**

*Prerequisite: Algebra II with a grade of B or better, or Algebra II, Intensified with a grade of C or better*

Physics, the fundamental science on which all the other sciences are based, is designed to enable students to recognize the mathematical expression of the physical world around them - physics is the mathematical description of the universe. This course is a two-year course of study that meets the aims of the IBO program. Through the use of all mathematics studied throughout their school careers, students investigate such core topics as classical mechanics, thermal physics, electricity and magnetism, wave and simple harmonic motion (including sound and light), atomic and nuclear physics, and relativity. The course will conclude with two optional topics, wave phenomena and astrophysics, which will require considerable use of the core topics to complete. IB Physics emphasizes the use of laboratory experiences, the collection and interpretation of data, and their presentation, to develop mathematical models of physical systems. Students are required to carry out an interdisciplinary Group 4 Project in conjunction with other IB Sciences classes at W-L. IB Physics students will take a comprehensive exam at the end of Year 1 over the core topics completed. *In May of Year 2, students will take the required Standard Level IB examination in Physics given to students worldwide. Students not completing the Internal Assessment and/or not taking the exam will not earn the additional quality point (24576) (24577).* This course is weighted by applying an additional 1.0 quality point value assigned to the final grade upon completion of the course.

**IB Sports, Exercise & Health Science (SL)**

**Part I (38055)**

**Two years, two credits**

**Part II (38057)**

**(+1.0 quality point each year**

**Grade(s): 11- 12**

**upon completion of both years)**

**Open to all Grade 11 and 12 W-L students who meet the prerequisites.**

*Prerequisites: B average in previous science courses and/or teacher recommendation*

IB Sports, Exercise & Health Science SL incorporates the traditional disciplines of anatomy and physiology, biomechanics, psychology, and nutrition, which are studied in the context of sport, exercise and health. Students will cover a range of core and option topics and carry out practical (experimental) investigations in both laboratory and field settings. This will provide an opportunity to acquire the knowledge and understanding necessary to apply scientific principles and critically analyze human performance. Where relevant, the course

will address issues of internationalism and ethics by considering sport, exercise, and health relative to the individual and in a global context. *This course prepares students for the required Standard Level IB examination in Sports, Exercise, and Health Science, which is taken at the end of the course of study. Students not completing the Internal Assessment and/or not taking the exam will not earn the additional quality point (28055) (28057).* This IB course is weighted by applying an additional 1.0 quality point value assigned to the grade upon completion of the course.

## Group 5

### *Mathematics*

**IB Mathematics: Applications and Interpretation (SL)** (33170)

**Full year, one credit (+1.0 quality point)**

**Societies (SL)**

**Grade(s): 11 or 12**

**Open to all Grade 11 and 12 W-L students who meet the prerequisites.**

*Prerequisites: Algebra III and teacher recommendation and a grade point average of B or better in previous math courses*

IB Math: Applications & Interpretation is a course that emphasizes the meaning of mathematics in context. This course is for students who are interested in developing their mathematics for describing our world and solving practical problems. Student's study and investigate the following mathematical topics: number theory and algebra, geometry and trigonometry, statistics and probability, functions, and introductory differential calculus. Topics are connected using key concepts. As required by IB, each student will complete an internal assessment consisting of an individual exploration. *This course will prepare the student for the required Standard Level IB examination in Applications and Interpretations. Students not completing the Internal Assessment and/or not taking the exam will not earn the additional quality point (23170).* This IB course is weighted by applying an additional 1.0 quality point value assigned to the final grade upon completion of the course.

**IB Mathematics: Analysis and Approaches (SL)** Part I (33171)  
Part II (33172)

**Full year, one credit (+1.0 quality point upon completion of both years)**

**Grade(s): 11 or 12**

**Open to all Grade 10 and 11 W-L students who meet the prerequisites.**

*Prerequisites: Algebra II, Intensified or teacher recommendation and a B cumulative average or better in previous math courses*

IB Mathematics: Analysis and Approaches (SL) is a course designed to allow students to study and investigate the following mathematical topics: number theory and related topics, algebra, geometry and trigonometry topics, vectors, matrices, probability, statistics, and functions. The course content in year two includes a study of the concepts of calculus of one variable and will cover the AP Calculus objectives as well as review for the IB Mathematics: Analysis & Approaches exam. Students must complete IB Mathematics: Analysis and Approaches Part I with a C or better to be eligible for part II. As required by the IB program an internal assessment will be completed on year 2 by each student. This internal assessment is an individual mathematical exploration. *Students not completing the Internal Assessment and/or taking the exam will not earn the additional quality point (23171) (23172).* This IB course is weighted by applying a 1.0 quality value assigned to the final grade upon completion of the course.

**IB Mathematics: Analysis & Approaches (HL)**                      **Part I (33181)**                      **Two years, two credits**  
**Grade(s): 11 and 12**                      **Part II (33182)**                      **(+1.0 quality point upon**  
**Open to all Grade 11 and 12 W-L students who meet the prerequisites.**                      **completion of both years)**

*Prerequisites: Successful completion of Intensified Pre-Calculus/IB Mathematics: Analysis & Approaches Standard Level Part I with a B or better; or teacher recommendation; and a B cumulative average or better in previous math courses.*

IB Mathematics: Analysis & Approaches HL is a rigorous, two-year course of study. The first year encompasses calculus topics, including Functions, Graph Limits & Continuity, Differential Calculus, Differential Applications, Integral Calculus, Integral Applications, and Sequences & Series. The topics assume thorough background knowledge in algebra, axiomatic geometry, trigonometry, and analytic geometry. The second year of IB Mathematics: Analysis and Approaches HL includes topics such as Vectors, Transformations, Complex Numbers, Probability & Statistics, Functions & Equations, Circular Functions & Trigonometry and Vector Geometry. IB Mathematics: Analysis & Approaches HL requires college-level performance and work habits. A five-hour external IB examination is given at the end of the senior year that accounts for eighty percent of the grade. As required by the IB program an internal assessment will be completed in part 2 by each student. This internal assessment is an individual mathematical exploration and will account for twenty percent of the IB exam grade. *Students not completing the Internal Assessment and/or taking the exam will not earn the additional quality point (23181) (23182).* This IB course is weighted by applying a 1.0 quality value assigned to the final grade upon completion of the course.

## Group 6

### *Arts*

**IB Film (SL)**                                      **Part I (31144)**                                      **Two years, two credits**  
**Grade(s): 11 and 12**                                      **Part II (31145)**                                      **(+1.0 quality point upon**  
**Open to all Grade 11 and 12 W-L students who meet the prerequisites.**                                      **completion of both years)**

*Prerequisite: Written recommendation of the previous English teacher or permission of the instructor*

IB Film is a two-year developmental course of study that meets the requirements of the IB program. This course aims to develop students' skills so that they become adept in the clarity of understanding, critical thinking, reflective analysis, effective involvement, and imaginative synthesis that is achieved through practical engagement in the art and craft of film. Through the study and analysis of film texts and exercises in filmmaking, this course provides students the opportunity to explore film history and make cross-curricular connections to the Theory of Knowledge core principles, as well as to develop and to creatively apply a range of filmmaking skills and techniques. IB Film students also develop throughout the course the ability to understand and to engage in the processes of interpreting and communicating in film language, while exploring film through personal, theoretical, and cultural contexts furthering their understanding of how these contexts inform and shape filmmaking practice and reception. Students will be assessed externally by the IBO and internally by the instructor. Each account for fifty percent of the overall IB exam score. *This course prepares students for the required Standard Level assessment at the end of the two-year course of study. Students not completing the Internal Assessment and/or not taking the exam will not earn the additional quality point (21144) (21145).* This IB course is weighted by applying an additional 1.0 quality point value assigned to the final grade upon completion of the course. This course earns a Career and Technical/Fine Arts credit.

**IB Film (HL)****Part I (31147)  
Part II (31149)****Two years, two credits  
(+1.0 quality point upon  
completion of both years)****Grade(s): 11 and 12****Open to all Grade 11 and 12 W-L students who meet the prerequisites.***Prerequisite: Written recommendation of the previous English teacher or permission of the instructor*

IB Film is a two-year developmental course of study that meets the requirements of the IB program. IV Film aims to develop students' skills so that they become adept in both interpreting and making film texts. Through the study and analysis of film texts and exercises in filmmaking, this course explores film history, theory, and socio-economic background. All film students must research and write an Independent Study, do a Practical Project, and give an oral presentation based on the close analysis of a five-minute extract from a film prescribed by the IBO. Part two of the course enables students to more fully develop creative skills, theoretical understandings and textual analysis. Part two extends on the development of the folio film. Students will be assessed externally by the IBO and internally by the instructor. Each account for fifty percent of the overall IB exam score. *This course prepares students for the required Higher-Level assessment at the of the two-year course of study. Students not completing the Internal Assessment and/or not taking the exam will not earn the additional quality point (21147) (21149).* This IB course is weighted by applying an additional 1.0 quality point value assigned to the final grade upon completion of the course. This course earns a Career and Technical/Fine Arts credit.

**IB Music (SL)****(39227)****Full year, one credit  
(+1.0 quality point)****Grade(s): 11 or 12****Open to all Grade 11 and 12 W-L students who meet the prerequisites.***Prerequisite: One year of any high school music course and/or permission of the instructor*

Students must have a good working knowledge of music fundamentals and be able to read music in at least one clef to enroll in the class. They will study music of many cultures and time periods to understand fully its musical construction and societal connections. Students will compose and/or perform significant works. Supplemental private lessons are recommended but not required. Students will use M.I.D.I. computer workstations to facilitate their composition skills. *A culminating performance or demonstration of the students' compositions is required in addition to the written exam. Students not completing the Internal Assessment and/or not taking the exam will not earn the additional quality point (29227).* The IB course is weighted by applying an additional 1.0 quality point value assigned to the final grade upon completion of the course. This course earns one Fine Arts credit.

**IB Theatre Art (SL)****(39141)****Full year, one credit  
(+1.0 quality point)****Grade(s): 11 or 12****Open to all Grade 11 and 12 W-L students who meet the prerequisites.***Prerequisite: Successful completion of any drama course (may include tech theatre) with C or better; and/or recommendation of the instructor*

The aims of the program in Theatre Arts are to help students understand the nature of the theatre, to understand it by making it as well as by studying it, to understand it not only with their minds but with their senses, their bodies, and their emotions, to understand the forms it takes in cultures other than their own and through this understanding better to understand themselves, their society and their world. The syllabus at Standard Level consists of four compulsory parts: Performance Skills, World Theatre Studies, Practical Play Analysis and Theatre Production. This course prepares students for the required Standard Level IB Assessment at the end of the course of study and consists of a research paper of 1750 words and an oral presentation (15 to 20 minutes' maximum) and a Portfolio of approximately 3000 words reflecting on the candidate's learning and development in Theatre Arts. *Students not completing the Internal Assessment and/or not taking the exam will not earn the additional quality point (29141).* This course is weighted by applying an additional 1.0 quality value assigned to the final grade upon completion of the course. This course earns one Fine Arts credit.

**IB Theatre Art (HL)****Part I (31942)  
Part II (39143)****Two years, two credits  
(+1.0 quality point each year  
upon completion of both years)****Grade(s): 11 and 12****Open to all Grade 11 and 12 W-L students who meet the prerequisites.**

*Prerequisite: Successful completion of any drama course (may include tech theatre) with a C or better; and/or recommendation of the instructor*

The aims of the program in Theatre Arts are to help students understand the nature of the theatre, to understand it by making it as well as by studying it, to understand it not only with their minds but with their senses, their bodies, and their emotions, to understand the forms it takes in cultures other than their own and through this understanding better to understand themselves, their society and their world. The syllabus at the Higher Level consists of five compulsory parts: Performance Skills, World Theatre Studies, Practical Play Analysis, Theatre Production, and an Individual Project. This course prepares students for the required High Level IB assessment at the end of the two-year course of study and consists of a research paper of 2500 words, an oral presentation (20-30 minutes maximum) on a practical play analysis, a portfolio of approximately 4500 words reflecting on the candidates learning and development in the theatre and an Individual Project. *Students not completing the Internal Assessment and/or not taking the exam will not earn the additional quality point (29142) (29143).* This course is weighted by applying an additional 1.0 quality value assigned to the final grade upon completion of the course. This course earns 2 Fine Arts credits.

**IB Visual Arts (SL)****(39144)****Full year, one credit  
(+1.0 quality point)****Grade(s): 11 or 12****Open to all Grade 11 and 12 W-L students who meet the prerequisites.**

*Prerequisite: Successful completion of Art II and permission of the instructor*

Students engage in advanced research of art processes, aesthetic issues, art criticism, and art history and culture. They exhibit in verbal, written and graphic forms how their research has led them to an understanding of selected topics. A research workbook which evidences critical research in an area agreed upon by the teacher and the student is required. *There is an internal assessment; in addition, the student must prepare an exhibition to be assessed externally. Students not completing the Internal Assessment and/or not taking the exam will not earn the additional quality point (29144).* This IB course is weighted by applying an additional 1.0 quality value assigned to the final grade upon completion of the course. This course earns a fine arts credit.

**IB Visual Arts (HL)****Part I (39146)  
Part II (39148)****Two years, two credits  
(+1.0 quality point each year  
upon completion of both years)****Grade(s): 11 and 12****Open to all Grade 11 and 12 W-L students who meet the prerequisites.**

*Prerequisites: Permission of the instructor upon evaluation and examination of a body of work which demonstrates ability commensurate with IB expectations*

This course is a 240-hour (two years or equivalent) course of study which includes as one-half of its requirement, maintaining a research workbook which evidences critical research in an area agreed upon by the teacher and the student. The other half of the course is the production in studio of a body of work using various mediums and techniques. At the culmination of this 240-hour course of study, a display or exhibit is required. Students wishing continuity in their IB Art program need to understand that this is a two-year commitment. The sketch book/journal and studio art are interrelated in this course. *There is an internal assessment as well as a required externally assessed exhibition of work. Students who do not exhibit will not earn the additional quality point (29146) (29148).* This IB course is weighted by applying an additional 1.0 quality value assigned to the final grade upon completion of the course. This course earns Fine Arts credit.

## ADDITIONAL IB DIPLOMA REQUIREMENT

<b>IB Core/Theory of Knowledge</b>	Part 1 (22604) Part 2 (32604)	<b>Two years, two credits (+1.0 quality point for part 2 only upon completion of both years)</b>
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### **Grade(s): 11 and 12**

#### **Open only to Grade 11 & 12 W-L full IB diploma candidates**

The IB Core/TOK course is a two-year course. Students complete part 1 in 11th grade and part 2 in 12th grade. The aim of the course is to support students as they move through the IB diploma program while also providing time and direction for the IB Core requirements (CAS, EE, & TOK). The curriculum of the course focuses on helping students to develop the skills needed to be successful in these challenging IB classes while also supporting the students with core components. There is a focus on IB's Approaches to Learning (ATL) skills. Approximately one semester in 11th grade and one semester in 12th grade are dedicated to delivering the Theory of Knowledge (TOK) curriculum. TOK is the key element in the educational philosophy of the IB. Its purpose is to stimulate critical reflection upon the knowledge and experiences acquired both inside and outside the classroom, to evaluate the bases of knowledge and experience, and to develop a personal mode of thought based on critical examination of evidence and argument. Official IB assessments for Theory of Knowledge include the creation of an exhibition (internally assessed) and an essay based on a prescribed topic (externally assessed). Course grades are determined by the teacher and include a variety of assessments. Students not completing the Internal Assessment and/or External Assessment will not earn the additional quality point in the second year (22605).

<b>Theory of Knowledge</b>	<b>(32605)</b>	<b>Full year, one credit, +1.0 quality point</b>
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### **Grade(s): 12**

#### **Open only to Grade 12 W-L full IB diploma candidates**

The Theory of Knowledge (TOK) course is the key element in the educational philosophy of the IB. Its purpose is to stimulate critical reflection upon the knowledge and experiences acquired both inside and outside the classroom, to evaluate the bases of knowledge and experience, and to develop a personal mode of thought based on critical examination of evidence and argument. Official IB assessments for Theory of Knowledge include a presentation (internally assessed) and an essay based on a prescribed topic (externally assessed). Course grades are determined by the teacher and include a variety of internal assessments. *Students not completing the Internal Assessment and/or External Assessment will not earn the additional quality point (22605).*



## **ADDITIONAL Non-AP COURSES OFFERED AT WASHINGTON-LIBERTY**

### **African American Literature (21064)**

**Full year, one credit**

**Grade(s): 10-12**

The African American Literature course will be an introduction to some of the great work of African American authors in a variety of genres including poetry, fiction, drama, and autobiography. This course will emphasize the importance of African American Literature in today's society.

### **Geospatial Tools and Techniques (98423W)**

**Full year, one credit, + 1.0 quality point**

**Grade(s): 11 and 12**

*Prerequisite: none*

This course is part of the James Madison University Geospatial Semester program and provides students with a research experience applying geospatial technologies, such as geographic information systems (GIS), global positions systems (GPS), and remote sensing to a problem of interest. This course will allow students to design and execute an extended research project. Students will work to identify a problem of interest, define the stakeholders for the problem, evaluate the data and geospatial tools needed to solve the problem, analyze the data, and propose and communicate possible solutions to stakeholders.

- **College credit:** *This course is dual enrolled at James Madison University (JMU) as Geog 161 for a total of 6 credits at JMU pending successful completion of the course. The content of this course is taught at the college level. Please consult with your counselor for more details.*

### **Earth Science II: Oceanography (24220)**

**Full Year, one credit**

**Grade(s):11, 12**

*Prerequisite: Earth Science and one additional laboratory science*

This course introduces students to the major topic areas of Oceanography. This course describes the role of the oceans on our earth, why they are important to us, and what influence the oceans have on the history of civilization. Oceanography deals with geography a biological oceanography and covers such topics as the geology and geography of ocean basis, physical properties of sea water, marine chemistry, marine biology, salinity and density circulation in the oceans, waves, tides, and oceanographic instruments, tolls, and methods. The course is designed to be an in-depth treatment of oceanography concepts.

### **Pre-Calculus, Dual Enrollment (93162W)**

**Full year, one credit, + 1.0 quality point**

**Grade(s): 9-12**

*Prerequisite(s): Qualifying score on the VPT (pass all 9 units, up to Algebra II content)*

NOVA MTH 161 presents college algebra, matrices, and algebraic, exponential, and logarithmic functions. NOVA MTH 162 presents trigonometry, analytic geometry, and sequences and series. This course prepares the student for MTH 263/264 Calculus I/II.

- **College Credit:** *This course may be dual enrolled at Northern Virginia Community College. The NOVA entrance requirements must be met before registering. Please consult with your school counselor for more details.*

## **ADDITIONAL Non-AP COURSES OFFERED AT YORKTOWN**

### **Chemistry, Principles of (24400) Laboratory course**

**Full year, one credit**

**Grade(s): 10-12**

*Prerequisite: None*

The primary goal is to acquaint students with those aspects of chemistry relevant to everyday life. Classroom activities and laboratory experiments are emphasized. *There is an end-of-course SOL Examination. Passing the SOL test and the course earns a verified credit.*

### **English 9 (21130) & World History & Geography: 1500 AD to the Present (22216)**

**Full year, two credits, two periods**

*Prerequisite: None*

This course offers students the opportunity to engage in an interactive and intensified study of English 9 and World History and Geography: 1500 AD to Present. Students participate in discussions, seminars, simulations, and research tied to themes in both subject areas. The class enables students to engage their peers and teachers of the course in a collaborative learning environment. *Passing the Standard of Learning assessment in World History II and the course earns a verified credit.*

### **English 9 (21132), Intensified & World History (22343), Intensified**

**Full year, two periods, two credits (one credit in English & one credit in World History)**

*Prerequisite: High academic achievement in both English and Social Studies. Teacher and/or counselor recommendation.*

This course is designed for the needs of the gifted and advanced students, and requires extensive reading and writing, intensive grammar and vocabulary, rigorous study of fiction, nonfiction, drama and poetry, and high-level performance in all strands of English language arts beyond what is required in English 9. Using an interdisciplinary approach, English and World History courses are taught together. Through the study of various genres of literature and nonfiction, students explore World History's thematic concepts of identity, culture, and conflict. This course is coordinated with gifted services. *Students will take the World History SOL test at the end of this course.*

### **Film Study II (21447)**

**One semester, one-half credit**

**Grade(s): 11-12**

*Prerequisite: Completion of Film Study I or permission of Instructor*

Film Study II will continue to expand upon the concepts taught in Film Study I. Students will more completely sample the genre and sample film making as a part of understanding film viewing. In addition to practicing oral and written communication skills, Film Study II will explore director studies, actor studies, ethnic film, screenwriting, filmmaking practice, mysteries, and film noir.

### **SOAR (Success, Opportunity & Results) (20152)**

**Full year, one credit**

**Grade(s): 9**

*Prerequisite: Past academic achievement and/or scores at the 80% percentile or above on various tests administered in middle school, middle school recommendation*

SOAR is a unique program designed for a selected group of minority Grade 9 students. The SOAR class is a supportive environment with a foundation of empowerment, achievement, independence, involvement and respect. SOAR curriculum reinforces study skills, organizational strategies, critical thinking, and leadership skills.

### **SOAR Seminar (Success, Opportunity & Results) (20151)**

**Full year, one credit**

**Grade(s): 10-12**

*Prerequisite: None*

SOAR is an opportunity for students of color who want additional support in developing the skills needed for advanced scholarship, leadership, and post-secondary education. Students will continue development of time

management and academic skills, engage with issue of social justice while honing their leadership skills, and prepare for the college application and financial aid process.

### **World Literature (21518)**

**Full year, one credit**

**Grade(s): 12**

*Prerequisite: Teacher recommendation*

World Literature is designed to parallel English 12 in language and composition. Studies include extensive reading in comparative literature from Europe, Africa, Asia, South and Central America, focusing on the development of modern thought. Students initiate independent study projects to present to the class, participate in panel discussions and seminars, and write many short papers. *Recommended for the highly motivated, disciplined student.*

## **ADDITIONAL ADVANCED PLACEMENT COURSES OFFERED AT YORKTOWN**

### **Environmental Science, AP (34270)**

**Full year, one credit + 1.0 quality point per credit upon completion of both credits & AP exam, double periods, concurrent enrollment with (34271)**

**Grade(s): 11-12**

*Prerequisite: Successful completion of two lab sciences (one life and one physical); however, students may be concurrently enrolled in Chemistry IF they have completed 2 lab sciences (one life and one physical); satisfactory completion of or concurrent enrollment in Algebra II or an equivalent class, concurrent enrollment in Selected Topics in Environmental Science and permission of the instructor*

Advanced Placement Environmental Science is a college-level course designed to provide students with the scientific principles, concepts and methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems both natural and human-made, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving and/or preventing them.

*Students are required to take the AP exam associated with the two required courses. Students not taking the exam will not earn the additional quality point for either course. (24365) (24271).*

### **Selected Topics in Environmental Science (34271)**

**Full year, one credit, double period**

**Grade(s): 11-12**

*Prerequisite: Concurrent enrollment in AP Environmental Science*

These topics will provide students with the opportunity to conduct extensive laboratory investigations in several areas on environmental science. Field experiences combined with laboratory research will allow the students to learn about the environment through firsthand observations. Interdependence of earth systems, population dynamics, and renewable/nonrenewable resources will be covered the first semester. Environmental quality, global change, and environment and society will be covered the second semester. *This course will count as a general elective credit. In addition, design, and completion of an individual or small-group research project is required.*

### **Comparative Government, AP (32442)**

**Full year, one credit, + 1.0 quality point**

**Grade(s): 10-12**

*Prerequisite: None*

This is an Introductory college-level course in comparative government and politics. The course uses a comparative approach to examine the political structures; policies; and political, economic, and social challenges of six selected countries: China, Iran, Mexico, Nigeria, Russia, and the United Kingdom. Students cultivate their understanding of comparative government and politics through analysis of data and text-based sources as they explore topics like power and authority, legitimacy and stability, democratization, internal and external forces, and methods of political analysis.

*Students are required to take the AP exam associated with this course. Students not taking the exams will not earn the additional quality point.*



## DUAL ENROLLMENT



Dual Enrollment is an enrichment and rigorous opportunity that allows high school students to earn college credits for courses taken through Northern Virginia Community College (NOVA) while enrolled in high school. Dual enrolled students are enrolled in both high school and NOVA.

### **Who Can Take Dual Enrollment classes?**

High school juniors and seniors or the home-schooled equivalent are eligible to participate in dual enrollment classes. To take these courses, you must demonstrate competence in reading, writing and math. VCCS policy allows colleges to consider exceptional freshman and sophomore students who demonstrate readiness for college-level coursework. Each sophomore student will be considered on a case-by-case basis.

### **Benefits of Dual Enrollment**

Dual enrollment can provide students an opportunity to enhance their education by enrolling early in college courses. This allows students to progress toward their next academic goal without having to wait until high school graduation. Studies show that students who acquire college credits while still in high school are more likely to graduate from high school and continue their formal education.

In addition, dual enrollment:

- Allows students to receive high school and college credit simultaneously.
- Can eliminate the duplication of courses taken in high school and in college.
- Permits students to accumulate credits prior to entering college so they can be able to graduate from college early or on time.
- Provides students with a wider range of courses giving them an opportunity to complete general education courses required at most colleges and allows them to explore different fields before declaring a major.
- Facilitates a seamless transition from high school to college.
- Can lower the cost of a post-secondary education.

### **Dual Enrollment Facts**

- Credits you take as a dual enrollment student can transfer to four-year colleges.
- Taking NOVA courses as a dual enrollment student can save you time and money.
- NOVA offers dual enrollment classes in many high schools based on teacher availability.
- Dual enrollment students can work towards a certificate or associate degree.
- Dual enrollment students can work toward a transferable General Education Certificate.

### **Taking a Dual Enrollment Course(s)**

- All students must demonstrate college readiness to take Dual Enrollment classes. PSAT, SAT, ACT, AP or SOL results will determine if the student is eligible to take a course. Taking a dual enrollment course requires the student to apply online with NOVA at <https://apply.vccs.edu/>
- In order to request dual, enroll course(s) students must register at <https://nvcc.dualenroll.com/>
- Under section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA), disability services are available to students if they are currently enrolled, have a documented disability that substantially limits them in one or more of life's major activities, and are otherwise academically qualified. Please carefully review the information on NOVA's Disability Services website: <https://nvcc.edu/disability-services/>
- A dual enrolled student is expected to engage in college level course content and discussions appropriate for adult learners.
- Dual enrollment courses are part of a NOVA transcript, which must be sent to any college/university to which the student attends.
- The student's lack of participation/attendance may negatively affect his/her ability to stay in a dual enrollment course. Should the student not pass the first semester of a 2-semester (full-year) course, he/she will be automatically dropped from the second semester dual enrollment class.
- NOVA courses will run throughout the entire academic school year. Students taking year-long Dual Enrollment (DE) courses may be enrolled in two consecutive NOVA courses during the fall and spring semester. Please note, math courses require students to earn a grade of C or higher to progress to the second semester of the college course (ex. MTH 161, MTH 162). For other courses, a passing grade

earned in the first semester is the prerequisite for the second semester course (ex. DE English 12 is ENG 111 and ENG 112). In order to utilize a course to fulfill a graduation requirement or transfer to another college or university, students must earn a C or higher.

- Dual Enrollment classes are based on a college semester schedule which is different from high school schedule. Courses will have unique start, drop, withdrawal and end dates which will be listed in the class syllabus. Pay attention to these dates as drops or withdrawals can impact your official college record.
- Dual Enrollment students are entitled to the same benefits and privileges as any other NOVA student. This includes access to free tutoring, NOVA's library system, on-campus activities, student services and many more. Once enrolled, students can request a NOVA student identification card which gives them access to these benefits and services

For more information, please view the Dual Enrollment Manual at  
<https://www.nvcc.edu/dual-enrollment/manual.html>

### Dual Enrolled Course Offerings

High School Course Title	NOVA Course	NOVA Course Title	NOVA Credits
Automotive Technology I (98509W)	AUT 100	Introduction to Automotive Shop Practices	2
Automotive Technology II (98507W)	AUT 265	Automotive Braking Systems	4
Automotive Technology III (98508W)	AUT 266	Automotive Alignment, Suspension and Steering	4
Anatomy/Physiology I (98085W)	BIO 141	Human Anatomy and Physiology I	4
Anatomy/Physiology I/II (94320W)	BIO 141/142	Human Anatomy and Physiology I & II	8
Calculus (93176W) *	MTH 263	Calculus I	4
Calculus I/II (93179W) *	MTH 263/264	Calculus I /II	8
Calculus w/Analytic Geometry (93173W) *	MTH 264	Calculus II	4
Computer Assist. Tech Drawing (98439W)	CAD 140	Technical Drawing	3
Computer Assisted Architectural Drawing (98408W)	ARC 123/124	Architectural Graphics I/II	6
Computer Information Systems (96614W)	ITN 100 ITE 170	Intro to Telecommunications/ Multimedia Software	6
Computer Information Systems, Advanced (96649W)	ITE 115	Introduction to Computer Applications & Concepts	3
Computer Programming (96638W)	CSC 221	Introduction to Problem Solving & Programming	3
Computer Programming Intensified, DE (96644W)	CSC 222 CSC 208	Object-Oriented Programming Introduction to Discreet Structures	7
Computer Programming Advanced (96643W)	CSC 223 CSC 205	Data Structures & Analysis of Algorithms Computer Organization	7
Cyber: Cisco Academy Level 1, Part I (96542W) & Level 1, Part II (96543W)	ITN 106 ITN 107	Microcomputer Operating Systems Personal Computer Hardware & Troubleshooting	6
Cybersecurity I: Cybersecurity Fundamentals (96659W) *	ITN 106	Microcomputer Operating Systems	3
Cybersecurity Network Systems (96667W) *	ITN 107	Personal Computer Hardware & Troubleshooting	3
Cybersecurity II: Computer Software Network Operations (96657W) *	ITN 101	Introduction to Network Concepts	3
Cybersecurity II: Cybersecurity Software Operations, (96662W) *	INT 171	Unix I	3
Cybersecurity III: Computer Software Network Operations, Advanced (96658W) *	ITN 200	Administration of Network Resources	3
Cybersecurity III: Cybersecurity Software Operations Advanced (96663W) *	ITN 260	Network Security Basics	3
Database Design & Management (96660W)	ITD 256 ITE 140	Advanced Database Management Spreadsheet Software	6
Differential Equations (93180W)	MTH 267	Differential Equations	3
Digital Photography III (98610W)	PHT 101	Photography I	3

High School Course Title	NOVA Course	NOVA Course Title	NOVA Credits
Early Childhood Education I (98235W)	CHD 120 CHD 145	Introduction to Early Childhood Teaching Art, Music, and Movement to Children	6
Early Childhood Education II (98236W)	CHD 165	Observation & Participation in Early Childhood	3
Economics DE (92801W) *	ECO 201 ECO 202	Principles of Macroeconomics/Microeconomics	6
Emergency Medical Technician I (98334W) Emergency Medical Technician II (98335W)	EMS 111 EMS 120	Emergency Medical Technician-Basic Emergency Medical Technician- Basic Clinical	8
English 11 (College Composition), DE (91150W) English 12 (College Composition), DE (91160W)	ENG 111 ENG 112	College Composition I/II	6
English 12 (British & World Literature), DE (91161W)	ENG 251 ENG 243	Survey of World English Literature I/II	6
Entrepreneurship I (99094W)	BUS 116	Entrepreneurship	3
Entrepreneurship, Advanced (99095W)	BUS 165	Small Business Management	3
General Biology DE (94310W)	BIO 101 BIO 102	General Biology I/II	8
General Environmental Science (94270W) *	ENV 121 ENV 122	General Environmental Science I/II	8
General College Physics DE I (94501W) *	PHY 201	General College Physics I	4
General College Physics DE II (94502W) *	PHY 202	General College Physics II	4
Linear Algebra (93165W)	MTH 266	Linear Algebra	3
Medical Terminology (98383W)	HIM 111	Medical Terminology I	3
Multivariable Calculus (93178W)	MTH 265	Calculus III	4
Introduction to Information Technology (96116W)	ITE 115 ITE 100	Introduction to Computer Applications & Concepts Introduction to Information Systems	6
Pre-Calculus DE (93162W) *	MTH 161 MTH 162	Pre-Calculus I/II	6
Quantitative Analysis (93167W)	MTH 154	Quantitative Reasoning	3
Intermediate Spanish I/II DE (95501W) *	SPA 201 SPA 202	Intermediate Spanish I/II	6
Statistics I/II DE (93163W) *	MTH 245	Statistics I	3
Teachers for Tomorrow I (99062W)	EDU 200	Introduction to Teaching as a Profession	3
Teachers for Tomorrow II (99063W) *	EDU 207	Human Growth & Development	3
TV & Multimedia Production I (98689W)	PHT 130	Video I	3
TV & Multimedia Production II (98690W)	PHT 131	Video II	3
TV & Multimedia Production III (98691W)	PHT 274	Digital Film Editing & Postproduction	3
VA US History DE (92360W) *	HIS 121 HIS 122	United States History I/II	6
VA US Government DE (92240W)	PLS 135	U.S. Government I	3
Vector Calculus (93175W)	MTH 265	Calculus III	4
Web Page Design & Multimedia (96646W)	ITD 110 ITD 210	Web Page Design I & II	6
Web Page Design & Multimedia, Advanced (96631W)	ITN 225	Web Scripting Languages	3
<i>*Available only to full time Arlington Career Center students</i>			

*Approved dual enrollment courses may be offered at different APS locations based on teacher availability.  
For additional information, please talk to you school counselor.*

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## NOVA General Studies Certificate Arlington Public Schools

The following articulates a pathway for a qualifying student within Arlington Public Schools to complete the NOVA Community College General Studies Certificate. To be eligible for this certificate **at least twenty-five percent (25%), or nine (9), of the credits must be taken in dual enrollment courses.** *When choosing college courses, it is wise to check transferability with the college you hope to attend.*

NOVA Course	Possible High School Courses			
	AP Courses		IB Credit will be earned for either 1 or 2 courses depending on the final score.	Dual Enrollment grade of a C or higher
<b>ENG 111/ 112 College Composition I &amp; II</b> College Credits: 6 High School Credit: 1 High School Graduation Requirement: English 12	<i>AP Courses with 3 or better on exam:</i> AP Language & Composition = ENG 111 AP Literature & Composition = ENG 112		IB English HL = ENG 111 or ENG 111/112	DE ENG 111/112 College Composition I & II DE ENG 251/243 Survey of World English Lit. I & II
<b>MTH 154 Quantitative Reasoning OR higher-level math courses</b> College Credits: 3-10 depending on course. High School Credit: 1 High School Graduation Requirement: Advanced Level Math	<i>AP Courses with 3 or better on exam:</i> AP Calculus AB = MTH 263 AP Statistics = MTH 245	<i>AP Courses with 4 or better on exam:</i> AP Calculus BC = MTH 263/264	IB Mathematics HL = MTH 263 or MTH 263/264	DE MTH 154 – Quantitative Reasoning DE MTH 161/162- Pre-Calculus I & II DE MTH 263- Calculus I DE MTH 263/264 – Calculus I & II DE MTH 265- Calculus III DE MTH 266- Linear Algebra
<b>Physical or Life Science with Lab I &amp; II</b> College Credits: 8 High School Credit: 1-2 High School Graduation Requirement: Science credit	<i>AP Courses with 3 or better on exam:</i> AP Biology = BIO 101 AP Chemistry = CHM 101 AP Physics 1 = PHY 101 AP Physics 2 – PHY 201 AP Physics C Electricity & Magnesium = PHY 202 AP Physics Mechanics – PHY 201	<i>AP Courses with 4 or better on exam:</i> AP Biology = BIO 101/102 AP Chemistry = CHM 111 AP Physics 1 = PHY 201 AP Physics 2 = PHY 202 AP Physics C Electricity & Magnesium = PHY 232 AP Physics Mechanics = PHY 231 AP Env. Science = ENV 121/122	IB Biology HL = BIO 101 or BIO 101/102 IB Chemistry HL = CHM 111 or CHM 111/112	DE Biology 101/102 – General Biology I & II DE PHY 201/202- General College Physics I & II
<b>3 Social Science Classes approved by District.</b> College Credits: 9 High School Credit: 1.5-2 (students need at least 2 courses) High School Graduation Requirement: History & Social Sciences credits	<i>AP Courses with 3 or better on exam:</i> AP European History = HIS 101 AP Virginia & US History = HIS 121 AP World History = HIS 111 AP Comp. Govt. & Politics = PLS 140 AP Govt. and US Politics = PLS 135 AP Economics, Macro = ECO 201 AP Economics, Micro = ECO 202 AP Psychology = PSY 200 AP Human Geography= GEO 210	<i>AP Courses with 4 or better on exam</i> AP European History = HIS 101/102 AP VA & US History = HIS 121/122 AP World History = HIS 111/112	IB Topics in World History HL = HIS 101 or HIS 101-112 IB History of the Americans HL = HIS Elective IB Psychology HL = PSY 201 or PSY 201-202 IB Social Anthropology HL = SOC 211 or SOC 211-212	DE PLS 135/136- US Government I & II DE JIS 121/122 – US VA History I & II
<b>2 Humanity Classes approved by District.</b> College Credits: 6 High School Credit: 1 High School Graduation Requirement: Elective, World Language or English 12 (credit depending on the course taken)	<i>AP Courses with 3 or better on exam:</i> AP Art History = ART 101 <i>AP Courses with 4 or better on exam</i> AP Chinese = CHI 201 AP French V = FRE 201 AP German V = GER 201	<i>AP Courses with 4 or better on exam</i> AP Spanish V = SPA 201 AP Art History = ART 101-102 <i>AP Courses with 5 or better on exam</i> AP Art History = ART 101/102	IB Philosophy = PHI 101 or PHI 101-102 IB French HL = FRE 201-202 with a score of 6 or 7 IB Spanish HL = SPA 201-202 with a score of 6 or 7	DE SPA 201 / 202 - Intermediate Spanish I&II
SDV 100 College Success Skills College Credits: 1 High School Credit: N/A High School Graduation Requirement: N/A				DE SDV 100- College Success Skills (ACC)

*All IB courses listed above only include Higher Level (HL) exam scores of 5 or higher. No credit is given for Standard Level (SL) IB exams. These courses are only offered at Washington-Liberty. IB Credit will be earned for either one or two NOVA courses depending on the final score. Scores of 5 generally will count as one NOVA course & scores of 6 or 7 will generally count as two NOVA courses*



## INDEX OF COURSES OFFERED IN THE 2022-23 PROGRAM OF STUDIES

ARTS EDUCATION (Pages 20-25)		CAREER AND TECHNICAL EDUCATION (Pages 26-35 & 77-101)	
COURSE NAME	CODE	COURSE NAME	CODE
Advanced Band	29234	Accounting with QuickBooks	26320
Advanced Choir	29289	Small Animal Care I	28062
Advanced Theatre IV	21430	Small Animal Care II	28063
Advanced Theatre Studies (WKHS & YHS)	21432	Advanced Drawing & Design	28440
Art History, AP	39151	Aerospace Engineering	28498
Art I	29120	Space Force Junior ROTC I	29911
Art II	29130	Space Force Junior ROTC II	29912
Art III	29140	Space Force Junior ROTC III	29913
Basso Chorus	29266	Space Force Junior ROTC IV	29914
Piano	29200	Automotive Collision Repair I	28677
Career Investigations	22010	Automotive Collision Repair II	28678
Ceramics I	29167	Automotive Collision Repair III	28680
Ceramics II	29168	Automotive Maintenance & Light Repair	28675
Ceramics III	29169	Automotive Technology I	28509
Chamber Choir	29252	Automotive Technology II	28507
Chamber Orchestra	29242	Automotive Technology III	28508
Computer Graphics	29152	Aviation Technology I	28731
Computer Graphics II	29153	Aviation Technology II	28732
Computer Graphics III	29154	Barbering I	28531
Concert Choir	29260	Barbering II	28532
Crafts	29162	Barbering III	28526
Digital Photography I	29193	Biotechnology in Health & Medical Sciences	28326
Digital Photography II	29194	Child Development & Parenting	28232
Digital Photography III	29195	Child Development & Parenting I	*28230
Digital Photography III, Dual Enrollment	98610W	Computer Assisted Architectural Drawing	28408
Ensembles	*29250	Computer Assisted Engineering Drawing	28438
Fine Arts Apprentice Program I	29290	Computer Assisted Technical Drawing	28439
Fine Arts Apprentice Program II	29291	Computer Information Systems	26614
Fine Arts Apprentice Program III	29292	Computer Information Systems, Dual Enrollment	96614W
Guitar I	29245	Computer Information Systems, Advanced	26649
Advanced Guitar	29247	Computer Information Systems, Adv., Dual Enroll.	96649W
Intermediate Band	29233	Computer Integrated Manufacturing Engineering	28493
Introduction Sculpture	*29165	Computer Programming	26638
Introduction to Crafts	*29160	Computer Programming, Dual Enrollment	96638W
Jazz Instrumental Lab/Ensemble	29251	Computer Programming Advanced	26643
Jazz/Pop Vocal Lab Ensemble	29280	Computer Programming Advanced, Dual Enrollment	96643W
Marching Band	*29254	Computer Programming Intensified	26637
Music Apprec: Hist. of Music, Genres and Cultural Id.	29222	Computer Programming Intensified, Dual Enrollment	96644W
Music Theory, AP	39226	Computer Science Principles, AP	33186
Painting & Drawing	*29163	Computer Science, AP	33185
Sculpture	29166	Construction Technology	28512
Song Writing, Digital Audio, & Music	29225	Cooperative "Coop" Education Work Experience	28951
String Orchestra	29244	Cosmetology I	28528
Art & Design, AP	39149	Cosmetology II	28529
Technical Theatre	21435	Cosmetology III	28530
Theatre Arts I	21400	Criminal Justice I	28702
Theatre Arts II	21415	Criminal Justice II	28703
Theatre Arts III	21425	Culinary Arts & Sciences I	28522
Treble Chorus	29263	Culinary Arts & Sciences II	28523





<b>ENGLISH LANGUAGE ARTS (Pages 36-40)</b>	
<b>COURSE NAME</b>	<b>CODE</b>
African American Literature	21064
American Civilization: English & Social Studies Intensified	21176/ 22376
Elements & Strategies of Reading	21180
English 9	21130
English 9 & World History & Geography: 1500 AD to the Present (YHS only)	21130/ 22216
English 9 & World History, Intensified (YHS only)	21132/ 22343
English 10	21140
English 10, Intensified	21142
English 11	21150
English 11, (College Composition) Dual Enrollment	91150W
ELD English 11 Extension	21185
English 11 Strategies (ACHS only)	21151
English 12	21160
English 12, (College Composition) Dual Enrollment	91160W
English 12, (British & World Literature) Dual Enrollment	91161W
English Language & Composition, AP Grade 11	31196
English Literature & Composition, AP Grade 12	31195
Film Study	*21446
Film Study II (WKHS & YHS only)	*21447
Journalism: Broadcast	21218
Journalism: Literary Magazine	21207
Journalism: Newspaper	21205
Journalism: Yearbook	21209
Remedial Independent Self-Paced Education-Reading	*20202
Remedial Independent Self-Paced Education-Writing	*20201
World Literature	21518

<b>HEALTH &amp; PHYSICAL EDUCATION (Pages 40-41)</b>	
<b>COURSE NAME</b>	<b>CODE</b>
Adaptive Physical Education - Gr 9	27670
Adaptive Physical Education - Gr 10	27680
Adaptive Physical Education - Gr 11	27690
Adaptive Physical Education - Gr 12	27700
Driver Education and Safety	*27010
Driver Education and Safety	*27011
Health & Physical Education ELD	27330
Health & Physical Education I	27300
Health & Physical Education II	27400
Health I	*27320
Health, Physical & Driver Education II (WKHS only)	27410
Physical Education III (Semester 1)	*27510
Physical Education III (Semester 2)	*27515
Physical Education IV (Semester 1)	*27610
Physical Education IV (Semester 2)	*27615

<b>ENGLISH LEARNER SERVICES (Page 41- 42)</b>	
<b>COURSE NAME</b>	<b>CODE</b>
ELD 4 English 10	20799
ELD 3 English 9	20796
ELD 1/SLIFE Literacy Development	20775
ELD SLIFE Math Foundations	23111
ELD SLIFE Pre-Algebra	23113
ELD 1/SLIFE Reading	20776
ELD 1 English	20786
ELD 1 Reading	20787
ELD 1 Science	20780
ELD 1 Social Studies	20789
ELD 1 Speaking/Writing	20788
ELD 2 English	20790
ELD 2 Reading	20791
ELD 2 Science	20781
ELD 2 Social Studies	20793
ELD Environmental Science	24362
ELD Principles of Physics	24501
ELD Virginia & US Government	22446
ELD Grammar Development (ACHS only)	20891
ELD Biology Laboratory Course	24317
ELD 4 Reading	20797
ELD 3 Reading	20794
ELD 3-4 World Hist. & Geography, 1500 AD to present	22345

<b>MATHEMATICS (Pages 42-48)</b>	
<b>COURSE NAME</b>	<b>CODE</b>
Algebra I	23130
Algebra I, Part I	23131
Algebra I, Part II	23132
Algebra II	23135
Algebra II/Trigonometry, Intensified	23136
Algebra III	23155
Algebra, Functions & Data Analysis	23145
Calculus AB, AP	33177
Calculus BC, AP	33179
Calculus with Analytic Geometry, Dual Enrollment	93173W
Calculus, Dual Enrollment	93176W
Calculus I/II, Dual Enrollment	93179W
Differential Equations	93180W
Geometry	23143
Geometry, Intensified	23141
Geometry, Principles	23142
High School General Mathematics	23120
Linear Algebra	93165W
Multivariable Calculus	93178W
Pre-Calculus, Dual Enrollment	93162W
Pre-Calculus, Intensified	23164
Pre-Calculus/Trigonometry	23162
Probability & Statistics	23190

Quantitative Analysis, Dual Enrollment	93167W
Remedial Independent Self-Paced Education-Algebra	20203
Remedial Independent Self-Paced Education	20204
Statistics I/II, Dual Enrollment	93163W
Statistics, AP	33192
Strategies, Algebra I	23124
Strategies, Algebra II	23126
Strategies, Geometry	23128
Vector Calculus	93175W

<b>SCIENCE (Pages 49-53)</b>	
<b>COURSE NAME</b>	<b>CODE</b>
Anatomy/Physiology I, Dual Enrollment	98085W
Anatomy/Physiology I/II, Dual Enrollment	94320W
Arlington Tech Capstone Experience	28955
Astronomy	24700
Biology	24310
Biology II/Human Biology	28085
Biology Laboratory Course Intensified Immersion	24319
Biology, AP	34370
Chemistry	24410
Chemistry, AP	34470
Earth Science	24210
Earth Science II: Oceanography	24220
Environmental Science	24361
Ecology	24365
Environmental Science, AP (WKHS & YHS only)	34270
General Biology, Dual Enrollment	94310W
General College Physics I, Dual Enrollment	94501W
General College Physics II, Dual Enrollment	94502W
General Environmental Science, Dual Enrollment	94270W
Geospatial Tools & Techniques (WL only)	98423W
Intensified Biology	24315
Intensified Chemistry	24415
Intensified Earth Science	24215
Intensified Physics	24515
Introduction to Biology (ACHS only)	24301
Introduction to Earth/Space Science (ACHS only)	24201
Physics	24510
Physics C: Mechanics & Electricity & Magnetism, AP	34570
Physics I, AP	34578
Physics, II, AP	34579
Physics, Principles of	24500
Principles of Chemistry (YHS only)	24400
Remedial Independent Self-Paced Ed-Biology	*20205
Remedial Independent Self-Paced Ed-Earth Science	*20206
Selected Topics in Biology	34371
Selected Topics in Chemistry	34471
Selected Topics in Environmental Science, AP	34271
Selected Topics in Physics C	34571
Selected Topics in Physics I	34568
Selected Topics in Physics II	34569

<b>SOCIAL STUDIES (Pages 54-60)</b>	
<b>COURSE NAME</b>	<b>CODE</b>
African American Studies	22371
American Civilization: English & Social Studies Intensified (WKHS only)	21176/ 22376
Comparative Government, AP	32442
Economics & Personal Finance	22212
Economics & Personal Finance Immersion	22211
Economics, AP	32806
Economics, Dual Enrollment	92801W
English 9 & World History & Geography: 1500 AD to the Present (YHS only)	21130/ 22216
European History, AP	32399
Human Geography, AP	32212
Introduction to Law	*22218
Introduction to VA/US History (ACHS only)	22202
Introduction to World Geography (ACHS only)	22201
Introduction to World History & Geography (ACHS)	22203
Latin American Studies	22373
Leadership Skills for Diversity Peer Trainers	22700
Psychology	22900
Psychology, AP	32902
Remedial Independent Self-Paced Education-VA/US Government	*20209
Remedial Independent Self-Paced Education-World Geography	*20208
Remedial Independent Self-Paced Education-World History II	*20207
Sociology	22500
Virginia & United States Government	22440
Virginia & United States Government, Dual Enrollment	92240W
Virginia & United States Government, AP	32445
Virginia & United States History	22360
Virginia & United States History, AP	32319
Virginia & United States History, Dual Enrollment	92360W
Virtual Economics & Personal Finance	22212V
Virtual Virginia & United States Government	22440V
Virtual Virginia & United States History	22360V
World Affairs	*22388
World Geography	22210
World History & English 9, Intensified (YHS only)	22343/ 21132
World Hist. & Geography, 1500 A.D. to the Present	22216
World Hist. & Geography: Beginning to 1500 AD	22215
World Hist. & Geography: Beginning to 1500 AD Intensified	22219
World History, AP	32400

<b>SPECIAL EDUCATION (Pages 61-64)</b>	
<b>COURSE NAME</b>	<b>CODE</b>
Algebra I, Part I	20008
Applications in Earth & Space Science	24211
Biology, Part I	20020
Biology, Part II	20021
Earth Science Part I (WKHS only)	20045
Earth Science Part II (WKHS only)	20046
English	20035
English 9	20001
English 10	20002
English 12	20004
Instructional Studies	20028
English 11	20003
Living Skills	20026
Mathematics	20036
Occupational Knowledge	20998
Occupational Training/Education for Employment	20976
Occupational Exploration	20999
Personal Living & Finances	20055
Principles of Physics	20049
Reading	20014
Reading	20015
Reading	*20006
Science	20038
Selected Topics in Geometry	20054
Social Skills	20023
Social Studies	20039
US History Applications	20053
Virginia & U.S. Government	20018
Virginia & U.S. History	20017
Virginia & U.S. History, Part I	20016
Virginia & U.S. History, Part II	20019
World Geography	20040
World History & Geography, Part I	20051
World History & Geography to the Present, Part II	20052
Writing	*20005

<b>WORLD LANGUAGES (continuation) (Pages 65-75)</b>	
<b>COURSE NAME</b>	<b>CODE</b>
Arabic V	25841
Chinese I	25615
Chinese II	25625
Chinese III	25630
Chinese IV	25640
Chinese Language & Culture, AP	35860
French I	25110
French II	25120
French III	25130
French IV	25140
French V	25150
French Language & Culture, AP	35165
German I	25210
German II	25220
German III	25230
Japanese I	25910
Japanese II	25920
Japanese III	25930
Latin I	25310
Latin II	25320
Latin III	25330
Latin IV	25340
Latin V	25350
Latin V, AP	35350
Spanish for Fluent Speakers I	25517
Spanish for Fluent Speakers II	25527
Spanish for Fluent Speakers III	25537
Spanish I	25510
Spanish II	25520
Spanish III	25530
Spanish Immersion 9	25511
Spanish Immersion 10	25521
Spanish IV	25540
Spanish V	25550
Spanish Language & Culture, AP	35565
Spanish Literature, AP	35580

<b>WORLD LANGUAGES (Pages 65-75)</b>	
<b>COURSE NAME</b>	<b>CODE</b>
Advanced Studies in French	25160
Advanced Studies in Latin	25360
Advanced Studies in Spanish	25560
American Sign Language I	25990
American Sign Language II	25995
American Sign Language III	25997
American Sign Language IV	25992
Arabic I	25800
Arabic II	25822
Arabic III	25830
Arabic IV	25840

<b>IB COURSES AT WASHINGTON-LIBERTY (Pages 113-133)</b>	
<b>COURSE NAME</b>	<b>CODE</b>
IB Arabic (SL) Part I	35841
IB Arabic (SL) Part II	35845
IB Biology (HL) Part I	34376
IB Biology (HL) Part II	34377
IB Biology (SL)	34378
IB Business & Management (SL)	36114
IB Chemistry (HL) Part I	34476
IB Chemistry (HL) Part II	34477
IB Computer Science (SL) Part I	36540
IB Computer Science (SL) Part II	36550
IB Computer Science (HL) Part I	36560
IB Computer Science (HL) Part II	36570
IB Design Technology (SL) Part I	38496
IB Design Technology (SL) Part II	38496
IB Economics (SL)	32802
IB English (HL) Part I	31197
IB English (HL) Part II	31198
IB English Language & Literature (SL) Part I	31190
IB English Language & Literature (SL) Part II	31191
IB Environmental Sys. & Societies (SL)	34275
IB Film (HL) Part I	31147
IB Film (HL) Part II	31149
IB Film (SL) Part I	31144
IB Film (SL) Part II	31145
IB French B (HL) Part I	35158
IB French B (HL) Part II	35168
IB French B (SL) Part I	35157
IB French B (SL) Part II	35167
IB Geography (SL)	32210
IB History of the Americas (HL) Part I	32385
IB Information Technology in a Global Society	36613
IB Latin (HL) Part I	35362
IB Latin (HL) Part II	35372
IB Latin (SL) Part I	35357
IB Latin (SL) Part II	35367
IB Mandarin Chinese ab initio (SL) Part I	35815
IB Mandarin Chinese ab initio (SL) Part II	35825
IB Mandarin Chinese B (SL) Part I	35817
IB Mandarin Chinese B (SL) Part II	35827
IB Mandarin Chinese (HL) Part I	35816
IB Mandarin Chinese (HL) Part II	35826
IB Mathematics: Analysis & Approaches (SL) Part I	33171
IB Mathematics: Analysis & Approaches (SL) Part II	33172

IB Mathematics: Applications and Interpretation (SL)	33170
IB Mathematics: Analysis & Approaches (HL) Part I	33181
IB Mathematics: Analysis & Approaches (HL) Part II	33182
IB Music (SL)	39227
IB Philosophy (SL)	32600
IB Physics (SL) Part I	34576
IB Physics (SL) Part II	34577
IB Psychology (HL) Part I	32903
IB Psychology (HL) Part II	32904
IB Psychology (SL)	32901
IB Social Anthropology (HL) Part I	32375
IB Social Anthropology (HL) Part II	32377
IB Social Anthropology (SL)	32372
IB Spanish B (HL) Part I	35578
IB Spanish B (HL) Part II	35588
IB Spanish B (SL) Part I	35575
IB Spanish B (SL) Part II	35585
IB Spanish Language & Literature (HL) Part I	35577
IB Spanish Language & Literature (HL) Part II	35587
IB Sports, Exercise, & Health Science (SL) Part I	38055
IB Sports, Exercise, & Health Science (SL) Part II	38057
IB Theatre Arts (HL) Part I	39142
IB Theatre Arts (HL) Part II	39143
IB Theatre Arts (SL)	39141
IB Topics in 20th Century World History (HL) Part II	32386
IB Visual Arts (HL) Part I	39146
IB Visual Arts (HL) Part II	39148
IB Visual Arts (SL)	39144
Theory of Knowledge	32605

**\*Semester Course**

<b>ADDITIONAL COURSES</b>	
<b>COURSE NAME</b>	<b>CODE</b>
Consult, AP	20184
Instructional Studies	*20030
Research, AP (WKHS only)	32112
Seminar, AP (WKHS & YHS only)	32110
Senior Project (*21095 semester option) (WKHS only)	20190
Senior Project Independent Study (WKHS only)	20191
SOAR (YHS only)	20152
SOAR Seminar (YHS only)	20151
Volunteer Service (*20156 semester option)	20155

**APPENDIX A**  
**Arlington Public Schools**  
**Fine Arts Course Offerings**

The following courses meet the current definition of fine arts. Semester courses may be taken provided two or more are completed for one unit of credit.

**Visual Arts**

Art I (29120)  
Art II (29130)  
Art III (29140)  
Art & Design, AP (39149)  
Art History, AP (39151)  
IB Visual Art (HL) Part I (39146) Part II (39148)  
IB Visual Art (SL) (39144)  
Ceramics I (29167)  
Ceramics II (29168)  
Ceramics III (29169)  
Introduction to Crafts (S) (29160)  
Crafts (29162)  
Painting & Drawing (S) (29163)  
Computer Graphics (29152)  
Computer Graphics II (29153)  
Computer Graphics III (29154)  
Digital Photography I (29193)  
Digital Photography II (29194)  
Digital Photography III (29195)  
Introduction to Sculpture (S) (29165)  
Sculpture (29166)  
Television Production I (28689)  
Television & Multimedia Production II (28690)  
Television & Multimedia Production III (28691)

**Music**

Chamber Choir (29252)  
Concert Choir (29260)  
Treble Chorus (29263)  
Basso Chorus (29266)  
Advanced Choir (29289)  
Intermediate Band (29233)  
Advanced Band (29234)  
Marching Band (S) (29254)  
Ensembles (S) (29250)  
Piano (29200)  
String Orchestra (29244)  
Chamber Orchestra (29242)  
Guitar I (29245)  
Advanced Guitar (29247)  
Song Writing, Digital Audio, & Music Theory (29225)  
Music Appreciation: History of Music: Genres & Cultural Identities (29222)  
Music Theory, AP (39226)  
IB Music SL (39227)  
Jazz Instrumental Lab/Ensemble (29251)  
Jazz/Pop Vocal Lab/Ensemble (29280)

**Theatre Arts**

Theatre Arts I (21400)  
Theatre Arts II (21415)  
Theatre Arts III (21425)  
Advanced Theatre Arts IV (21430)  
Technical Theatre (21435)  
IB Theatre Arts SL (39141)  
IB Theatre Arts HL Part I (39142) Part II (39143)  
IB Film SL Part I (31144) Part II (31145)  
IB Film HL Part I (31147) Part II (31149)

**Fine Arts Apprenticeship Program**

Fine Arts Apprenticeship Program I (29290)  
Fine Arts Apprenticeship Program II (29291)  
Fine Arts Apprenticeship Program III (29292)



**APPENDIX B**  
**Arlington Public Schools**  
**Career & Technical Education (CTE) Courses at a Glance**

<b>2022-23 Course Offerings</b>	<b>Career Center</b>	<b>Wakefield</b>	<b>W-L</b>	<b>Yorktown</b>
<b>Business &amp; Information Technology</b>				
Accounting with QuickBooks (26320)	X	X	X	X
Computer Information Systems (26614)	X	X	X	X
Computer Programming (26638)	X			
Computer Programming, Intensified (26637)	X			
Computer Programming Advanced (26643)	X	X	X	X
Cyber: Cisco Academy Level I, Part I (26542)	X	X	X	X
Cyber: Cisco Academy Level I, Part II (26543)	X	X	X	X
Cybersecurity I: Cyber Security Fundamentals (26659)	X			
Cybersecurity II: Computer Software Network Operations (26657)	X			
Cybersecurity II: Cybersecurity Software Operations (26662)	X			
Cybersecurity III: Computer Software Network (26658)	X			
Cybersecurity III: Cybersecurity Software (26663)	X			
Cooperative “Coop” Work Experience I, II, III, requires concurrent CTE Course enrollment, (28951, 28953, 28954)	X	X	X	X
Criminal Justice I & II (28702) (28703)	X			
Web Page Design & Multimedia (26646)	X	X	X	X
Web Page Design & Multimedia, Advanced (26631)	X	X	X	X
Entrepreneurship (29094)	X	X	X	X
Entrepreneurship Advanced (29095)	X	X	X	X
Introduction to Business & Marketing (26112)		X	X	X
Introduction to Information Technology (26116)	X	X	X	X
IB Business & Management SL (36114)			X	
<b>Computer Science</b>				
Computer Science, AP (33185)		X	X	X
Computer Science Principles, AP (33186)	X	X	X	X
IB Computer Science, SL Part I (36540) & Part II (36550)			X	
IB Computer Science, HL Part I (36560) & Part II (36570)			X	
IB Information Technology in a Global Society (36613)			X	
<b>Marketing</b>				
Introduction to Business & Marketing (26112)		X	X	X
Sports, Entertainment, & Recreation Marketing (28123)		X	X	X
<b>Family &amp; Consumer Sciences</b>				
Child Development & Parenting – Year (28232) Semester (28230)		X	X	X
Early Childhood Education I (28235) & II (28236)	X			
Gourmet Foods: Nutrition & Wellness - Year (28274) Semester (28272)		X	X	X
Gourmet Foods: Introduction to Culinary Arts		X	X	X
Introduction to Fashion Careers (28147)		X	X	X
Introduction to Interior Design (28289)		X	X	X
Teachers for Tomorrow I (29062) & II (29063)	X	X	X	X
<b>Technical Education/Trade &amp; Industrial Programs</b>				
Advanced Drawing & Design (28440)	X	X	X	X
Aerospace Engineering (28498)	X			
Automotive Collision Repair I (28677), II (28678) & III (28680)	X			
Automotive Maintenance & Light Repair (28675)	X			
Automotive Technology I (28509)	X			
Automotive Technology II (28507)	X			
Automotive Technology III (28508)	X			

<b>2022-23 Course Offerings</b>	<b>Career Center</b>	<b>Wakefield</b>	<b>W-L</b>	<b>Yorktown</b>
<b>Technical Education/Trade &amp; Industrial Programs</b>				
Aviation Technology I (28731)	X			
Aviation Technology II (28732)	X			
Barbering I (28531)	X			
Barbering II (28532)	X			
Barbering III (28526)	X			
Biotechnology in Health & Medical Sciences (28326)	X			
Carpentry I (28519)	X			
Computer Assisted Architectural Drawing (28408)	X	X	X	X
Computer Assisted Engineering Drawing (28438)	X	X	X	X
Computer Assisted Technical Drawing (28439)	X	X	X	X
Computer Integrated Manufacturing Engineering (28493)	X			
Construction Technology (28512)	X			
Cosmetology I (28528)	X			
Cosmetology II (28529)	X			
Cosmetology III (28530)	X			
Criminal Justice I & II (28702) (28703)	X			
Culinary Arts & Sciences I (28522) & II (28523)	X			
Culinary Arts III: Baking & Pastries (28524)	X			
Culinary Arts III: Catering/Banquet (28525)	X			
Digital Animation (28457)	X			
Digital Electronics (26671)	X			
Electricity I (28534) & II (28535)	X			
Emergency Medical Technician I (28334) & II (28335)	X			
Emergency Medical Technician III (28336)	X			
Energy and Power (26448)	X			
Engineering I: Intro to Engineering Design (28491)	X	X	X	X
Engineering II: Principles of Engineering (28492)	X	X	X	X
Engineering Capstone: Design & Development (28494)	X	X	X	X
Forensic Technology with Application in Biotechnology (28325)	X			
Graphic Communications Systems (28458)	X			
Health Sciences (28303)	X			
IB Design Technology Part I (38496) & Part II (38497)			X	
Materials & Processes	X			
Medical Terminology (28383)	X			
Pharmacy Technician (28305)	X			
Physical Therapy/Sports Medicine Technology (28332)	X			
Photo & Video I (28625)	X			
Photo & Video II (28626)	X			
Robotic Design (28421)	X			
School to Work Transition Internship (29828)	X			
Small Animal Care I/ (28062) & II (28063)	X			
Space Force Junior ROTC I (29911) & II (29912)	X			
Space Force Junior ROTC III (29913) & IV (29914)	X			
Sustainable & Renewable Technologies (28460)	X			
Technical Animal Science I/Veterinary Science I (28064) & II (28061)	X			
Television Production I (28689)	X			
Television & Multimedia Production II (28690)	X			
Television & Multimedia Production III (28691)	X			

*Note: Enrollment in any of these courses includes the opportunity to earn industry certification or to take a state licensure examination which would fulfill the graduation requirement for a Standard Diploma.*



**APPENDIX C**  
**Arlington Public Schools**  
 Virtual Course Offerings

<p><b>Arts Education</b></p> <ul style="list-style-type: none"> <li>• Art History, AP</li> <li>• Music Theory, AP</li> </ul>	<p><b>Social Studies</b></p> <ul style="list-style-type: none"> <li>• African America History</li> <li>• Comparative Government and Politics, AP</li> <li>• Economics and Personal Finance</li> <li>• Economics, AP (Combines AP Macro &amp; AP Micro)</li> <li>• European History, AP</li> <li>• Human Geography, AP</li> <li>• Psychology</li> <li>• Psychology, AP</li> <li>• Virginia &amp; U.S. History</li> <li>• Virginia &amp; U.S. Government</li> <li>• World Geography</li> <li>• World History &amp; Geography to 1500 AD</li> <li>• World History &amp; Geography: 1500 AD to the Present</li> <li>• World History: Modern, AP</li> </ul>
<p><b>Career, Technical, and Adult Education (CTE)</b></p> <ul style="list-style-type: none"> <li>• Computer Science A, AP</li> <li>• Computer Science Principles, AP</li> </ul>	
<p><b>English Language Arts (ELA)</b></p> <ul style="list-style-type: none"> <li>• English 9</li> <li>• English 10</li> <li>• English 11</li> <li>• English 12</li> <li>• English Language &amp; Composition, AP</li> <li>• English Literature &amp; Composition, AP</li> </ul>	
<p><b>Health and Physical Education</b></p> <ul style="list-style-type: none"> <li>• Health I (0.5 credit)</li> </ul>	<p><b>World Languages</b></p> <ul style="list-style-type: none"> <li>• American Sign Language I*</li> <li>• American Sign Language II*</li> <li>• American Sign Language III*</li> <li>• Arabic I *</li> <li>• Arabic II*</li> <li>• Arabic III*</li> <li>• Chinese I*</li> <li>• Chinese II*</li> <li>• Chinese III</li> <li>• Chinese IV</li> <li>• Chinese Language &amp; Culture, AP</li> <li>• French I*</li> <li>• French II*</li> <li>• French III</li> <li>• French IV</li> <li>• French Language &amp; Culture, AP</li> <li>• Latin I*</li> <li>• Latin II*</li> <li>• Latin III</li> <li>• Latin IV</li> <li>• Latin, AP</li> <li>• Spanish I*</li> <li>• Spanish II*</li> <li>• Spanish III</li> <li>• Spanish IV</li> <li>• Spanish Language &amp; Culture, AP</li> <li>• Spanish Literature &amp; Culture, AP</li> </ul>
<p><b>Mathematics</b></p> <ul style="list-style-type: none"> <li>• Algebra I</li> <li>• Geometry</li> <li>• Algebra II</li> <li>• Algebra Functions &amp; Data Analysis (AFDA)</li> <li>• Pre-Calculus/Mathematical Analysis</li> <li>• Calculus AB, AP</li> <li>• Calculus BC, AP</li> <li>• Statistics, AP</li> </ul>	
<p><b>Science</b></p> <ul style="list-style-type: none"> <li>• Biology</li> <li>• Biology II: Anatomy/Physiology</li> <li>• Biology II: Ecology</li> <li>• Biology, AP</li> <li>• Chemistry I</li> <li>• Chemistry II</li> <li>• Earth, Space Science*</li> <li>• Earth Science II: Astronomy</li> <li>• Earth Science II: Oceanography</li> <li>• Environmental Science, AP</li> <li>• Physics</li> <li>• Physics I, AP</li> <li>• Physics II, AP</li> </ul>	

\*Course is available to grade 7-12.

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