Resilience. Pride. Success.

RICHMOND PUBLIC SCHOOLS

GRADES 6-12

FOCUS ON THE FUTURE

2018-2019

Program of Studies

Planning Guide for Students and Parents

rvaschools.net

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Introduction

This Program of Study booklet is intended to provide valuable information to allow students and parents to make selections that will best prepare for future success. It has been designed to explain the rich variety of challenging and rigorous choices available.

The demands of high school coursework for students throughout the state make the expectations for graduation challenging for students than in past years. However, these expectations prepare students to be career and college ready. In anticipation of meeting these demands, Richmond Public Schools (RPS) offers complexity in course work as well as electives to help to diversify each high school experience.

Students are encouraged to work with their teachers and school counselors to make decisions appropriate for achieving individual goals. RPS continues to explore ways to introduce more rigor, relevancy, diversity, and specialization to all school course offerings and school counselors will be able to fully explain courses that are implemented after the printing of this booklet.

How students spend their time in school will only make their future better and their goals more attainable. All members of RPS urge each student to take full advantage of the courses that are provided in this booklet as well as in the classroom. Student success is the division's greatest achievement, and Richmond Public Schools is committed to students' continued development.

Superintendent
Jason Kamras

School Board
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James Scott Barlow (District 2)
Kenya Gibson (District 3)
Jonathan Young (District 4)
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Please Note:
Although deemed accurate when printed, information in this booklet may change during the year as Richmond School Board policies and regulations are updated. For the most current version of this booklet, visit the RPS website: www.rvaschools.net.

To see Richmond School Board Policies and Regulations, visit: http://www.rvaschools.net/Page/1965

GENERAL INFORMATION

Course Selection

The course selection process involves balancing student requests, teacher recommendations, parent preferences, and course availability. Many courses have prerequisites for the next sequential course, and it is important for the student to check with the teacher and/or department head to see if he/she has satisfied the prerequisites for the next course. Placement in honors and advanced placement courses requires a desire on the student's part to explore a topic in greater depth, a commitment to extra time and effort, parent approval, and a teacher recommendation. Elective courses such as Art are assigned based on student interest as well as both availability and positioning in the schedule.

School Counseling Services

Richmond Public Schools provides a comprehensive, developmental guidance and school-counseling program that addresses the academic, career, and personal/social development of all students. School counselors are professional advocates who provide support to maximize student potential and academic achievement. In partnership with other educators, parents/guardians, and the community, school counselors facilitate the support system to ensure all students in the school division have access to and are prepared with the knowledge and skills to contribute at the highest level as successful and productive members of the community.

Course Changes

Students will be issued schedules based on their selections as reflected on their course selection forms. **Every effort will be made to satisfy student requests, student needs, and parent and teacher recommendations.** Students will be encouraged and given every opportunity to discuss their choices with teachers, advisors, parents, and counselor before they leave for the summer. The school counseling staff is available for two weeks at the end of the school year and again two weeks before school opens in the fall to discuss scheduling problems. This practice has been put in place in hopes that any changes in the fall will be kept to a **minimum** and certainly within the first two weeks of school. A date will be set for the beginning of the school year that will mark the end of the add-drop period.

SECTION I: Key Information

Academic and Career Plan

Beginning in 7th grade all students are to have a personal learning plan and course of study that aligns with the student's academic and career goals. See a sample copy of the plan in Section II.
http://www.doe.virginia.gov/instruction/graduation/academic_career_plan/index.shtml

The Academic and Career Plan must include but is not limited to:

- A program of study for high school graduation and a postsecondary career pathway based on the student's academic and career interests.
- A review and update, if necessary, before the student enters the ninth and eleventh grades.
- The signatures of the student, student's parent or guardian and school official(s) designated by the principal.

Advanced Placement Program

The Advanced Placement (AP) Program, sponsored by the College Board, gives students the opportunity to pursue college-level studies while still in high school and to possibly receive college credit. Courses offered are designated "AP" in the course descriptions. The curriculum of an AP course is challenging and requires more effort and homework on the part of the student than a regular or honors course. Students develop critical thinking skills, fluent writing abilities, problem-solving skills, and expertise in absorbing masses of material. They learn to deal with strenuous traditional academic settings and ultimately achieve at levels they never imagined possible. Students are required to take the Advanced Placement Exam.

College Courses

With the approval of the high school principal, students may take college-level courses at the local colleges and universities. Students must also meet the admissions requirements set forth by the university as well as pay the full cost for the college course taken. Students are also responsible for securing and paying for the needed textbooks and supplies. See section III for information concerning special programs offered at local colleges and universities.

Dual Enrollment

The Dual Enrollment program provides an opportunity for qualified high school students to enhance their education by enrolling early in college courses. Students will be able to experience college-level courses, explore career options and shorten the time required to complete a college degree. Dual enrollment courses allow high school students to meet the requirements for high school graduation while simultaneously earning college credit.

Eligibility for Activities

Middle School Eligibility

A student may be eligible to participate only on the athletic team(s) of the middle school in which he or she is enrolled. Students may not participate while enrolled in an alternative education program. A student may not practice or compete with more than one middle school interscholastic team at a time.

Academic Requirements

- To be eligible to participate in middle school athletics, a student must pass five courses with a minimum grade of C, two of which shall be English and Math, and read on grade level, as determined by test data at the end of the preceding school year.
- **Fall Sports:** students must pass five courses with a minimum grade of C, two of which shall be English and Math, and read on grade level, at the end of the preceding school year. Rising sixth grade students must have passed all fifth-grade core academic courses with a minimum grade of C at the end of the preceding school year and read on grade level.
- **Winter Sports:** students must pass five courses with a minimum grade of C, two of which shall be English and Math, and read on grade level, at the end of the preceding school year. Rising sixth grade students must have passed all core academic courses with a minimum grade of C and read on grade level, at the end of the preceding school year. If the winter season extends into the second semester, students who do not pass

five courses with a minimum grade of C, two of which shall be English and Math, and read on grade level, at the end of the first semester of the current year shall become ineligible to participate for the remainder of the season. Likewise, students who do not meet the academic eligibility requirements at the beginning of the first semester may become eligible at the beginning of the second semester, if the student passes five courses with a minimum grade of C, two of which shall be English and Math, and read on grade level, at the end of the first semester.

- **Spring Sports:** students must pass five courses with a minimum grade of C, two of which shall be English and Math, and read on grade level, at the end of the first semester of the current school year.
- **Special Education:** students must also pass five courses, two of which shall be English and mathematics in accordance with any modifications prescribed by his/her individualized education program (IEP). Rising sixth grade students must pass all core academic courses with a minimum grade of C, at the end of the preceding school year to participate in Fall Sports or in Winter Sports during the first semester. A special education student who does not receive grades must make standard progress in his/her courses as determined by his/her IEP.

A participant in middle school athletics shall not have reached the age of 15 on or before September 1 of the school year in which he or she wishes to compete.

High School Eligibility
Richmond Public Schools Athletic GPA policy:

POLICY 8-4.2 INTERSCHOLASTIC ATHLETICS

The School Board of the City of Richmond endorses membership by its high schools in the Virginia High School League, Inc. (VHSL). The School Board approves of a broad program of interscholastic athletics for students eligible under the VHSL rules, subject to the additional academic and student conduct requirements set forth below for students participating in VHSL interscholastic athletic competition.

To be eligible to participate in the school athletic program, a student must be a bona fide student in good standing of the school he/she represents. A student's academic and behavioral performance is considered in determining whether that student is in good standing in their home school.

For a student to be deemed to be in good standing he/she must meet the following academic and student conduct criteria:
Academic Requirements For each semester, the student shall be enrolled in no fewer than five subjects, or their equivalent, offered for credit and which may be used for graduation.

Beginning July 1, 2014, students shall meet the following academic requirements to be eligible for participation in VHSL activities:

Rising 9th Graders:
All rising 9th graders who otherwise meet the qualifications for participation in VHSL activities will be deemed eligible to participate in VHSL activities for the upcoming school year.

Rising 10th, 11th and 12th Graders:
All rising 10th, 11th, and 12th graders who otherwise meet the qualifications for participation in VHSL activities will be deemed eligible to participate in VHSL activities for the first semester of the upcoming school year if:

(1) the student's cumulative grade point average at the conclusion of the preceding school year is 2.0 or greater; or
(2) the student's most recent semester grade point average was 2.0 or greater.

For eligibility in subsequent semesters, students must achieve:

(1) a cumulative grade point average of 2.0 or greater for the preceding school year; or
(2) a semester grade point average of 2.0 or greater for the preceding semester to retain eligibility.

Virginia High School League Eligibility

28A-5-1 SCHOLARSHIP RULE-The student shall:

(a) For the first semester, be currently enrolled in not fewer than *five* subjects, or their equivalent, offered for credit and which may be used for graduation; and have *passed five* subjects, or their equivalent, offered for credit and which may be used for graduation the immediately preceding year or the immediately preceding semester for schools that certify credit on a semester basis; and

(b) For the second semester, be currently enrolled in not fewer than five subjects, or their equivalent, offered for credit and which may be used for graduation; and have passed five subjects, or their equivalent, offered for credit and which may be used for graduation the immediately preceding semester.

Note: Credit for courses must be recognized by the State Department of Education. Such credit is to be awarded for the semester in which the work is scheduled to be completed. Credit for summer school work must be applied on the immediately preceding semester or year.

English Learners (EL)

An ESL program is available to students with non-English or limited English-speaking proficiency. The mission of the ESL Program is to provide a bridge to general education standards expected of all students in Richmond Public Schools. The department offers special resources and services to meet the needs of English Learners (EL). Language instruction is organized to assist students in communicating effectively in English both in and out of school and to use English to achieve academically in all content areas.

Exceptional Education

Exceptional education and related services are available for students with identified disabilities under the Individuals with Disabilities Education Improvement Act (IDEIA). These services ensure a student's access to the general education curriculum and addresses the unique needs that result from his/her disability. Services are individualized and implemented through the student's Individualized Education Plan (IEP) that is provided to the student in the least restrictive environment. Through the IEP process the students and collaborative team members are encouraged to develop specific goals related to a career plan that will support the student in reaching those goals by focusing on academics and social/emotional skills that will guide students to success and become contributing members of society.

Students with disabilities may participate in all school activities and must not be excluded from courses and tests required to earn a Standard, or Advanced Studies Diploma. Students with disabilities may receive any one of the three Board recognized (refer to "Graduation Requirements" in Section III) diplomas, as deemed appropriate by their IEP team, or other board approved certified credential (e.g. GED certificate).

Gifted and Advanced Learners

Richmond Public Schools Programs for the Gifted & Talented provides a continuum of comprehensive services for gifted and talented students. This continuum is accessible to all students beginning in kindergarten through twelfth grade. Such services are an essential component of an urban school division's commitment to deliver quality education to students to achieve at their highest potential. The Programs for the Gifted & Talented offer four levels of services of increasing challenge and are designed to emphasize the importance of pairing services with student needs utilizing flexible entry points. Our goal is to provide opportunities for students to experience challenges that promote continuous academic growth.

Levels of Services

Level 1: Special Program for Academic and Creative Excellence (General Education Classroom Push-in Services) Level 1 service is provided to all students in K-5 through the collaboration between SPACE teacher and classroom teachers. Critical and creative thinking skills will be embedded within lessons modeled by SPACE teachers using the

gifted push-in model in grades K-1. SPACE teachers and classroom teachers will identify students who demonstrate the aptitude for high achievement to be referred for Level 2 pullout services.

Level 2: Special Program for Academic and Creative Excellence (General Intellectual Aptitude/GIA Pull-out Services)
The SPACE teachers will service students with high achievement and consistent outstanding general intellectual ability in SPACE, a pull out program. The SPACE program serves students with high ability in grades 2-5. Elementary school (ES) gifted resource teachers will collaborate with classroom teachers to enhance and employ critical and creative thinking strategies in their instruction. The ES gifted resource teachers use units of study that deepen and enhance the curriculum for gifted learners. They will use sophisticated and complex content in authentic learning. These units, emphasize high-end learning, build students' critical and creative thinking skills by challenging them beyond grade level.

The middle school SPACE program serves students with high ability in grades 6 – 8. At the middle school level, elective classes with instruction provided by SPACE teachers emphasize the components of a differentiated curriculum, including advanced content, process, and product development. The MS SPACE teacher will advise and assist core teachers with differentiation for advanced and gifted learners.

Level 3: Specific Academic Ability (SAA)

Honors Program - Grades 6-12
Advanced and gifted students at the middle and high school levels are provided courses emphasizing challenging and meaningful learning experiences. Single and double advanced mathematics and dual enrollment opportunities provide students with accelerated content and in-depth study. Middle school students who qualify or meet certain criteria have access to gain high school credit in the following, Algebra I, Geometry, Earth Science, and Foreign Language.

Level 4: Application based programs servicing advanced and gifted students full time (GIA)
International Baccalaureate Middle Years Programme (IB_MYP): Grades 6-10. The IB Middle Years Programme provides a framework of academic challenge that encourages students to embrace and understand the connections between traditional subjects and the real world, and become critical and reflective thinkers.

International Baccalaureate Diploma Programme (IB-DP): Grades 11-12
The IB Diploma Programme is designed as an academically rigorous and balanced program of education that prepares students for success at the university level and in life.

Richmond Community High School: Grades 9-12
Richmond Community High School is a college preparatory high school that provides an outstanding educational opportunity for gifted students whose socio-economic circumstances may limit their ability to succeed.

Open High School: Grades 9-12
Open High School develops responsible, creative, independent, college/career ready students who value intellectual inquiry, compassion, and social responsibility in a global society by leading students to pursue challenging academic goals, participate in shared decision-making, and form partnerships with the community.

Maggie L. Walker Governor's School for Government and International Studies: Grades 9-12
Maggie L. Walker Governor's School provides broad-based educational opportunities that develop gifted students' understanding of world cultures and languages as well as the ability to lead, participate in, and contribute to a rapidly changing global society.

Appomattox Regional Governor's School for the Arts and Technology VPA and CTA: Grades 9-12
Appomattox Regional Governor's School nurtures gifted and talented creative thinkers, leaders, artists, innovators, and pioneers in the fine, performing and technological arts.

Area of Giftedness Identified by the Division	Grades Served
General Intellectual Aptitude (GIA) ▪ Special Program for Academic and Creative Excellence (SPACE)* K-8 ▪ Honors Program, Advanced Placement (AP), Dual Enrollment and Early College Academy (ECA) 6-12 ▪ International Baccalaureate Middle Years Programme (IB-MYP)* 6-10 ▪ International Baccalaureate Diploma Programme (IB-DP)* 11-12 ▪ Richmond Community High School* 9-12 ▪ Open High School* 9-12 ▪ Maggie L. Walker Governor's School for Government and International Studies* 9-12	K-12
Specific Academic Aptitude (SAA) ▪ Accelerated Mathematics 6-12 ▪ Advanced Placement (AP) 9-12	6-12
Career and Technical Aptitude (CTA) ▪ Appomattox Regional Governor's School for the Arts and Technology* 9-12 ▪ Governor's Summer STEM Academy, Hanover* 10-11	9 – 12 *
Visual and/or Performing Arts Aptitude (VPA) ▪ Appomattox Regional Governor's School for the Arts and Technology* 9-12	9 – 12 *
Extracurricular Programs for Middle School and High School Students ▪ Summer Regional Governor's School (middle school students) * ▪ Summer Residential Governor's School (high school students) * ▪ Math Science Innovation Center Summer Programs ▪ William & Mary Camp Launch* ▪ University of Virginia Summer Enrichment Program (SEP)*	6-12

*Each of these programs requires a specific application and adjudication process.

Grade Point Average (GPA), Class Rank, Grading Scale and Weighting of Grades

A student's grade point average (GPA) and class rank shall be computed for the following purposes: (1) to determine honor graduates; (2) to determine if a student is eligible for the diploma seal awarded by the Virginia Board of Education; (3) to communicate to college admissions offices and other agencies designed by the student and/or parent; and (4) to determine the valedictorians) and salutatorian(s) for the graduating class.

Class rank will be determined by assigning the student with the highest GPA the rank of number one (1); the second highest, the rank of number two (2), etc. In cases where more than one student has the same numerical average, all students with the average will be given the same rank. The next highest average will assure the next rank position.

Example:

Student No. 1 – 3.9880 Rank 1
Student No. 2 – 3.9880 Rank 1
Student No. 3 – 3.8972 Rank 2
Student No. 4 – 3.8972 Rank 2

The student with the next highest average will have the rank of three (3) in the class.

Students are ranked numerically, in descending order, according to GPA at the end of each high school year in grades 9 through 11 and at the end of the first semester of the senior year. All credit bearing courses will be used to compute the GPA and class rank. High school classes taken in middle school shall also be included in the computation. Courses with the letter grade of "I" or "P" and courses specifically flagged for exclusion (i.e., "pseudo" courses used for scheduling such as "Leave Early", "Media Assistant," etc.) are excluded from GPA calculation. GPA and class rank are reported to colleges and universities on a 4.0 scale at the end of grade 11 and at the end of the first semester of grade 12.

Students transferring during the junior or senior year shall receive a GPA and a standing as to percentage (i.e., top 5%, top 10%, etc.) but shall not be included in the numerical ranking. The GPA is determined as follows:

Points x Credits = Calculated Points
Total Calculated Points / Total Credits Attempted = GPA

Refer to the chart below for grading scale and grade values. Note that Honors/Dual Enrollment and Advanced Placement courses are assigned weighted values.

RPS Grading Scale

RPS Grading Scale	
A - Outstanding	**100-90**
B - Above Average	**80-89**
C - Average	**70-79**
D - Below Average	**60-69**
F - Unsatisfactory	**59-0**

Honor Roll

Students can attain honor roll status at the end of each 9-week marking period, semester and year by earning a grade point average of 3.0 or above and no grade below C.

Internet Acceptable Use Procedures

Appropriate student use of the Internet is addressed in the Student Code of Responsible Ethics under Standard Number 11 titled "Improper Use of the Internet." This standard recognizes the role of students as responsible uses of the Internet. Students in Richmond Public Schools are provided access to the Internet via a number of browsers, including Internet Explorer, Google Chrome and Firefox. They will not be provided with individual electronic mail accounts or unsupervised access to other tools for traveling the Internet. As such, the RPS S.C.O.R.E shall serve as the definitive guide for acceptable uses of the Internet in Richmond Public School. It is expected that all computers within the division accessing the Internet will be used in a responsible, efficient, ethical and legal manner.

Locally Awarded Verified Credits

Guidelines set forth by the Virginia Department of Education enable local school boards to award verified credits in science and history/social studies that may be used to fulfill the requirement of four verified credits of the student's own selection. These guidelines do not apply to the awarding of verified credits in English or mathematics and refer only to the Standard Diploma.

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

- Pass the high school course, not pass the related SOL or approved substitute test, but scores within a 375-399 scale score range on any administration of the SOL test after taking the test at least twice.
- Have fewer than four of the student-selected verified credits required for the Standard Diploma.
- No more than four verified credits may be awarded through this process and these guidelines may not be used to award verified credits for the Advanced Studies Diploma.

However, local school board is eligible to award locally awarded verified credits in reading, writing, and mathematics, in addition to science and history, to students with disabilities that are obtaining a Standard Diploma with accommodations. Use the same criteria for awarding credits currently approved for science and history that is stated above.

See your school's principal or counselor for complete information concerning locally awarded verified credits.

NCAA Eligibility for College-Bound Athletes

Students who plan to participate as college freshmen in Division I or II athletic programs must register and be certified by the NCAA (National Collegiate Athletic Association) Initial-Eligibility. After receiving the NCAA student-release form and a brochure entitled "Making Sure You Are Eligible to Participate in College Sports" from the guidance office, students should follow the directions to complete the necessary paperwork (including payment of a fee to the NCAA).

NCAA eligibility requirements may change annually; therefore, it is imperative that future college athletes read current NCAA materials on the NCAA Eligibility Center at http://www.eligibilitycenter.org. Students should specifically review core course requirements, SAT requirements, recruiting rules, and amateur status.

Promotion/Retention

Middle School

Promotion shall be based on successful completion of **3 out of 4** core curriculum areas (English, mathematics, social studies, and science) for each grade level. SOL test results administered at grade 8 may also be used to determine promotion or retention.

Students are encouraged to take advantage of academic strengthening, i.e., summer school, tutoring, etc. in any subject with a final grade of "F". If the student fails English and /or mathematics, he/she may be required to address the deficiency.

High School

Promotion shall be determined by (1) the successful completion of the required standard units of credit for each grade level, and (2) proficiency on the associated SOL tests.

The guidelines for grade placement are as follows:

Grade Level	Credits
9 to 10	Completion of 5 units, and pass 3 core courses
10 to 11	Completion of 10 units, and pass 6 core courses
11 to 12	Completion of 14 units, and pass 9 core courses

These are the minimum requirements that are cumulative in nature. For grades in which the SOL tests are given, achievement of a passing score on the SOL tests should be considered in addition to promotion/retention policies. Achievement expectations and participation in SOL testing of pupils with disabilities will be guided by provisions of their Individualized Education Plan (IEP) or 504 Plan.

Each student in middle and high schools shall take applicable end-of-course SOL tests following course instruction. Students who achieve a passing score shall be awarded a verified credit for that course.

Parents must be notified of unsatisfactory academic progress which might affect a child's progression to the next grade or their eligibility for graduation.

RVA Future Centers

The Centers are located in each comprehensive high school in collaboration with the school counseling department. The RVA Future Centers offer meaningful nonfinancial and financial support to RPS students, before, during, and after graduation to enhance educational and economic success. Future Centers help students identify college and career opportunities that fit their interests and abilities while focusing on the needs of the market. The RVA Future center is collaboration between Richmond Public Schools, City of Richmond, and RPS Education Foundation.

Scholar Roll

Students may attain scholar roll status at the end of each 9-week marking period, semester and year by earning a grade point average of 3.6 or above and no grade below B.

School/Parent Communication on Student Progress

Parents are provided written information concerning student progress throughout the year. The school year for all comprehensive high schools is divided into quarters of nine weeks each; students receive report cards following each quarter. Interim reports are sent home to parents in the middle of the first and third quarters. Consequently, each parent receives a minimum of six written progress reports for each student each year in addition to numerous opportunities for parent/teacher dialogue through written correspondence, conferences, email and telephone contacts.

Selection of Valedictorian(s) and Salutatorian(s)

The student or students with the highest rank at the end of the first semester of the senior year will be the valedictorian(s) of the graduating class. The student or students with the second highest rank at the end of the first semester of the senior year will be the salutatorian(s).

In those instances where two or more students have an identical GPA that results in a rank of number one, the students shall be designated co-valedictorians. Where there are two or more students with an identical GPA that results in a rank of number two, the students shall be designed as co-salutatorians for the class.

To be eligible for valedictorian and salutatorian, a student must complete the last four (4) consecutive semesters prior to graduation in the high school from which he/she will be graduating. Long-term homebound, exchange and

early graduation students shall not be eligible for valedictorian and salutatorian.

The policy regarding the eligibility of students for valedictorian and salutatorian shall become effective with the graduating class of 2005.

Sequential Electives

Beginning with the graduating class of 2003, at least two sequential electives are required for the Standard Diploma. Guidelines are as follows:

- Sequential electives may be in any discipline as long as the courses are not specifically required for graduation.
- Courses used to satisfy the one unit of credit in a fine or career and technical education elective may be used to partially satisfy this requirement.
- An exploratory course followed by an introductory course may not be used to satisfy the requirement.
- An introductory course followed by another level of the same course of study may be used.

Sequential electives do not have to be taken in consecutive years.

Standards of Learning (SOL), End-of-Course Tests, and Verified Credits

The State of Virginia has established a set of K-12 subject-area Standards of Learning (SOL) with corresponding end-of-course SOL tests. All students enrolled in a Grade 8 course are required to take a corresponding SOL test in the spring. In addition, all middle and high school students enrolled in applicable high school credit-bearing courses are required to take corresponding end-of-course tests.

Remediation opportunities (during school, after school and summer school) will be provided for students failing one or more of the SOL tests. Students and parents should check with principals in selecting appropriate programs.

Students who pass the course and achieve a passing score on an end-of-course test are awarded a **verified** unit of credit in that course. A **verified credit** is defined as 140 clock hours of instruction, successful completion of the course requirements, and the achievement of a passing score on the SOL test for that course or on a substitute assessment. (See "Substitute Assessments" in this section). The State has established the number of standard credits and verified credits required for the Standard Diploma and for the Advanced Studies Diploma (See "Graduation Requirements" in Section I.):

1. Students entering the ninth grade in (Class of 2007 and beyond) must pass 6 end-of-course tests: 2 English plus 1 mathematics, 1 science, 1 history/social science, and 1 of student's choice.
2. Students seeking an **Advanced Studies Diploma** entering ninth grade in (Class of 2004 and beyond) must pass 9 end-of course tests: 2 English, 2 mathematics, 2 sciences, 2 history/social sciences, and 1 of the student's choice.

Verified credits may be earned in each of the following core content areas:

ENGLISH

For both the 22-Credit Standard Diploma and the 26-Credit Advanced Studies Diploma, Virginia Graduation requirements specify four (4) course credits with two (2) verified credits earned by passing the following SOL English end-of-program tests:

- End-of-Course **Reading** SOL test (1 verified credit; grades 9-11 SOL) and;
- End-of-Course **Writing** SOL test (2 parts, 1 verified credit; grades 9-11 SOL); typically, will be administered to all students enrolled in English 11.

MATHEMATICS

Virginia graduation requirements for the 22-Credit Standard Diploma specify three (3) course credits with one (1) verified credit; for the 26-Credit Advanced Studies Diploma, four (4) course credits with two (2) verified credits earned by passing the following:

- End-of-Course Algebra I SOL test
- End-of-Course Geometry SOL test
- End-of-Course Algebra II SOL test

SCIENCE

Virginia graduation requirements for the 22-Credit Standard Diploma specify three (3) laboratory science credits (from at least two different science disciplines) with one (1) verified credit; for the 26-Credit Advanced Studies Diploma, four (4) laboratory science credits (from at least three different science disciplines) and two (2) verified credits are earned by passing the following:

- End-of-Course Earth Science SOL test
- End-of-Course Biology SOL test
- End-of-Course Chemistry SOL test

HISTORY/SOCIAL SCIENCE

Virginia graduation requirements for the 22-Credit Standard Diploma specify three (3) course credits with one (1) verified credit; for the 26-Credit Advanced Studies Diploma, four (4) course credits with two (2) verified credits are earned by passing the following:

- End-of-Course Geography SOL test
- End-of-Course World History and Geography I: to 1500 AD SOL test
- End-of-Course World History and Geography II: 1500 AD to the Present SOL test
- End-of-Course U.S. and Virginia History SOL test

Straight "A" Scholar

Students who earn all A's at the end of each nine-week period, semester and/or year will achieve the status of Straight "A" Scholar.

Student Activities

Students are encouraged to explore interests and to participate in student activities that tend to promote and build self-esteem, character and leadership qualities. Numerous opportunities are available for students to excel in activities beyond the classroom and the textbook to include the following:

Athletics	Intramural activities
Service clubs	Co-curricular activities
Honor societies	Community service
Performing groups	Publications

Student-Selected Tests

Student-selected Test(s) may come from:

- Any end of course EOL test that is not already satisfying a required verified credit or
- Tests in computer science technology, or other areas
- The State Board of Education has approved a number of career and technical education certification and licensure exams that may also be used to satisfy student-selected verified credits. See the school counselor for a complete list.

Substitute Assessments for SOL Tests

Assessments that substitute for SOL tests and enable students to earn verified credit must meet the following minimum criteria:

1. The test must be standardized and graded independently of the school or school division in which the test is given;
2. The test must be knowledge based;
3. The test must be administered on a multistate or international basis, or administered as part of another state's accountability assessment program; and
4. To be counted in a specific academic area, the test must measure content that incorporates or exceeds the SOL content in the course for which verified credit is given.

Testing Program

Testing is an essential part of a student's education. With test results students, parents, teachers, and administrators can determine not only the student's strengths but also the schools curricular strengths. State – mandated test scores are a part of the student's school record.

The following standardized tests may be administered to middle and high school students.

Grade	Test	Dates
6^{th}-12^{th}	SOL	Spring, (Fall and Summer for some)
9^{th}-11^{th}	PSAT	Fall
11^{th}	SAT- School Day	Spring
10^{th}-12^{th}	Advanced Placement	Spring

VCU Health Sciences Academy

VCU Health Sciences Academy is in partnership with two Richmond City Public Schools, John Marshall High School (JMHS) and Richmond Community High School (RCHS), and offers:

- a health sciences exploration course,
- interactive lectures from health care workers,
- a mentoring program with VCU undergraduates and
- field trips to the Monroe Park and VCU Health campuses.
- Syllabi for Richmond City Public School Students

Websites

The Web Site for Richmond Public Schools is https://www.rvaschools.net/
The Web Site for Virginia Department of Education is http://www.doe.virginia.gov/
The Web Site for Scholarship Search is https://www.fastweb.com/
The Web Site for College Board (SAT, PSAT, AP) is https://www.collegeboard.org/
The Web Site for ACT is http://www.act.org/
The Web Site for FAFSA (Free Application for Federal Student Aid) is https://fafsa.ed.gov/

SECTION II: Overview of Middle and High Schools

Elementary School

Career Awareness and Planning for Middle School

Middle School

Exploring Careers and Planning for High School

MIDDLE SCHOOL OPTIONS

Middle Schools

(Curriculum includes standards, honors, high school offerings)
Binford, Lucille M. Brown, Thomas C. Boushall, Elkhardt-Thompson, Thomas H. Henderson, Albert Hill, and Martin Luther King, Jr.

Special Middle School Programs

Talented and Gifted offered at all middle schools
International Baccalaureate Middle Years Program located at Lucille M. Brown Middle School
Turnaround Arts at Binford Middle School and Martin Luther King, Jr. Middle School
RTC-Franklin Military Academy (Leadership)

HIGH SCHOOL OPTIONS

Comprehensive High Schools

(Academic and technical programs of studies offered in five high schools)
Armstrong, George Wythe, Huguenot, Thomas Jefferson, John Marshall
Curricula include standard, honors, IB, Dual Enrollment, and Advanced Placement offerings

Career and Technical Centers and Alternative Education

Richmond Technical Center (Specialized technical concentrations available to all high school students)
Performance Learning Center (A nontraditional learning environment with a blended learning curriculum)
Richmond Alternative School (Alternative Education)

Academic Core and Electives

English
Mathematics
Science
History and Social Science
Health/Physical Education
World Languages
Fine and Performing Arts
JROTC

Career and Technical Education Areas

Business, Finance, and Marketing
Communications, Arts, and Media
Manufacturing, Trades, and Technical
Health, Human, and Public Services

Alternative High Schools and Specialty Programs

(Applications and/or referral for admission required)
Franklin Military Academy, Open High, Richmond Community High, Appomattox Regional Governor's School for the Arts and Technology, Maggie L. Walker Governor's School for Government and International Studies, CodeRVA

International Baccalaureate Program

Grades 9-12 at Thomas Jefferson High School

Post Secondary Options

Four-Year College - Two-Year College - Other Professional Training
Apprenticeship - Military Services - Work Force

Living and Working in the 21st Century

RICHMOND PUBLIC SCHOOLS
ACADEMIC & CAREER PLAN

Tentative Career Cluster/Plan:

Gr. 7_____
Gr. 8_____
Gr. 9_____
Gr. 10_____
Gr. 11
Gr. 12_____

Student Name: _____ **Student ID#:** _____
School:_____
Career Goal: **Career Cluster/Pathway:**

Diploma Choice: Advanced □ Standard □ Applied □

This individualized plan is tentative and will be reviewed annually. Do not be overly concerned with selecting electives for the 7th, 8th, and 9th grades as these may change based on interest and availability. *Your school counselor will help you develop your plan and will monitor your progress.*

STANDARD		**ADVANCED STUDIES**		**Applied**	**SOL TESTING REQUIREMENTS**	
Diploma Requirements 22 Credits		**Diploma Requirements 26 Credits**		This diploma is available to students with disabilities who complete the requirements of their Individualized Education Program (IEP) and who do not meet the requirements of for other diplomas	**Advanced Diploma**	**Standard Diploma**
Subject	**Units of Credit**	**Subject**	**Units of Credit**		2 English 2 Math 2 Science 2 History/Social Science 1 Student selected Test **9 TOTAL**	2 English 1 Math 1 Science 1History/Social Science 1 Student selected Test **6 TOTAL**
English	4	English	4			
*Mathematics	3	*Mathematics	4		**English:** Reading: Writing: **Math:** Algebra 1: Geometry: Algebra 2:	**Science:** E. Science : Biology: Chemistry: **History:** W. Geography: W. History 1: W. History 2: US/VA:
Laboratory Science	3	Laboratory Science	4			
History/Social Science	3	History/Social Science	4			
Health/Physical Education	2	Health/Physical Education	2			
World Lang/Fine Arts/Career	2	World Language (3 yrs. of one or 2 yrs. each of languages)	3		**Denote Completion of Virtual, Industry Cert & CPR** ☐ Virtual Credit ☐ Industry Cert. _____ ☐ CPR. Training	
Economics/Per. Finance	1	Economics/Per. Finance	1			
Electives	4	Fine or Career/Tech Ed.	1			
		Electives	3			
Virtual Course		Virtual Course				
Industry Certification						
CPR Training		CPR Training				
TOTAL	**22**	**TOTAL**	**26**			

TEST DATA:

PSAT		**SAT**		**ACT**		**OTHER**		**OTHER**

PLAN OF STUDY

EDUCATION LEVELS
9

SECTION III: Graduation Requirements

Standard Diploma

Course and Assessment Requirements - 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 **six verified credits** by passing end-of-course SOL tests or other assessments approved by the Board of Education.

Additional Requirements - **Beginning with students entering ninth grade for the first time in 2013-2014,** a student must earn a Board-approved career and technical education credential to graduate with a Standard Diploma; and successfully complete one virtual course, which may be non-credit bearing.

Beginning with first-time ninth-grade students in 2016-2017, students shall be trained in emergency first aid, CPR, and the use of AEDs, including hands-on practice of the skills necessary to perform CPR.

Discipline Area	Standard Credits: effective with first-time ninth graders in 2016-2017 and beyond	Verified Credits: effective for first-time ninth graders in 2002-2004 and beyond	Proposed Verified Credits: effective with ninth graders in 2018-2019 and beyond
English	4	2	2
Mathematics[1]	3	1	1
Laboratory Science [2,6]	3	1	1
History & Social Sciences 2[,6]	3	1	1
Health and Physical Education	2		
Foreign Language, Fine Arts or Career & Technical Education[7]	2		
Economics and Personal Finance	1		
Electives 4	4		
Virtual Course	Required		
CPR, First Aid, and AED	Required		
CTE Credential	Required		
Student Selected Test[5]		1	
Total	**22**	**6**	**5**

[1]**For students entering the ninth grade for the first time in 2011-2012 and beyond:** Courses completed to satisfy this requirement shall include at least two different course selections from among: Algebra I, Geometry, Algebra, Functions and Data Analysis, Algebra II, or other mathematics courses above the level of Algebra II. The Board shall approve courses to satisfy this requirement.

[2] **For students entering the ninth grade for the first time in 2011-2012 and beyond:** Courses completed to satisfy this requirement shall include course selections from at least two different science disciplines: earth sciences, biology, chemistry or physics or completion of the sequence of science courses required for the International Baccalaureate Diploma. The board shall approve courses to satisfy this requirement.

[3] **The Board shall approve additional courses to satisfy this requirement. For students entering the ninth grade for the first time in 2011-2012 and beyond:** Courses completed to satisfy this requirement shall include U. S. and Virginia History, U. S. and Virginia Government, and

one course in either World History or Geography or both. The Board shall approve courses to satisfy this requirement.

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

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

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

[7]For students entering the ninth grade for the first time in 2011-2012 and beyond: Pursuant to Section 22.1-253.13:4, Code of Virginia, credits earned for this requirement shall include one credit in fine or performing arts or career and technical education.

[8]Students shall earn a career and technical education credential approved by the Board of Education that could include, but not be limited to, the successful completion of an industry certification, a state licensure examination, a national occupational competency assessment, or the Virginia workplace readiness assessment.

[9]Students shall successfully complete one virtual course, which may be noncredit-bearing course or a required or elective credit-bearing course that is offered online.

Electives

Fine Arts and Career and Technical Education

The Standard and Advanced Studies Diplomas each contain a requirement for one standard unit of credit in Fine Arts or Career and Technical Education. The Standards of Accreditation do not require that courses used to satisfy the requirement of Fine Arts or Career and Technical Education be approved by the Board.

Sequential Electives

Effective with the graduating class of 2003, students who wish to receive a Standard Diploma must successfully complete two sequential electives. On February 5, 2002, the Board of Education approved Guidelines for Sequential Electives for the Standard Diploma.

Guidelines are as follows:

- Sequential electives may be in any discipline as long as the courses are not specifically required for graduation.
- Courses used to satisfy the one unit of credit in fine arts or career and technical education course may be used to partially satisfy this requirement.
- An exploratory course followed by an introductory course may not be used to satisfy the requirement.
- An introductory course followed by another level of the same course of study may be used.
- Sequential electives do not have to be taken in consecutive years.

Information regarding Graduation Requirements can be found at
http://www.doe.virginia.gov/instruction/graduation/index.shtml

Credit Accommodations

The Board of Education has approved Guidelines for Standard Diploma Credit Accommodations for Students with Disabilities to provide alternatives for these students in meeting the requirement for a Standard Diploma.

Credit Accommodations Available for Personal Living and Finances Course – These credit accommodations include augmenting the Personal Living and Finances course (state course code 3120) by including the 21 Workplace Readiness Skills (WRS) for the Commonwealth. Students with Individualized Education Programs (IEPs) and 504 Plans will have the opportunity to use the revised course to meet the Economics and Personal Finance graduation requirement if the student has earned at least three (3) standard credits in history and social science.

Credit accommodations provide alternatives for students with disabilities in earning the standard and verified credits required to graduate with a Standard Diploma.

Credit accommodations for students with disabilities may include:

- Alternative courses to meet the standard credit requirements;
- Modifications to the requirements for locally awarded verified credits;
- Additional tests approved by the Board of Education for earning verified credits;
- Adjusted cut scores on tests for earning verified credits;
- Allowance of work-based learning experiences through career and technical education (CTE) courses

While credit accommodations provide alternative pathways and flexibility, students receiving accommodations must earn the 22 standard credits and six verified credits required to graduate with a Standard Diploma.

Information regarding Credit Accommodations for the Standard Diploma can be found at http://www.doe.virginia.gov/instruction/graduation/credit_accommodations.shtml

Advanced Studies Diploma

Course and Assessment Requirements - To graduate with an Advanced Studies Diploma, a student must earn at least **26 standard units of credit**, depending on when he or she entered ninth grade, and at least **nine verified units of credits** by passing end-of-course SOL tests or other assessments approved by the Board of Education.

Additional Requirements - **Beginning with students entering ninth grade for the first time in 2013-2014**, a student must successfully complete one virtual course, which may be non-credit bearing, to graduate with an Advanced Studies Diploma.

Beginning with first-time ninth-grade students in 2016-2017, students shall be trained in emergency first aid, CPR, and the use of AEDs, including hands-on practice of the skills necessary to perform CPR.

Discipline Area	Standard Credits: effective with first-time ninth graders in 2016-2017 and beyond	Verified Credits: effective with ninth graders in 2000-2001 and beyond	Verified Credits: effective with ninth graders in 2018-2019 and beyond
English	4	2	2
Mathematics[1]	4	2	1
Laboratory Science [2]	4	2	1
History & Social Sciences [3]	4	2	1
Foreign Languages	3		
Health & Physical Education	2		
Fine Arts or Career & Technical Education	1		
Economics and Personal Finance	1		
Electives	3		
Virtual Course	Required		
CPR, First Aid, and AED	Required		
Student Selected Test[5]		1	
Total [6]	**26**	**9**	**5**

[1] **For students entering the ninth grade for the first time in 2011-2012 and beyond:** Courses completed to satisfy this requirement shall include at least three different course selections from among Algebra I, Geometry, Algebra II, or other mathematics courses above the level of Algebra II. The Board shall approve courses to satisfy this requirement.

[2] **For students entering the ninth grade for the first time in 2011-2012 and beyond:** Courses completed to satisfy this requirement shall include course selections from at least three different science disciplines from among: earth sciences, biology, chemistry, or physics, or completion of the sequence of science courses required for the International Baccalaureate Diploma. The Board shall approve courses to satisfy this requirement.

[3] **For students entering the ninth grade for the first time in 2011-2012 and beyond:** Courses completed to satisfy this requirement shall include U. S. and Virginia History, U. S. and Virginia Government, and two courses in either World History or Geography or both. The Board shall approve courses to satisfy this requirement.

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

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

[6] Students shall successfully complete one virtual course, which may be noncredit-bearing course, or may be a course required to earn this diploma that is offered online.

Electives

Fine Arts and Career and Technical Education

The Standard and Advanced Studies Diplomas each contain a requirement for one standard unit of credit in Fine Arts or Career and Technical Education. The Standards of Accreditation do not require that courses used to satisfy the requirement of Fine Arts or Career and Technical Education be approved by the Board. Therefore, local school officials should use their own judgment in determining which courses students take to satisfy this requirement.

World Language

The Advanced Studies Diploma contains a requirement for either three years of one world language or two years of two languages. In March 1998, the Board of Education approved the provision of three years of instruction in American Sign Language (ASL) for world language credit toward an Advanced Studies Diploma; other world languages will satisfy this requirement as well. Details of this action are available in: Superintendent's Memo, Interpretive, #1, June 12, 1998.

Information regarding Graduation Requirements can be found at
http://www.doe.virginia.gov/instruction/graduation/index.shtml

Applied Studies Diploma

As of July 1, 2015, state legislation eliminated the term “Special Diploma”. In lieu of this language, the term “Applied Studies Diploma” will be used. This diploma is available to students with disabilities who complete the requirements of their Individualized Education Program (IEP) and who do not meet the requirements for other diplomas.

Diploma Requirements for First-Time Transfer Students

Standard Diploma Verified Credit Requirements

Beginning = First 20 hours of instruction During = After the first 20 hours of instruction

Students transferring into a Virginia public school for the first time			
During 9th Grade OR Beginning of 10th Grade:	**Must Earn**	**Ninth Graders in 2000-01, 2001-02, 2002-03**	**Ninth Graders in 2003-04 and beyond**
6 Verified Credits:			
	English	2	2
	Mathematics		1
	Science		1
	History & Social Science		1
	Student Selected	4	1
During 10th Grade OR Beginning of 11th Grade:	**Must Earn**	**Ninth Graders in 2000-01, 2001-02, 2002-03**	**Ninth Graders in 2003-04 and beyond**
4 Verified Credits:			
	English	2	1
	Mathematics		1
	Science		1
	History & Social Science		1
	Student Selected	2	
During 11th Grade OR Beginning of 12th Grade:			
2 Verified Credits:			
	English	1	1
	Student Selected	1	1
During 12th Grade:	Students should be given every opportunity to earn a diploma; if this is not possible, the school division should arrange to have the previous school award the diploma; or seek a waiver of the verified credit requirement from VDOE.		

Six verified credits required for a student transferring during the 9th grade or at the beginning of the 10th grade

- English – 2
- Mathematics – 1
- Science – 1
- History & Social Science – 1
- Student Selected – 1

Four verified credits for a student transferring during the 10th grade or at the beginning of the 11th grade

- English – 1
- Mathematics – 1
- Science – 1
- History & Social Studies – 1

Two verified credits for a student transferring during the 11th grade or at the beginning of the 12th grade

- English – 1
- Student Selected – 1

For a student transferring during the 12th grade, every opportunity should be given to earn a diploma; if this is not possible the local school division should seek to have the previous school award the diploma or request from VDOE a waiver of the verified credit requirement.

Information regarding Graduation Requirements for First-time Transfers to a Virginia Public School can be found at http://www.doe.virginia.gov/instruction/graduation/student_transfers.shtml

Advanced Studies Diploma Verified Credit Requirements

Beginning = First 20 hours of instruction During = After the first 20 hours of instruction

Students transferring into a Virginia public school for the first time		
During 9th Grade OR Beginning of 10th Grade:	**Must Earn**	**Ninth Graders in 2000-01 and beyond**
9 Verified Credits:		
	English	2
	Mathematics	2
	Science	2
	History & Social Science	2
	Student Selected	1
During 10th Grade OR Beginning of 11th Grade:	**Must Earn**	**Ninth Graders in 2000-01 and beyond**
6 Verified Credits:		
	English	2
	Mathematics	1
	Science	1
	History & Social Science	1
	Student Selected	1
During 11th Grade OR Beginning of 12th Grade:	**Must Earn**	**Ninth Graders in 2000-01 and beyond**
4 Verified Credits:		
	English	1
	Student Selected	3
During 12th Grade:	Students should be given every opportunity to earn a diploma; if this is not possible, the school division should arrange to have the previous school award the diploma; or seek a waiver of the verified credit requirement from VDOE.	

Nine verified credits required for a student transferring during the 9th grade or at the beginning of the 10th grade

- English – 2
- Mathematics – 2
- Science – 2
- History & Social Science – 2
- Student Selected – 1

Six verified credits for a student transferring during the 10th grade or at the beginning of the 11th grade

- English – 2
- Mathematics – 1
- Science – 1
- History & Social Studies – 1
- Student Selected - 1

Four verified credits for a student transferring during the 11th grade or at the beginning of the 12th grade

- English – 1
- Student Selected – 3

For a student transferring during the 12th grade, every opportunity should be given to earn a diploma; if this is not possible the local school division should seek to have the previous school award the diploma or request from VDOE a waiver of the verified credit requirement.

Information regarding Graduation Requirements for First-time Transfers to a Virginia Public School can be found at http://www.doe.virginia.gov/instruction/graduation/student_transfers.shtml

General Achievement Adult High School Diploma (GAAHSD) Program

This diploma is intended for individuals who are at least 18 years of age and not enrolled in public school or not otherwise meeting the compulsory school attendance requirements set forth in the *Code of Virginia*.

Requirements for earning the GAAHSD include prescribed standard units of credit; a passing score on a high school equivalency examination approved by the Virginia Board of Education; and the attainment of a Board-approved career and technical education credential, such as the successful completion of an industry certification, a state licensure examination, a national occupational competency assessment, or the Virginia Workplace Readiness Skills Assessment. Standard credits required for the GAAHSD may be earned in a variety of educational settings, including public school; community college or other postsecondary institution; adult high school program; or approved correspondence, distance education, or online courses. See General Achievement Adult High School Diploma (GAAHSD) Program for requirements.

General Education Development Certificates (GED)

The Tests of General Educational Development (GED) were developed by the American Council on Education to enable persons who have not graduated from high school to demonstrate the attainment of abilities normally associated with completion of a high school program of study. The Virginia GED program provides an opportunity to recognize the educational development of individuals as results of their life and/or employment experiences. Persons who are successful on the battery of tests receive a certificate that is equivalent to a high school diploma. Applications and testing information can be secured from the Richmond Alternative School (RAS).

An applicant must be at least 18 years of age and out of school. Under special circumstances the age limit may be lowered if an applicant:

- has been officially withdrawn from school
- meets all requirements for homeschooled youth
- meets the requirements for youth granted an Individual Student Alternative Education Plan (ISAEP)
- meets the requirements for youth currently enrolled in alternative education programs. Under no circumstances is an individual under the age of 16 eligible for testing.

The GED battery of four tests measures the skills considered to be the major outcomes of a high school education. The tests focus on the major use of skills and concepts rather than upon recall of specific facts. The questions focus on the general abilities to analyze, evaluate, and draw conclusions.

Subject Areas

- Reasoning through Language Arts
- Mathematical Reasoning
- Science
- Social Studies

Richmond Public Schools offers a GED preparatory program with course instruction in writing skills, reading skills, science, social studies and mathematics. A practice test is also offered monthly. Call 804- 780-4388 for complete registration and testing information.

Diploma Seals

Students meeting specific requirements for graduation and demonstrating exemplary performance may receive diploma seals for recognition. VDOE makes available to local school divisions the following seals:

Governor's Seal

Awarded to students with an Advanced Studies Diploma with an average grade of "B" or better who 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

Awarded to students who complete requirements for a Standard or Advanced studies diploma beginning with the 9th grade class of 2006-2007 and beyond with an average grade of **"A"**.

Board of Education's Career and Technical Education Seal

Awarded to students who earns 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"** average in those courses; or (i) pass an examination or 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 (ii) 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.

Board of Education's Advanced Mathematics and Technology Seal

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 (a) pass an examination in a career and technical education field that confers certification from a recognized industry, or trade or professional association; or (b) acquire a professional license in a career and technical education field from the Commonwealth of Virginia; or (c) 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.

Board of Education's Excellence in Civics Education Seal

Awarded to students who meet each of the following 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; participating in school-sponsored extracurricular activities that have civics focus. Any student who enlists in the United States military prior to graduation will be deemed to have met this community service requirement; and have good attendance and no disciplinary infractions as determined by local school board policies.

Board of Education's Seal of Biliteracy

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.
- Local school divisions may award other diploma seals or awards for exceptional academic, CTE, citizenship or other exemplary performance in accordance with criteria defined by the local school board. The design, production and use of those seals are the responsibility of the local school boards awarding the seal.

Board of Education Seal for Excellence in Science and the Environment – Proposed for Entering ninth grade class of 2018-2019

The Board of Education's for Excellence in Science and the Environment shall be awarded to students who earn either a Standard Diploma or Advanced Studies Diploma and (i)complete at least three different first level board approved laboratory science courses and at least one rigorous advanced –level or post-secondary laboratory science course, each with a grade of "B" or higher: (ii) complete laboratory or field-science research and present that research in a formal juried setting: and (iii) 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.

Standard Diploma
Record of Standard and Verified Credits

Student Name_____ Grade _____ Yr. Entered 9th Grade_____

Discipline	Courses	Standard Credits	SOL Test or Substitute Assessment Passed		Verified Credits
English 4 standard credits 2 verified credits			English RLR* Or Substitute		
			English Writing or Substitute		
Mathematics 3 standard credits			Students may combine SOL tests with other approved substitute assessments or career and technical certifications to earn verified credits. A list of the approved substitute assessments may be found on the Internet: http://www.doe.virginia.gov/?VDOE/suptsmemom/2002/info079a.pdf		
Laboratory Science 3 standard credits					
History and Social Science 3 standard credits					
Health and Physical Education 2 standard credits				Sequential Electives	
Fine or Practical Art, World Language, or CTE 2 standard credits					
Economics & Personal Finance 1 standard credit					
Electives 4 standard credits Students who graduate in 2003 and beyond must have 2 sequential electives. Guideline on sequential electives are available on the Internet: http://www.doe.virginia.gov/VDOE/suptsmemom/2002/info079a.pdf					
Board-approved Career or Industry Credential	**Required**		**Required**		
Virtual Course	**Required**		**Required**		
Students Selected Test	During the transition years, students must earn 2 verified credits in English and 4 other verified credits of their choice, which would be reflected above.				
Total	Minimum: 22 Standard Credits		Minimum: 6 Standard Credits		

*English Reading/Literature/Research

Advanced Studies Diploma
Record of Standard and Verified Credits

Student Name_____ Grade _____ Yr. Entered 9th Grade_____

Discipline	Courses	Standard Credits	SOL Test or Substitute Assessment Passed		Verified Credits
English 4 standard credits 2 verified credits			English RLR* Or Substitute		
			English Writing or Substitute		
Mathematics 4 standard credits 2 verified credits			Students may combine SOL tests with other approved substitute assessments or career and technical certifications to earn verified credits. A list of the approved substitute may be found on the Internet: http://www.doe.virginia.gov/VDOE/suptsmemos/2002/int001a.pdf		
Laboratory Science 4 standard credits 2 verified credits					
History and Social Science 4 standard credits 2 verified credits					
World Language 3 standard credits (3 years of 1 language or 2 years each of 2 languages)					
Health and Physical Education 2 standard credits					
Fine or Practical Art 1 standard credit					
Economics & Personal Finance 1 standard credit					
Electives 3 Standard credits http://www.doe.virginia.gov/VDOE/suptsmemos/2002/int001a.pdf					
Board-approved Career or Industry Credential	**Required**		**Required**		
Virtual Course	**Required**		**Required**		
Students Selected Test	Students must earn 2 verified credits in English, 2 verified credits in Mathematics, 2 verified credits in laboratory science, 2 verified credits in History and Social Science, and 1 of Student's Selection.				
Total	Minimum: 24 Standard Credits or 26 Standard Credits		Minimum: 9 Verified Credits		

*English Reading/Literature/Research

Section IV: Course Sequences and Honors Guidelines

Acceleration

Efforts have been made to ensure that students may access an accelerated pathway toward high school credit while in middle school without skipping *Standards of Learning*. There are multiple ways in which students may earn high school credits in middle school and points for applications submitted to specialty and Governor's schools. The criteria for placement in accelerated courses are described in this catalog.

Honors

Efforts have also been made to ensure that students have access to honors course in middle and high school. These courses are for students who want to extend their thinking and challenge their abilities. The criteria for placement in honors courses are described in this catalog.

Identification/Placement

Each school is responsible for establishing an Identification/Placement Committee, which will be responsible for reviewing referrals and pertinent documentation for placement into honors courses. The Identification/Placement Committee will consist of teachers, school counselors, assessment analysts, gifted program staff, school administrators, and/or others with credentials or experience in gifted education as deemed appropriate by the school principal.

Accelerated Courses

Accelerated courses are designed to allow students an opportunity to accelerate through the typical core curriculum while ensuring that all standards are taught or essential knowledge and skills are met in each grade level. This occurs most commonly in Mathematics.

Students may demonstrate ability that requires them to skip content and accelerate to a higher grade level course to meet their academic needs. These students will be permitted to take a class in the next grade level based on meeting a majority of the criteria listed below for their current grade level and course sought.

Screening and Identification

Richmond Public Schools shall use a uniform procedure with **multiple criteria** for screening and identification of accelerated-learning pupils in all populations, as prescribed by the Virginia Board of Education. Richmond Public Schools shall use the following criteria for determining the appropriate level of acceleration:

- Assessment of appropriate pupil evidence of learning, performance, or portfolio;
- Record of observation of in-class behavior (teacher recommendation);
- Appropriate rating scaled, checklists, or questionnaires;
- Individual interview;
- Record of previous accomplishments such as awards, honors, grades; and
- Additional valid and reliable measures or procedures.

Assessments

Assessments used to determine placement in honors or accelerated courses may include:

- Measures of Academic Progress (MAP)
- Standards of Learning Assessments (SOL)
- PowerSchool District Created Assessment

English Acceleration Criteria

Students should meet the majority of criteria listed below based on their current grade level and course in which they are seeking to enroll.

Course	Criteria	Comments/Notes
English 6 - 12	▪ Standard Grade Level Language Arts/English Course	▪ Students will receive instruction on grade level SOL ▪ Students will take the appropriate grade level SOL test at the end of the respective grade level or course.
Honors English 6 - 12	▪ Grade of "B" or better in previous Language Arts/English course ▪ MAP Reading Score in the 80th Percentile or greater ▪ Teacher recommendation	▪ Honors course completes grade level SOL at a more rigorous level ▪ Students will take the appropriate grade level SOL Test at the end of the respective grade level or course. ▪ Placement decisions made by school-based team

*Teacher recommendation should be based on academic ability, not behavior.

Mathematics Acceleration Criteria

Students should meet the majority of criteria listed below based on their current grade level and course in which they are seeking to enroll. Differentiated instruction in mathematics reflects a tiered system of instruction:

- **Grade level mathematics courses -** Content-based, differentiated general classroom instruction will service approximately 80 percent of students in a given grade level
- **Single acceleration -** Compacted courses will service 15-20 percent of students per grade level,
- **Double acceleration -** Subject level acceleration will service approximately 5 percent of students in a given grade level.

6th GRADE MATHEMATICS

Course	Criteria	Comments/Notes
Mathematics Grade 6	Standard Grade Level Mathematics Course	▪ Students will receive instruction on 6th Grade SOL ▪ Students will take the Grade 6 Mathematics SOL test at the end of 6th grade
Mathematics Grade 6/7	▪ Grade of "B" or better in previous mathematics course ▪ Score of 450 or greater on Grades 5 Mathematics SOL ▪ MAP Math Score in the 90th percentile or greater ▪ Score of 80% or higher on District created Assessment in PowerSchool ▪ Teacher recommendation*	▪ This course completes all of the Grade 6 Mathematics SOL and the first semester of the Grade 7 Mathematics SOL ▪ Students will take the Grade 6 Mathematics SOL test at the end of 6th grade ▪ Placement decisions made by school-based team
Mathematics Grade 7	▪ Grade of "B" or better in previous math course ▪ Score of 500 or Higher on 5th Grade Math SOL test ▪ MAP Math Score in the 95th percentile or greater ▪ Score of 90% or higher on District created Assessment in PowerSchool ▪ Teacher recommendation*	▪ 7th Grade Mathematics SOL will be taught ▪ Students will take the Grade 7 Mathematics SOL test at the end of 6th grade ▪ Placement decisions will be made in consultation with Instructional Specialist for Mathematics

*Teacher recommendation should be based on academic ability, not behavior.

7th GRADE MATHEMATICS

Course	Criteria	Comments/Notes
Mathematics 7	▪ Standard Grade Level Mathematics Course	▪ Students will take 7th Grade Mathematics SOL test
Honors Mathematics 7/8	▪ Grade of "B" or better in previous mathematics course ▪ Score of 450 or greater on Grade 6 Mathematics SOL test ▪ Score of 85% or higher on District created Assessment in PowerSchool ▪ Teacher recommendation*	▪ This course includes second semester of the Grade 7 Mathematics SOL and all the Grade 8 Mathematics SOL. ▪ Students will take the Grade 8 Mathematics SOL test at the end of 7th grade ▪ Placement decisions will be made by school-based team
Mathematics 8	▪ Grade of "B" or better in previous math course ▪ Score of 500 or greater on Grade 6 Mathematics SOL test ▪ MAP Math Score in the 90th percentile or greater ▪ Score of 90% or higher on District created Assessment in PowerSchool ▪ Teacher recommendation*	▪ This course includes the Grade 8 Mathematics SOL ▪ Students will take the Grade 8 Mathematics SOL test ▪ Placement decisions made by school-based team in consultation with Instructional Specialist for Mathematics
Algebra 1	▪ Grade of "B" or better in previous mathematics course ▪ Score of 500 or greater on the Grade 8 Mathematics SOL test ▪ MAP Math Score in the 95th percentile or greater ▪ Score of 95% or higher on District created Assessment in PowerSchool ▪ Teacher recommendation*	▪ Double Acceleration ▪ Students will take the Algebra I SOL test ▪ This course is eligible for high school credit ▪ Placement decisions made by school-based team in consultation with Instructional Specialist for Mathematics

*Teacher recommendation should be based on academic ability, not behavior.

8th GRADE MATHEMATICS

Course	Criteria	Comments/Notes
Mathematics 8	▪ Standard Grade Level Mathematics Course	▪ Students will take Grade 8 Mathematics SOL test
Algebra I	▪ Grade of "B" or higher in previous mathematics course ▪ Score of 500 or greater on recent Mathematics SOL tests ▪ MAP Math Score in the 85th percentile or greater ▪ Score of 90% or higher on District created Assessment in PowerSchool ▪ Teacher recommendation*	▪ Students will take the Algebra I SOL test ▪ This course is eligible for high school credit ▪ Placement decisions made by school-based team
Geometry	▪ For middle school students who have passed Algebra 1, Geometry is the next course in the sequence; no testing requirement must be met	▪ Geometry students will take the Geometry SOL test ▪ Placement decisions made by school-based team in consultation with Instructional Specialist for Mathematics ▪ This course is eligible for high school credit

*Teacher recommendation should be based on academic ability, not behavior.

History/Social Science Acceleration Criteria

Students should meet the majority of criteria listed below based on their current grade level and course in which they are seeking to enroll.

6th GRADE HISTORY/SOCIAL SCIENCE

Course	Criteria	Comments/Notes
United States History to 1865	▪ Successful completion of previous history course	▪ Students will receive instruction on United States History to 1865 standards
Honors United States History to 1865	▪ Grade of "B" or better in previous history course ▪ Teacher recommendation*	▪ Placement decisions made by school-based team

*Teacher recommendation should be based on academic ability rather than behavior.

7th GRADE HISTORY/SOCIAL SCIENCE

Course	Criteria	Comments/Notes
United States History 1865 to Present	▪ Successful completion of previous history course	▪ Students will receive instruction on United States History 1865 to Present standards
Honors United States History 1865 to Present	▪ Grade of "B" or better in previous history course ▪ Teacher recommendation*	▪ Placement decisions made by school-based team

*Teacher recommendation should be based on academic ability, not behavior.

8th GRADE HISTORY/SOCIAL SCIENCE

Course	Criteria	Comments/Notes
Civics and Economics	▪ Successful completion of previous history course	▪ Students will receive instruction on Civics and Economics standards
Honors Civics and Economics	▪ Grade of "B" or better in previous history course ▪ Teacher recommendation*	▪ Placement decisions made by school-based team

**Teacher recommendation should be based on academic ability, not behavior.*

Science Acceleration Criteria

Students should meet the majority of criteria listed below based on their current grade level and course in which they are seeking to enroll.

6th GRADE SCIENCE

Course	Criteria	Comments/Notes
Science 6	▪ Standard Grade Level Science Course	▪ Students will receive instruction on 6th Grade Science Standards of Learning. ▪ The Grade 8 Science SOL test will be administered at the end of Physical Science.
Honors Science 6	▪ Grade of "B" or better in previous Science course ▪ Score of 450 or higher on 5th Grade Science SOL test ▪ Teacher recommendation*	▪ This course includes Grade 6 Science Standards of Learning. ▪ Placement decisions made by school-based team in consultation with Instructional Specialist for Science.
Science Grade 6/Life Science	▪ Grade of "B" or better in previous science course ▪ Score of 500 or greater on Grade 5 Science SOL Test ▪ Teacher recommendation*	▪ This course completes the Grade 6 Science Standards of Learning and half of the Life Science Standards of Learning. ▪ Placement decisions made by school-based team in consultation with Instructional Specialist for Science.

*Teacher recommendation should be based on academic ability, not behavior.

7th GRADE SCIENCE

Course	Criteria	Comments/Notes
Life Science	▪ Standard Grade Level Science Course	▪ Life Science SOL will be taught.
Honors Life Science	▪ Grade of "B" or better in previous science course ▪ Teacher recommendation*	▪ This course includes the Life Science Standards of Learning. ▪ Placement decisions made by school-based team in consultation with Instructional Specialist for Science.
Life Science/ Physical Science	▪ Grade of "B" or better in the Grade 6/Life Science course ▪ Teacher recommendation*	▪ This course includes second half of Life Science Standards of Learning and all of the Physical Science Standards of Learning. ▪ Students will take the Physical Science SOL test at the end of this course ▪ Placement decisions made by school-based team in consultation with Instructional Specialist for Science

*Teacher recommendation should be based on academic ability, not behavior.

8th GRADE SCIENCE

Course	Criteria	Comments/Notes
Physical Science	▪ Standard Grade Level Science Course	▪ Students will take Grade 8 Science SOL test.
Honors Physical Science	▪ Grade of "B" or better in previous science course ▪ Teacher recommendation*	▪ This course will include the Physical Science SOL. ▪ Students will take the Physical Science SOL test. ▪ Placement decisions made by school-based team in consultation with Instructional Specialist for Science.
Earth Science	▪ Grade of "B" or higher in previous science course ▪ Score of 500 or greater on Grade 8 Science SOL Test ▪ Teacher recommendation*	▪ Students will take the Earth Science SOL test. ▪ This course is eligible for high school credit. ▪ Placement decisions made by school-based team in consultation with Instructional Specialist for Science.

*Teacher recommendation should be based on academic ability, not behavior.

Middle School Course Sequences

Middle School Course Sequences			
	Grade 6	**Grade 7**	**Grade 8**
English	English - Grade 6	English - Grade 7	English - Grade 8
	Honors English – Grade 6	Honors English – Grade 7	Honors English – Grade 8
Mathematics	Mathematics – Grade 6	Mathematics – Grade 7	Mathematics – Grade 8
	Honors Mathematics – Grades 6/7	Honors Mathematics – Grade 7/8	Algebra I (high school course)
	Honors Mathematics – Grade 7	Grade 8	Algebra I
		Algebra I* (high school course)	Geometry I* (high school course)
Science	Grade 6 Science	Life Science	Physical Science
	Honors Grade 6 Science	Honors Life Science	Honors Physical Science
	Grade 6/Life Science	Life Science/Physical Science	Earth Science (high school course)
History and Social Science	United States History to 1865	United States 1865 to Present	Civics and Economics
	Honors United States History to 1865	Honors United States 1865 to Present	Honors Civics and Economics
Elective Options	A range of elective options including Art, Music, Career and Technical Education are offered in the middle grades.		

Academic Support Classes

Students are recommended for placement and continuation based on multiple criteria including results from previous standardized tests, diagnostic assessments, IEPs and on-going quarterly data with teacher observation evidence.

Grade 6	Grade 7	Grade 8
Reading & Writing	Reading & Writing	Reading & Writing

3199/Mathematics Enrichment	3200/Mathematics Enrichment	3201/Mathematics Enrichment

High School Course Sequences by Core Subject

English

Diploma	Year 1	Year 2	Year 3	Year 4
Standard Diploma	English – Grade 9 Honors English – Grade 9	English – Grade 10 Honors English – Grade 10	English – Grade 11 Honors English – Grade 11 AP Language and Composition Dual Enrollment English	English – Grade 12 Honors English – Grade 12 AP Literature and Composition Dual Enrollment English
Advanced Diploma	English – Grade 9 Honors English – Grade 9 Pre-IB English – Grade 9	English – Grade 10 Honors English – Grade 10 Pre-IB English – Grade 10	English – Grade 11 Honors English – Grade 11 IB English –Grade 11 AP Language and Composition Dual Enrollment English	English – Grade 12 Honors English – Grade 12 IB English – Grade 12 AP Literature and Composition Dual Enrollment English

Academic Support Classes

Students are recommended for placement and continuation based on multiple criteria including results from previous standardized tests, diagnostic assessments, IEPs and on-going quarterly data with teacher observation evidence.

Course			
High School Developmental Reading I	High School Developmental Reading II	High School Developmental Reading III	High School Developmental Reading IV

English Electives

(Note: These courses will earn students a standard elective credit but may not be used as a standard credit to satisfy an English graduation requirement.)

Course			
Writing	English Composition	Advanced Composition	Creative Writing
Speaking		Advanced Speech	Debate
Publication	Publication Production/ Yearbook		
College and Career Readiness	Grade 12 English Capstone	College Assessments: Standardized Test Preparation	
Journalism I	Journalism II	Journalism III	Journalism IV

Mathematics Sequence(s)

(Note: The following chart offers some potential mathematics course sequences. Please inquire with your High School Counselor and Mathematics Instructional Specialist with options you are interested in pursuing that are not on the chart below. All sequences not listed on this chart must be authorized by the Mathematics Instructional Specialist.)

A FULL 3-year course sequence will satisfy Standard Diploma requirements, however, it is recommended for students to take four years of mathematics.

Diploma	Grade 9	Grade 10	Grade11	Grade 12
Standard Diploma	Algebra I or Honors Algebra I	Geometry or Honors Geometry	Algebra, Function & Data Analysis (AFDA) or Algebra II	Algebra, Function & Data Analysis (AFDA) or Algebra II **(Optional)**
	Geometry/ Honors Geometry (Prerequisite – Algebra 1)	Algebra, Function & Data Analysis (AFDA) or Algebra II	Algebra, Function & Data Analysis (AFDA) or Algebra II	Math Analysis/Pre-Calculus **(Optional)**
	Algebra I Part 1	Algebra I Part 2	Geometry	Algebra, Function & Data Analysis (AFDA) or Algebra II
	Algebra 1	Geometry Part 1	Geometry Part 2	Algebra, Function & Data Analysis (AFDA) or Algebra II
	*Algebra I Part 1	* Algebra I Part 2	*Geometry Part 1	*Geometry Part 2
Advanced Diploma	Algebra 1 / Honors Algebra 1	Geometry/ Honors Geometry	Algebra II or Algebra II and Trigonometry	Mathematical Analysis / Pre-Calculus
	Geometry/ Honors Geometry	Algebra II or Algebra II and Trigonometry	Mathematical Analysis/Pre-Calculus or IB Math Studies SL 1	AP Computer Science AB or AP Statistics or AP Calculus or Dual Enrollment or IB Mathematics
	Algebra II or Algebra II and Trigonometry	Mathematical Analysis/Pre-Calculus or IB Math Studies SL 1	AP Computer Science A or AP Calculus AB or AP Statistics or Dual Enrollment (or) IB Mathematics	AP Computer Science A or AP Calculus AB or Dual Enrollment or IB Mathematics

* The Board of Education's Guidelines on Credit Accommodations allow students with disabilities who are eligible for credit accommodations in mathematics to use each part of Algebra I, Parts I and II, and Geometry, Parts I and II, to earn a standard credit towards the three mathematics credits required for the Standard Diploma only. A student who chooses to earn standard credits by taking both Algebra I and Geometry in two

parts must complete *both* parts of both courses to meet the minimum course requirements, and would earn three standard credits in mathematics plus one additional elective credit. Two-part courses may also be combined with full-year courses in other Board- approved mathematics courses to meet the requirements.

Guidelines for High School Mathematics Placement

Placement in Algebra I

- Mathematics 8 grade A - D **and** Grade 8 Mathematics SOL test score greater than 400
- Mathematics 8 grade A - C **and** Grade 8 Mathematics SOL test score below 400 **and** Algebra Readiness Diagnostic Test (ARDT) score greater than 1750

Placement in Algebra I, Part I

- Mathematics 8 grade D or F and Grade 8 Mathematics SOL test score below 400
- Mathematics 8 grade A - C and Grade 8 Mathematics SOL below 400 and ARDT below 1750 (Other data and teacher recommendation should be considered for possible placement in Algebra I)

Placement in Geometry I, Part I

- Algebra 1 grade D or F and EOC Algebra 1 SOL test score below 400

Mathematics Electives

(Note: These courses will earn students a standard elective credit but may not be used as a standard credit to satisfy a Mathematics graduation requirement.)

Foundations of Algebra	SAT Prep

History and Social Science

(Note: The following chart offers some potential History/Social Science course sequences. Please inquire with your High School Counselor and History/Social Science Instructional Specialist with options you are interested in pursuing that are not on the chart below. All sequences not listed on this chart must be authorized by the History/Social Science Instructional Specialist.)

* The honors level course is an option for this course.

Diploma	Grade 9	Grade 10	Grade11	Grade 12
Standard Diploma	World History and Geography to 1500 AD (CE)*	World History and Geography: 1500 AD (CE) to the Present*	United States and Virginia History*	Government*
	World History and Geography to 1500 AD (CE)*	United States and Virginia History, Part I*	United States and Virginia History, Part II*	Government*
	World History and Geography to 1500 AD (CE)*	World History and Geography: 1500 AD (CE) to the Present*	United States and Virginia History*	Government*
	World Geography*	World History and Geography to 1500 AD (CE)*	United States and Virginia History*	Government*
	World Geography*	World History and Geography: 1500 AD (CE) to the Present*	United States and Virginia History*	Government*
Advanced Studies Diploma	World History and Geography to 1500 AD (CE)*	World History and Geography: 1500 AD (CE) to the Present*	United States and Virginia History 2360* or AP United States History	Government 2440* or AP Government & Politics: United States
	World History and Geography to 1500 AD (CE)*	World Geography*	United States and Virginia History 2360* or AP United States History	Government 2440* or AP Government & Politics: United States

	World Geography*	World History and Geography to 1500 AD (CE)*	United States and Virginia History* or AP United States History	Government* or AP Government & Politics: United States
	World Geography*	World History and Geography: 1500 AD (CE) to the Present*	United States and Virginia History* or AP United States History	Government* or AP Government & Politics: United States
	World History and Geography: 1500 AD (CE) to the Present*	Government*	IB History HL 1	IB History HL 2

* The honors level course is an option for this course.

Science

(Note: The following chart offers some potential Science course sequences. Please inquire with your High School Counselor and Science Instructional Specialist with options you are interested in pursuing that are not on the chart below. All sequences not listed on this chart must be authorized by the Science Instructional Specialist.)

Diploma	Grade 9	Grade 10	Grade11	Grade 12
Standard Diploma (**Note:** The **Standard Diploma** requires **three (3) standard credits from two (2) science disciplines**.)	Earth Science I	Biology I	Chemistry I	Physics I
	Environmental Science	Biology I or Earth Science I	Chemistry I	Biology II or Earth Science II
	Earth Science I, Part I*	Earth Science I, Part II*	Biology I	Biology II: Ecology 4340 **or** Earth Science II: Astronomy
	Biology I	Biology II: Anatomy/ Physiology **or** Biology II: Genetics	Chemistry I	Physics I
	Biology I, Part I*	Biology I, Part II*	Earth Science I	Chemistry I
	Earth Science I	Biology I	Earth Science II: Astronomy	Physics I
	Biology I	Biology II: Ecology	Earth Science I	AP Environmental Science
	Earth Science I	Biology I	Chemistry I	Physics I

Advanced Studies Diploma (**Note:** The **Advanced Studies Diploma** requires four **(4) standard credits from three (3) science disciplines**.)	Environmental Science	Biology or Earth Science	Chemistry I	Physics/Bio II/Earth Science II/AP/IB or Dual Science Courses
	Biology I	Chemistry I	Physics I or AP Physics 1	AP Biology or AP Chemistry **or** Dual Enrollment (DE) Biology **or** DE Chemistry
	Biology I	Biology II: Anatomy/ Physiology **or** Biology II: Genetics	Chemistry I	Physics I
	Biology I	Chemistry I	AP Physics 1 or DE Biology or DE Physics or IB Biology SL/HL 1 or IB Physics SL 1 or IB Environmental Systems and Societies SL 1	AP Biology **or** AP Chemistry **or** Biology II: Anatomy/ Physiology 4330 **or** Biology II: Genetics 4350 **or** IB Biology SL/HL 2 **or** IB Physics SL 2 **or** IB Environmental Systems and Societies SL 2
	Physics I	Biology I	Chemistry I	AP Biology **or** AP Chemistry **or** Biology II: Anatomy/ Physiology **or** Biology II: Genetics

*This pathway is only available to students eligible for credit accommodations in science. Students must complete both parts of both courses to meet minimum course requirements.

Course Sequences - Fine Arts Middle School 06-08

Middle School Course Sequences			
	Grade 6	**Grade 7**	**Grade 8**
Band	Beginning Band-9230	Intermediate Band- 9231	Advanced Band- 9229
Chorus	Beginning Chorus- 9269	Intermediate Chorus- 9270	Advanced Chorus- 9271
Dance	Beginning Dance-18wk- 6305 Beginning Dance-36wk-6305M	Intermediate Dance-18wk-6306 Intermediate Dance-36wk-6306M	Advanced Dance-18wk-6307 Advanced Dance-36wk-6307M
Guitar	Beginning Guitar- 5008	Intermediate Guitar- 5009	Advanced Guitar- 5010
Harp	Beginning Harp- 3711	Intermediate Harp- 3712	Advanced Harp- 3713
Orchestra	Beginning Orchestra- 9235	Intermediate Orchestra- 9236	Advanced Orchestra- 9241
Theatre	Beginning Theater I-18wk-1393 Beginning Theater I-36wk-1393M	Intermediate Theater II-18wk-1394 Intermediate Theater II-36wk-1394M	Speech Application &Theatre -1395
Visual Art	Art- Grade 6-18wk-9103 Art- Grade 6-36wk-9103M	Art- Grade 7-18wk-9105 Art- Grade 7-36wk-9105M	Art- Grade 8-18wk-9115 Art- Grade 8-36wk-9115M

Course Sequences – Fine Arts High School 09-12

Diploma	**Year 1**	**Year 2**	**Year 3**	**Year 4**
Standard Diploma	Beginning Band-9232	Intermediate Band-9233	Advanced Band- 9234	Artist Band-9244
	Beginning Chorus- 9260	Intermediate Chorus-9285	Advanced Chorus- 9289	Artist Chorus- 9290
	Beginning Orchestra-9237	Intermediate Orchestra- 9238	Advanced Orchestra-9239	Artist Orchestra-9242
	Dance Technique: Dance I- 9252	Dance Technique: Dance II- 9253	Dance Technique: Dance III- 9254	Dance Technique: Dance IV-9255
	Theater I/Introduction to Theater-1410	Theater II/Dramatic Literature & Theater-1420	Theater III/Introduction to Acting-1423	Theater IV-Advanced Acting- 1426
	Guitar I-9245	Guitar II-9247	Small Instrumental Ensemble-Guitar-9250	Small Instrumental Ensemble-Guitar-9251
	Art I/Art Foundations-9120	Art II/Intermediate-9130	Art III/Advance Intermediate-9140	Art IV/Advanced- 9145

Course Sequence – Fine Arts High School 09-12 cont'd

Diploma	Year 1	Year 2	Year 3	Year 4
Advanced Diploma	Beginning Band-9232 Beginning Chorus-9260 Beginning Orchestra-9237 Dance Technique: Dance I- 9252 Theater I/Introduction to Theater-1410 Guitar I-9245 Art I/Art Foundations-9120	Intermediate Band-9233 Intermediate Chorus-9285 Intermediate Orchestra- 9238 Dance Technique: Dance II- 9253 Theater II/Dramatic Literature & Theater-1420 Guitar II-9247 Art II/Intermediate-9130	Advanced Band- 9234 Advanced Chorus-9289 Advanced Orchestra-9239 Dance Technique: Dance III- 9254 Theater III/Introduction to Acting-1423 Small Instrumental Ensemble-Guitar-9250 Art III/Advance Intermediate-9140	Artist Band-9244 Artist Chorus- 9290 Artist Orchestra-9242 Dance Technique: Dance IV-9255 Theater IV-Advanced Acting- 1426 Small Instrumental Ensemble-Guitar-9251 Art IV/Advanced-9145

Course Sequence – World Language/Spanish Middle School 06-08

Grade 6	Grade 7	Grade 8
Exploratory Spanish (18 Weeks)	Spanish 1A	Spanish 1B
Exploratory Spanish (36 weeks)	Spanish1 A	Spanish 1B
Spanish 1A	Spanish 1B	

WORLD LANGUAGES

The study of World Languages is of increasing importance in today's global society. It is more important than ever that our students are properly equipped with skills that will allow them to graduate from high school on a path that has prepared them to engage with the world that will await them.

Middle School Offerings

RPS offers Spanish language offerings in the middle school to allow students to experience or build on their language experiences with the goal of providing students with the language experience needed for high school.

- Students with little to no experience in Spanish will enroll in Exploratory Spanish in either semester or yearlong format.
- Students who demonstrate language proficiency at a certain level may enroll in Spanish 1A in 6th grade.
- As they progress, students may enroll in Spanish 1B

SECTION V: Course Descriptions

Career & Technical Education

Business and Information Technology

Accounting
Course 6320 **1 Credit**
Students study the basic principles, concepts, and practices of the accounting cycle for a service business and a merchandising business. **(Grades 10-11)**

Advanced Accounting
Course 6321 **1 Credit**
Students gain in-depth knowledge of advanced accounting procedures and techniques used in solving business problems and making financial decisions. **(Grades 11-12)**
Prerequisite: *Accounting*

Business Law-18 weeks
Course 6132 **0.5 Credit**
Students examine the foundations of the American legal system and learn the rights and responsibilities of citizens. Students gain practical knowledge and life skills by exploring economic and social concepts related to laws governing business and individuals. Focus areas include contracts, consumer protection, criminal law, tort law, international law, family/domestic law, employment law, cyber law, and careers in the legal profession. **(Grades 10-12)**

Business Management-18 weeks
Course 6136 **0.5 Credit**
Students study basic management concepts and leadership styles as they explore business ownership, planning, operations, marketing, finance, economics, communications, the global marketplace, and human relations. **(Grades 10-12)**

Computer Information Systems
Course 6612 **1 Credit**
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. **(Grades 10-12)**
Prerequisite: *Keyboarding Applications recommended*

Advanced Computer Information Systems
Course 6613 **1 Credit**
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, Website development, programming, networking, emerging technology, and employability skills. (**Grades 11-12)**
Prerequisite: *Computer Information Systems*

Computer Science Solutions-18 weeks
Course 6609 **0 Credit**
Students are introduced to the world of business using the computer as a problem-solving tool. Emphasis is placed on completing a variety of projects incorporating programming concepts and writing code. Basic Internet safety is an important component of this course. **(Grade 7)**

Computer Science Solutions-36 weeks
Course 6610 **0 Credit**
Students are introduced to the world of business using the computer as a problem-solving tool. Emphasis is placed on completing a variety of projects incorporating programming concepts and writing code. Basic Internet safety is an important component of this course. **(Grade 7)**

Design, Multimedia & Web Technologies
Course 6630 **1 Credit**
Students develop proficiency in designing and creating desktop-published projects, multimedia presentations/ projects, and Websites, using industry-standard application software. Students apply principles of layout and design in completing projects. Students create portfolios that include a résumé and a variety of desktop-published, multimedia, and Web-site projects produced in the course. **(Grades 10-12)**

Advanced Design, Multimedia & Web Technologies
Course 6631 **1 Credit**
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. **(Grades 11-12)**
Prerequisite: *Design, Multimedia & Web Tech.*

Economics & Personal Finance
Course 6120 **1 Credit**
Students learn how economies and markets operate and how the United States economy is interconnected with the global economy. Additionally, they learn how to navigate the financial decisions they must face and to make informed decisions relating to career exploration, budgeting, banking, credit, insurance, spending, financing postsecondary education, taxes, saving and investing, buying/leasing a vehicle, and living independently. **(Grades 10-12)**

Information Technology (IT) Fundamentals
Course 6670 **1 Credit**
Students are introduced to skills related to information technology basics, Internet fundamentals, network systems, computer applications, programming, and graphics, Web page design, and interactive media. **(Grades 9-10)**

Keyboarding Applications
Course 6152 **1 Credit**
Students develop and enhance touch skills for entering alphabetic, numeric and symbol information on a keyboard. Students compose and produce a variety of personal, business, and professional documents. **(Grades 8-10)**

Keyboarding Middle-18 weeks
Course 6150 **0 Credit**
This course is designed for middle school students to develop and enhance touch skills for entering alphabetic, numeric and symbol information on a keyboard to produce documents. **(Grade 6)**

Legal Systems Administration
Course 6735 **1 Credit**
Students explore various areas of law (e.g., civil, criminal, family, real estate, estate, and probate) while preparing for employment in the legal field. Students gain knowledge and skills in legal document preparation, office communications, legal terminology, client services, records management, financial records, and business ethics. Successful completion of this course may lead to an entry-level position in a law office, court office, law enforcement agency, corporate legal department, or to postsecondary education. **(Grades 11-12)** ***Offered at RTC***
Prerequisite: *Keyboarding Applications recommended*

Medical Systems Administration
Course 6730 **1 Credit**
Students learn how to use medical terminology and apply administrative procedures necessary to be productive employees in a healthcare environment. Students will learn how to manage office activities, enhance communication skills, identify legal and ethical issues in health care practices, manage financial functions, and enhance employability skills. **(Grades 11-12)** ***Offered at RTC Only***
Prerequisite: *Keyboarding Applications 6152 recommended*

Office Administration
Course 6621 **1 Credit**
Students enhance word processing and communication skills as they develop competencies needed by administrative support professionals. Students study office procedures such as information processing, telecommunications, electronic record management, and financial records management. **(Grades 11-12)**
Prerequisite: *Keyboarding Applications recommended*

Principles of Business & Marketing
Course 6115 **1 Credit**
Students discover the roles of business and marketing in the free enterprise system and the global economy. Basic financial concepts of banking, insurance, credit, inheritance, taxation, and investments are investigated. (**Grades 9-10)**

Programming
Course 6640 **1 Credit**
Students in the Programming course explore programming concepts, use algorithmic procedures, implement programming procedures with one or more standard languages, and master programming fundamentals. Coding is used throughout the course. Graphical user interfaces may be used as students design and develop interactive multimedia applications, including game programs. **(Grades 10-12)**
Prerequisite: *Keyboarding Applications Recommended*

Advanced Programming
Course 6641 **1 Credit**
Building on their foundation of programming skills, Advanced Programming students use object-oriented programming to develop database applications, interactive multimedia applications including game applications, mobile applications, and Web applications. (**Grades 11-12)**
Prerequisite: *Programming*

Career Connections

Career Investigations
Course 9070 **0 Credit**
This course allows students to explore career options and begin investigating career opportunities. Students assess their roles in society, identify their roles as workers, analyze their personal assets, complete a basic exploration of career clusters, select career pathways or occupations for further study, and create an Academic and Career Plan based on the their academic and career interests. This course also helps students identify and demonstrate the workplace skills that employers desire in their future employees. **(Grades 6-8)**

Career Strategies
Course 9071 **1 Credit**
Students do an in-depth study of one to four or more career cluster, through a variety of investigative activities. They 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. **(Grades 9-12)**

Education for Employment I- Preparation
Course 9078 **1 Credit**
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. **(Grades 9-12)**

Education for Employment II - Preparation
Course 9080 **1 Credit**
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. **Grades 10-12**
Prerequisite: *Education for Employment I – Preparation I*

VA Teachers for Tomorrow I
Course 9062 **1 Credit**
Virginia Teachers for Tomorrow (VTFT) fosters student interest, understanding, and appreciation of the teaching profession and allows secondary students to explore careers in education. Students build a foundation for teaching; learn the history, structure and governance of teaching; apply professional teaching techniques in the VTFT classroom and field experience; and reflect on their teaching experiences. **Grades 10-12**

VA Teachers for Tomorrow II
Course 9072 **1 Credit**
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. **(Grades 11-12)**
Prerequisite: *VA Teachers for Tomorrow I*

Family & Consumer Science

Child Development and Parenting
Course 8232 **1 Credit**
Students enrolled in Child Development and parenting focus on assessing the impact of the parenting role in society; taking responsibility for individual growth within the parenting role; preparing for a healthy emotional and physical beginning for parent and child; meeting developmental needs of children and adolescents; building positive parent-child relationships; using positive guidance and discipline to promote self-discipline, self-respect, and socially responsible behavior. **(Grades 9-11)**

Early Childhood, Education, and Services I
Course 8285 **1 Credit**
This course introduces early childhood development through activities and experiencing nursery, pre-kindergarten, and primary programs. Focus is placed on child growth and development; development of self-concepts and building self-esteem; learning experiences for children; principles of guiding children; healthy and safe environments; career development and careers related to child care. **(Grades10-11)**

Early Childhood, Education, and Services II
Course 8286 **1 Credit**
Students prepare for positions in child care centers as childcare attendants, kindergarten aides, or childcare assistants; as foster parents; or as entrepreneurs. Cooperative (on-the- job) education or an internship under the supervision of the instructor is an option. **(Grades 11-12**)
Prerequisite: *Early Childhood, Education, and Services I*

Family and Consumer Sciences Exploratory I
Course 8208 **0 Credit**
This course provides a foundation for managing individual, family, career, and community roles and responsibilities. In FACS Exploratory I, students focus on areas of individual growth such as personal goal achievement, responsibilities within the family and accountability for personal safety and health. They also explore and practice financial management, clothing maintenance, food preparation, positive and caring relationships with others, and self-assessment as related to career exploration. **(Grade 6)**

Family and Consumer Sciences Exploratory II
Course 8263 **0 Credit**
This course provides a foundation for managing individual, family, work, and community roles and responsibilities. In FACS Exploratory II, students focus on their individual development as well as their relationships and roles within the family unit. They learn how to maintain their living and personal environments and to use nutrition and wellness practices. Students apply consumer and family resources, develop textile, fashion, and apparel concepts, and explore careers related to Family and Consumer Sciences. **(Grade 7)**

Family and Human Services I
Course 8264 **1 Credit**
Students prepare for occupations related to individual and family health; consumer and community special services; nutrition and dietary modification; home maintenance, management and adaptation to physical restrictions; and services to homebound individuals of all ages. **(Grades 10-11)**

Family and Human Service II
Course 8265 **1 Credit**
Students continue to prepare for occupations related to individual, family, community health and well-being. Critical thinking, practical problem solving and entrepreneurship opportunities within the field of home and community care is emphasized. **(Grades 11-12)**
Prerequisite: *Family and Human Services I*

Family Relations
Course 8225 **1 Credit**
Family Relations focus on analyzing the significance of the family, nurturing human development in the family throughout the lifespan, analyzing factors that build and maintain healthy family relationships, developing communication patterns that enhance family relationships, dealing effectively with family stressors and conflicts, managing work and family roles and responsibilities, and analyzing social forces that influence families across the lifespan. (**Grades 9-11)**

Fashion Careers I
Course 8280 **1 Credit**
Students prepare for occupations concerned with the spectrum of clothing, apparel, and textiles production and services, including but not limited to construction, fabric and fabric care, pattern design, principles of clothing construction and selection, fitting and alterations for ready-to- wear garments, custom tailoring, and clothing maintenance. **(Grades 11-12)**

Fashion Careers II
Course 8281 **1 Credit**
Students focus on technical skills identified as essential for careers in the fashion industry. Students continue to develop skills in fashion illustration, draping, pattern making, garment construction and compilation of a portfolio. Opportunities for entrepreneurship within the field of fashion design are examined. Work-based learning opportunities within the fashion industry are encouraged to provide opportunities for students to develop employability skills. (**Grades 11-12)**
Prerequisite: *Fashion Careers I*

GRADS

Course 8278 **1 Credit**

Students enrolled in the Graduation, Reality, and Dual-role Skills Program (GRADS) concentrate on developing self-esteem; using effective communication skills; maintaining positive relationships; promoting wellness, prenatal, and postnatal care; evaluating the cost of parenthood; adjusting to parenthood; understanding child development; providing child care; managing family relationships; exploring careers; employability skills; managing resources and expenditures; and balancing work and family. This course is designed for pregnant and parenting teens. **(Grades 9-12)**

Independent Living

Course 8219 **1 Credit**

This course allows students to explore successful strategies for living independently by actively participating in practical problem solving focusing on relating to others, relationships; managing resources in the areas of apparel, nutrition and wellness, and housing; using leadership skills to reach individual goals; planning for careers and making consumer choices in a global environment. **(Grades 9-11)**

Individual Development

Course 8210 **1 Credit**

Students enrolled in individual development focus on self and others throughout the lifespan; enhancing positive views of self and others; managing stressful situations; formulating a plan to achieve career goals; forming healthy, caring relationships with family members and peers; managing conflict; choosing responsible ways to express oneself; and evaluating the importance of responsible parenting to individuals, families, and society. **(Grades 8-11)**

Intro to Culinary Arts

Course 8250 **1 Credit**

This course focuses on identifying and exploring the individual careers within the foodservice industry. Units of study include food science and technology, dietetics and nutrition services, contemporary cuisines and service styles, food and beverage production and preparation, and food safety and sanitation. **(Grades 9-11)**

Intro to Early Childhood Education

Course 8234 **1 Credit**

This course introduces early childhood development through activities and experiences in nursery, pre-kindergarten, and primary programs. Focus is placed on child growth and development; development of self-concepts and building self-esteem; learning experiences for children; principles of guiding children; healthy and safe environments; career development and careers related to child care. **(Grades 9-11)**

Intro to Fashion Careers

Course 8248 **1 Credit**

The fashion design and merchandising competencies focus on identifying and exploring the individual careers within the fashion 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; and the skills and characteristics necessary for success in careers in the textile, design, apparel production and fashion merchandising industries. **(Grades 9-11)**

Nutrition and Wellness

Course 8229 **1 Credit**

Students enrolled in nutrition and wellness focus on making choices that promote wellness and good health; analyzing relationships between psychological and social needs and food choices; choosing foods that promote wellness; obtaining and storing food for self and family; preparing and serving nutritious meals and snacks; selecting and using equipment for food preparation; and identifying strategies to promote optimal nutrition and wellness in society. **(Grades 9-11)**

Marketing

Introduction to Fashion Careers
Course 8248 **1 Credit**
Students 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. **(Grades 9-10)**

Fashion Marketing
Course 8140 **1 Credit**
Students gain basic knowledge of the apparel and accessories industry and skills necessary for successful employment in apparel businesses. Students develop general marketing skills necessary for successful employment in fashion marketing, general marketing skills applicable to the apparel and accessories industry, and specialized skills unique to fashion marketing. Personal selling, sales promotion, purchasing, physical distribution, market planning, and product/service technology, and supervision as well as academic skills will be developed . **(Grades 10-11)**

Advanced Fashion Marketing
Course 8145 **1 Credit**
Students with an interest in apparel and accessories marketing gain in-depth knowledge of the apparel and accessories industry and skills utilized in various apparel businesses. They develop advanced skills unique to fashion marketing and advanced general marketing skills applied to the apparel and accessories industry. Professional selling, sales promotion, buying, merchandising, marketing research, economics, hiring and retaining employees, product/service technology, and supervision as well as academic skills. **(Grades 11-12)**
Prerequisite: *Fashion Marketing*

Introduction to Marketing
Course 8110 **1 Credit**
Students gain an understanding of the importance of marketing in today's society. They develop skills related to interpersonal communication, self-presentation, economics, marketing, sales, employability, career discovery, and ethical decision-making. **(Grades 9-10)**

Marketing
Course 8120 **1 Credit**
Students examine activities in marketing and business important for success in marketing employment and postsecondary education. Students will learn how products are developed, branded, and sold to businesses and consumers. Students will analyze industry trends and gain hands-on experience in the marketing of goods, services, and ideas. Topics will include professionalism in the workplace, product planning and positioning, promotion, pricing, selling, economic issues, and the impact of technology on the marketplace. **(Grades 10-11)**

Advanced Marketing
Course 8130 **1 Credit**
Students build on knowledge gained in a prior Marketing course. Students participate in supervisory and management activities focusing on the marketing mix, purchasing, financing, human resources, global marketing, pricing, and emerging technologies. Students will prepare for advancement in marketing careers and postsecondary education. **(Grades 11-12)**
Prerequisite: *Marketing*

Opportunities in Global Trade
Course 8135 **1 Credit**
Opportunities in Global Trade is a specialized course for students with a career interest in the field of international trade. Students gain an understanding of the various careers in global trade, finance, shipping, and marketing and consider fundamental concepts, principles, and theories of marketing in an international setting. **(Grades 11-12)**

Advanced Opportunities in Global Trade
Course 8136 **1 Credit**
This is a specialized course for students with a career interest in international trade, builds upon concepts learned in Global Marketing and Commerce (8135). Economic and international trade concepts are reviewed, and the world environment of international trade is further explored. Students expand their knowledge about the impact of culture on international trade and continue their study of the legal and political aspects of international marketing. Global product strategies are examined. Concepts detailing entry into international markets, pricing strategies, international promotion, and marketing research are studied. **(Grade 12)**
Prerequisite: *Opportunities in Global Marketing*

Digital Marketing
Course 8125 **1 Credit**
Students receive an introduction to marketing functions and the business plan and study Internet marketing's role in the global economy. Students gain knowledge of the tools and techniques used in Internet marketing and learn how to design a Web site. They explore ethical, legal, and security aspects and prepare for a career in Internet marketing. **(Grades 11-12)**

Principles of Business & Marketing
Course 6115 **1 Credit**
Students discover the roles of business and marketing in the free enterprise system and the global economy. Basic financial concepts of banking, insurance, credit, inheritance, taxation, and investments are investigated. **(Grades 9-10)**

Sports and Entertainment Marketing
Course 8175 **1 Credit**
Students develop a thorough understanding of fundamental marketing concepts and theories as they relate to the sports and entertainment 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. **(Grades 10-11)**

Sports and Entertainment Management
Course 8177 **1 Credit**
Students will build on prior knowledge of sports, entertainment, and recreation marketing. This course focuses on the principles of management and planning supported by research, financial, and legal concepts. Students will be able to plan and execute an event, develop a career plan, and establish a sports, entertainment, or recreation marketing product/business. **(Grades 11-12)**
Prerequisite: *Sports and Entertainment Marketing*

Military Science

Army JROTC Military Science I - Leadership

Course 7913 **1 Credit**

Cadets develop leadership techniques with emphasis on assuming command and staff functions. Character, leadership development and theory, leadership application, foundations of success, wellness, and first aid are also included. Academic areas of geography, Earth science, citizenship, and American history are emphasized and reinforced. Service-learning projects and community involvement are also covered at this level.

Army JROTC Military Science II - Leadership

Course 7916 **1 Credit**

Cadets continue to develop leadership techniques with emphasis on assuming command and staff functions. Character, leadership development and theory, leadership application, foundations of success, wellness, and first aid are also included. Academic areas of geography, Earth science, citizenship, and American history are emphasized and reinforced. Service-learning projects and community involvement are also covered at this level.

Army JROTC Military Science III - Leadership

Course 7918 **1 Credit**

Cadets experience the culmination of their JROTC experience by applying leadership theories and communication skills at the command and staff level in cadet-led classes. Foundations of success, wellness, and first aid are addressed. Academic areas of geography, Earth science, citizenship, and American history are emphasized and reinforced. Service-learning projects are implemented, and community involvement is stressed with emphasis on group dynamics, human relations, and U.S. issues.

Army JROTC Military Science IV- Leadership

Course 7919 **1 Credit**

Cadets experience the culmination of their JROTC experience by applying leadership theories and communication skills at the command and staff level in cadet-led classes. Foundations of success, wellness, and first aid are addressed. Academic areas of geography, Earth science, citizenship, and American history are emphasized and reinforced. Service-learning projects are implemented, and community involvement is stressed with emphasis on group dynamics, human relations, and U.S. issues.

Technology and Engineering

Technical Drawing and Design

Course 8435 **1 Credit**

In this foundation course, students learn the basic language of technical design, while they design, sketch, and make technical drawings, illustrations, models, or prototypes of real design problems. Students develop spatial ability as they apply mathematical concepts to visual representations. **(Grades 9-11)**

Architectural Drawing and Design

Course 8437 **1 Credit**

Students explore architectural design foundations and increase understanding of working drawings, construction techniques, and codes regulating building design. They learn the design process and apply the elements and principles of design to architectural projects. Through producing models and illustrations of all aspects of a building, students create architectural design solutions using CADD (computer aided drafting and design). **(Grades 10-12)**

Prerequisite: *Technical Drawing and Design or Introduction to Engineering Design*

Advanced Drawing & Design
Course 8438 **1 Credit**
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, reverse 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. **(Grades 11-12)**
Prerequisite: *Architectural Drawing and Design*

Digital Visualization
Course 8459 **1 Credit**
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. **(Grades 9-11)**
Prerequisite Recommended: *Technical Drawing and Design*

Electronics Systems I
Course 8416 **1 Credit**
Electronic devices are everywhere in modern life and business, and, as a result, opportunities abound for any who should master the knowledge and skills required to design, alter, repair, and construct them. This course allows students the opportunity to explore principles of electricity, apply knowledge in mathematics and science, and conduct experiments with electronics. Students solve problems using simple electrical devices and circuits and build electronic projects using DC and AC devices and circuits. **(Grades 11-12)**

Electronics Systems II
Course 8412 **1 Credit**
Students work with electronics devices, instruments, and circuits, building and designing devices to apply theories and laws with electronic components such as resistors, capacitors, and transistors. They also study integrated circuits used in computers, amplifiers, television, and other equipment. **(Grade 11-12)**
Prerequisite: *Electronics Systems I*

Introduction to Technology 18 weeks
Course 8482 **0 Credit**
Students study technological resources through problem-solving processes and various hands-on activities. They relate the impact of technology on society, environment, and culture to future consequences and decisions. **(Grades 6-8)**

Inventions and Innovations 18 weeks
Course 8464 **0 Credit**
Students make models of significant inventions that have advanced society. After studying these developments, they explore contemporary technological problems facing them, their community, or the world and apply a systematic procedure to invent new products or innovations as solutions. **(Grade 7)**

Principles of Technology I
Course 9811 **1 Credit**
Students in this single-period laboratory science course apply physics and mathematics concepts through a unified systems approach to develop a broad knowledge base of the principles underlying modern technical systems. Students study seven technical principles: force, work, rate, resistance, energy, power, and force transformers, emphasizing how each principle plays a unifying role in the operation of mechanical, fluid, electrical, and thermal systems in high-technology equipment. This "principles and systems" approach to studying these technical principles provides a foundation for further education and career flexibility as technology and technical systems advance. The sequence of Principles of Technology I and Principles of Technology II will satisfy one unit of credit in laboratory science for physics and one elective credit. Students who enroll in Principles of Technology courses for a physics credit must have completed Algebra I and two other laboratory science courses as specified by the accrediting standards prior to enrolling in Principles of Technology. **(Grades 10-12)**

Principles of Technology II
Course 9812 **1 Credit**
Students continue to apply physics and mathematics concepts through a unified systems approach to expand their knowledge base of the principles underlying modern technical systems. This course focuses on seven technical principles: momentum, waves, energy converters, transducers, radiation, optical systems, and time constants, emphasizing how each principle plays a unifying role in the operation of mechanical, fluid, electrical, and thermal systems in high-technology equipment. This "principles and systems" approach to studying these technical principles provides a foundation for further education and career flexibility as technology and technical systems advance. The sequence of Principles of Technology I and Principles of Technology II will satisfy one unit of credit in laboratory science for physics and one elective credit. Students who enroll in Principles of Technology courses for a physics credit must have completed Algebra I and two other laboratory science courses as specified by the accrediting standards prior to enrolling in Principles of Technology. **(Grades 11-12)**
Prerequisite: *Principles of Technology I*

Technology Foundations
Course 8403 **1 Credit**
In this beginning high school course, students acquire a foundation in technological material, energy, and information and apply processes associated with the technological thinker. Challenged by laboratory activities, students create new ideas and innovations, build systems, and analyze technological products to learn further how and why technology works. They work in groups to build and control systems using engineering design in the development of a technology. **(Grades 8-11)**

Technology Transfer
Course 8405 **1 Credit**
Students learn that technology transfer occurs when a new user applies an existing technology developed for one purpose to a different function. Groups work together, applying mathematics, science, and engineering concepts to projects that combine systems such as energy and power, agriculture and biotechnology, information and communication, manufacturing, construction, transportation, and medical technologies. Students engage in thematic activities to learn that the transfer of a technology from one society to another can cause cultural, social, economic, and political changes that affect both societies to varying degrees. **(Grades 10-12)**
Prerequisite: *Technology Foundations*

Richmond Technical Center

Prerequisites recommended for all students enrolling in Richmond Technical Center courses: have completed a computer/keyboarding application course with at least a grade of C; have passed English 10 with at least a grade of C; have passed Algebra 1 with at least a grade of C.

Trade and Industrial

Auto Body Technology 1 (280 hours)
Course 8676 **2 Credits**
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. Students who successfully complete this program sequence will be prepared to take and pass the respective ASE/NATEF exam and will be prepared for postsecondary education opportunities. **(Grades 10-11)**

Auto Body Technology II (280 hours)
Course 8677 **2 Credits**
In the global automotive repair industry there is a growing demand for qualified auto body technicians. In this course, students are taught to repair, mask, and refinish auto body components and entire vehicles. In addition, they use spray guns and personal safety equipment while applying undercoats and topcoats, working with a variety of materials, and gaining career skills. Students who successfully complete this program sequence will be prepared to take and pass the respective ASE/NATEF exam and will be prepared for postsecondary education opportunities. **(Grades 11-12)**
Prerequisite: *Auto Body Technology I*

Auto Body Technology III (280 hours)
Course 8678 **2 Credits**
This course allows students to further apply the tasks/competencies learned in Auto Body Technology 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 this program sequence will be prepared to take and pass the respective ASE/NATEF exam and will be prepared for postsecondary education opportunities. Note: Auto Body Technology III may be offered as a complement to an existing concentration sequence in any Career Cluster. **(Grade 12)**
Prerequisite: *Auto Body Technology II*

Automotive Technology I (280 hours)
Course 8506 **2 Credits**
Due to recent technological advancements in automobiles, it is crucial that technicians are prepared with state-of-the-art technology and training. This course represents a large sampling of the competencies from National Automotive Technician's Education Foundation's (NATEF's) Maintenance and Light Repair accredited program. Students are provided instruction in all systems as they prepare for the ASE (Automotive Service Excellence) Student Certification, "the first step in building a career as a service professional in the automotive industry." (**Grades 10-11)**

Automotive Technology II (280 hours)
Course 8507 **2 Credits**
This course represents the advanced competencies from National Automotive Technician's Education Foundation's (CNATEF's) Maintenance and Light Repair accredited program without redundancy from the prerequisite course. Students are provided instruction in all systems as they prepare for the ASE (Automotive Service Excellence) Student Certification, "the first step in building a career as a service professional in the automotive industry." Successful completion of this course will result in program completion and prepare students to pass the equivalent NATEF student exam and ultimately attain certification. (**Grades 11-12)**
Prerequisite: *Automotive Technology I*

Automotive Technology III (280 hours)
Course 8508 **2 Credits**
This course is available for students who have completed the first two courses of Automotive Technology and attained program-completer status. The tasks for this capstone course represent the middle-tier standards of the National Automotive Technician's Education Foundation (NATEF's) Automobile Service Technology accredited program. Students are provided instruction in all systems as they prepare for the ASE (Automotive Service Excellence) Student Certification, "the first step in building a career as a service professional in the automotive industry." (**Grade 12)**
Prerequisite: *Automotive Technology II*

Barbering I (280 hours)
Course 8740 **2 Credits**
Barbering is the study of hair, scalp, and skin. Students 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 students to work or apprentice in a local barbershop or beauty salon. (**Grades 10-11)**

Barbering II (280 hours)
Course 8741 **2 Credits**
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 barbershop or beauty salon. Related areas of study include psychology, ethics, and professional image. Competency completions prepare the students for the Virginia state-licensing exam. **(Grades 11-12)**
Prerequisite: *Barbering I*

Barbering III (280 hours)
Course 8742 **2 Credits**
In Trade and Industrial Education, task lists traditionally have been shared among related course codes and course titles. To meet new Perkins IV requirements, these competency lists have been divided to specifically address each level (I, II, III, IV). Please note that this level III course is in transition. For more information, contact the Trade and Industrial Education program specialist at VDOE. **(Grade 12)**
Prerequisite: *Barbering II*

Beauty Salon Assistant (140 hours)
Course 8546 **2 Credits**
The Beauty Salon Assistant course prepares students for work as an assistant in a hair salon. Students study and prepare in a clinical lab setting, learning practical and manipulative skills. The program emphasizes safety and sanitation, shampooing and conditioning, retailing, inventory control, and receptionist work. Competency completions allow students a certificate for entry-level employment. **(Grades 9-10)**

Building Management I (140 hours)
Course 8590 **2 Credits**
Students obtain the knowledge and skills to perform the upkeep of commercial and public buildings and grounds through hands-on training in cleaning operations, building repairs, plumbing, and grounds maintenance. **(Grades 09-10)**

Building Management II (280 hours)
Course 8591 **2 Credits**
Students obtain advanced knowledge and skills to perform the upkeep of commercial and public buildings and grounds through hands-on training in cleaning operations, building repairs, plumbing, and grounds maintenance. Completion of the two-course sequence may prepare students for a number of certification exams, helpful for employment in a variety of Building Management occupations. **(Grades 10-11)**
Prerequisite: *Building Management I*

Building Management III (280 hours)
Course 8592 **2 Credits**
Building Management III is offered as a capstone course for high school. Students apply the knowledge and skills to perform advanced maintenance and upkeep of commercial and public buildings and grounds through specific hands-on training in cleaning operations, building repairs, electrical, plumbing, and grounds maintenance. **(Grades 11-12)**
Prerequisite: *Building Management II*

Career Strategies
Course 9071 **1 Credit**
Students do an in-depth study of one to four or more career cluster, through a variety of investigative activities. They 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. **(Grades 9-12)**

Carpentry I (140 hours)
Course 8601 **2 Credits**
Carpentry I is the building block 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, and interpret blueprints. Students will become proficient in identifying types of residential construction components to form foundations and frame walls, floors, ceilings, roofs, doors, and windows. All students will obtain the required OSHA 10 safety credential. **(Grades 09-10)**

Carpentry II (280 hours)
Course 8602 **2 Credits**
Carpentry II leads to successful transition into postsecondary education for careers in carpentry and related fields, such as construction management, architecture, and others. Students are taught the safe use of hand and power tools common to the industry to complement their OSHA 10 safety credential earned in Carpentry I. Students will become proficient in assembling and installing various types of residential construction components that are current with industry standards, including rigging and job-estimating procedures, forming foundations, framing floors, walls, ceiling, roofs, trusses, roofing materials, stairs, exterior doors and windows, decks, and porches. Successfully passing this course leads to CTE program completion. **(Grades 10-11)**
Prerequisite: *Carpentry I*

Carpentry III (280 hours)
Course 8603 **2 Credits**
Carpentry III is an advanced course that allows students to gain in-depth knowledge and hands-on experience in construction industry skills. Work-based learning methods of instruction for this course would provide the student with practical, on-the-job experience in addition to what he or she has already mastered in Carpentry I and II. Additional exploration of the carpentry profession and postsecondary options for continuing education and professional opportunities are also emphasized.
(Grades 12)
Prerequisite: *Carpentry II*

Cosmetology I (280 hours)
Course 8527 **2 Credits**
In this introductory course, students study hair, skin, and nails and their related care. Students are grounded in theory as they prepare to practice procedures in a clinical lab setting or classroom, using manikins for manipulative skill practice. The first-year course emphasizes personal safety, professionalism, and sanitation and disinfection of equipment and facilities. Students develop skills in shampooing and conditioning hair, as well as styling and cutting hair. They are introduced to chemical texture services and develop skills in manicure and pedicure procedures. **(Grades 10-11)**

Cosmetology II (280 hours)
Course 8528 **2 Credits**
In this advanced course, students build on their theoretical foundation of general sciences and practices in cosmetology to increase proficiency in haircutting and styling on live models, with attention to professionalism, client consultation, safety, and infection control. Students are trained in safe chemical processes related to permanent waves, relaxers, soft-curl permanent waves, lightening, and coloring hair. They also develop artistic skills with wigs and hair additions. In addition, students learn to care for skin, hands, and feet, developing experience in providing facials, manicures, pedicures, and nail enhancements. A business management unit focuses on managing the salon. 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. **(Grades 11-12)**
Prerequisite: *Cosmetology I*

Cosmetology III (280 hours)
Course 8529 **2 Credits**
In this advanced course, students build on their theoretical foundation of general sciences and practices in cosmetology to increase proficiency in haircutting and styling on live models, with attention to professionalism, client consultation, safety, and infection control. An advanced business management unit focuses on managing the salon. 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. **(Grade 12)**
Prerequisite: *Cosmetology II*

Criminal Justice I (140 hours)
Course 8702 **2 Credits**
Students are introduced to the legal foundations and processes, and the principles, techniques, and practices for exploring careers within the criminal justice system. Completion of the two-course sequence may prepare students for a number of certification exams, helpful for employment in a variety of Criminal Justice occupations. **(Grade 11)**

Criminal Justice II (140 hours)
Course 8703 **2 Credits**
Students learn the legal foundations and processes, the principles, techniques, and practices for exploring careers within the criminal justice system, and the history of terrorism in the United States. Students combine classroom instruction and supervised, practical experience throughout the school year. **(Grade 12)**
Prerequisite: *Criminal Justice I*

Electricity I (140 hours)
Course 8533 **2 Credits**
Students develop skills in the installation, operation, maintenance, and repair of residential, commercial, and industrial electrical systems. They also study electrical theory, navigate the National Electrical Code Book, select and install conductors, and work with panel boards, switchboards, and generators. Completion of the two-course sequence may prepare students for a number of certification exams, helpful for employment in a variety of Electrical occupations. **(Grades 9-10)**

Electricity II (280 hours)
Course 8534 **2 Credits**
Students continue to develop skills in the installation, operation, maintenance, and repair of residential, commercial, and industrial electrical systems. They also study electrical theory and mathematical problems related to electricity, navigate the National Electrical Code Book, select and install conductors, examine lighting, communication, and power systems, and work with conduit and raceways, panel boards, switchboards, grounding systems, and generators. Completion of the two-course sequence may prepare students for a number of certification exams, helpful for employment in a variety of Electrical occupations. **(Grades 10-11)**
Prerequisite: *Electricity I*

Electricity III (280 hours)
Course 8535 **2 Credits**
Students continue to develop skills in the installation, operation, maintenance, and repair of residential, commercial, and industrial electrical systems. They also study electrical theory and mathematical problems related to electricity, navigate the National Electrical Code Book, select and install conductors, examine lighting, communication, and power systems, and work with conduit and raceways, panelboards, switchboards, grounding systems, and generators. **(Grades 11- 12)**
Prerequisite: *Electricity II*

Firefighting I (280 hours)
Course 8705 **2 Credits**
Firefighting is one of the most dangerous jobs in the world and, therefore, requires complete discipline and attention to achieving the academic and professional standards necessary to successfully fight live fires, address hazardous-materials incidents, and conduct search-and-rescue operations. Students will become familiar with the procedures, equipment, and technologies used by current fire departments. This course challenges students academically, mentally, and physically and meets the standards of National Fire Protection Association (NFPA) 1001-2013 leading to Firefighting I certification.
Note: Students must be at least 16 years old (40-1.79.1 Code of Virginia) by the first day of the course offering. Enrollment also requires parental consent. Additional requirements, including CPR, HAZMAT operations, and Mayday Awareness, are stipulated for those students seeking NFPA 1001-2013 Firefighter I certification. **(Grade 11)**

Firefighting II (140 hours)
Course 8706 **2 Credits**
This course builds upon the professional knowledge gained and skills taught in Firefighting I. Students respond to simulated hazardous-materials incidents and conduct rescue operations, including vehicle extrication. Students react to multi-faceted situations (e.g., caused by simulated terrorism, accidents, and natural disasters) by managing resources such as medivac helicopters, emergency medical personnel, technical rescue teams, and community-based organizations. Students will become familiar with the procedures, equipment, and technologies used by current fire departments. This course challenges students academically, mentally, and physically and meets the standards of National Fire Protection Association (NFPA) leading to Firefighting II certification. **(Grade 12)**
Prerequisite: *Firefighting I*

Graphic Imaging Technology I (140 hours)
Course 8660 **2 Credits**
Graphic Imaging Technology I introduces students to the graphic communications industry. Students gain an overview of digital file preparation, image capture, color theory, digital file output, press operations, and bindery operations. Students learn to practice workplace safety and develop skills in measurement, mathematical problem solving, interpersonal communication, and the job application process. Graphic Imaging Technology programs may be accredited by GAERF, the accrediting body for the nationally recognized PrintEd certification program. Completion of the two-course sequence may prepare students for a number of certification exams, helpful for employment in a variety of Graphic Imaging occupations. **(Grades 10-11)**

Graphic Imaging Technology II (280 hours)
Course 8661 **2 Credits**
Graphic Imaging Technology II prepares students for a career in the graphic communications industry. Students gain knowledge and skills in digital file preparation and output. Graphic Imaging Technology programs may be accredited by GAERF, the accrediting body for the nationally recognized PrintED certification program. Completion of the two-course sequence may prepare students for a number of certification exams, helpful for employment in a variety of Graphic Imaging occupations. **(Grades 11-12)**
Prerequisite: *Graphic Imaging Technology I*

Heating, Ventilation, Air Conditioning, and Refrigeration I (140 hours)
Course 8503 **2 Credits**
In this first course of the instructional program, students are taught to professionally install, repair, and maintain the operating conditions of heating, air-conditioning, and refrigeration systems. Students work with piping and tubing, study the principles of heat and electricity, install duct systems, and comply with EPA regulations. Completion of the two-course sequence may prepare students for a number of certification exams, helpful for employment in a variety of HVACR occupations. **(Grades 10-11)**

Heating, Ventilation, Air Conditioning, and Refrigeration II (280 hours)
Course 8504 **2 Credits**
This instructional program teaches students to professionally install, repair, and maintain the operating conditions of heating and cooling systems. Students also explore emerging technologies, EPA regulations and conservation techniques, and R-410A systems. Completion of this sequence may prepare students for a number of certification exams, helpful for employment in a variety of HVACR occupations. **(Grades 11-12)**
***Prerequisite*:** Heating, Ventilation, Air Conditioning, and Refrigeration I

Precision Machining Technology I (140 hours)
Course 8539 **2 Credits**
The demand for precision machinists is growing along with the resurgence of the U.S. manufacturing industry. Machinists are highly skilled, creative problem solvers who are task-oriented and self-directed individuals. In this first course, students are taught safety awareness and the foundations of machining, including how to accurately apply measurements, use engineering drawings and sketches, and apply metalworking theory in order to efficiently plan, manage, and perform general machine maintenance and machining jobs. Completion of the two-course sequence may prepare students for a number of certification exams, helpful for employment in a variety of Precision Machine occupations. **(Grades 10-11)**

Precision Machining Technology II (280 hours)
Course 8540 **2 Credits**
The demand for precision machinists is growing along with the resurgence of the U.S. manufacturing industry. Machinists are highly skilled, creative problem solvers who are task-oriented and self-directed individuals. In this advanced course, CNC machining operations are emphasized. Students have the opportunity to increase their skills in applying precise measurements, using engineering drawings and sketches, and applying metalworking theory in order to safely and efficiently plan, manage, and perform general machine maintenance and machining jobs. Completion of the two-course sequence may prepare students for a number of certification exams, helpful for employment in a variety of Precision Machine occupations. **(Grades 11-12)**
Prerequisite: *Precision Machining Technology I*

Public Safety I (140 hours)
Course 8700 **2 Credits**
Students perform procedures related to law enforcement and firefighting occupations, including learning the history of the criminal justice system; policing skills; the rule of law; crime scene investigation; the role of the court's; communications systems; first aid and CPR techniques; protective devices (e.g. sprinklers); the history and fundamentals of the fire service; rescue procedures; and procedures for using personal protective equipment (PPE), the self-contained breathing apparatus (SCBA), water supply, hoses, and nozzles. **(Grades 10-11)**

Public Safety II (280 hours)
Course 8701 **2 Credits**
Students perform procedures related to law enforcement and firefighting occupations, including learning policing; the rule of law; the role of the courts, including juvenile justice; the history and fundamentals of the fire service; fire behavior; building construction; ventilation; salvage, overhaul, and cause of fire; the value of fire prevention and public fire education programs; fire suppression techniques; forcible entry methods; HazMat standards; and equipment related to firefighting and criminal justice. **(Grades 10-11)**
Prerequisite: *Public Safety I*

Television and Media Production I (140 hours)
Course 8688 **2 Credits**
Students will learn how to think and work like media producers by engaging in hands-on production projects. Students will also gain proficiency with the media production process while using industry-standard tools. They will explore jobs and careers in the dynamic and growing industry of television and media production and understand the impact of media and its function as entertainment, persuasion, information, and instruction. Completion of the two-course sequence may prepare students for a number of certification exams, helpful for employment in a variety of Television/ Media occupations. **(Grades 9-11)**

Television and Media Production II (280 hours)
Course 8689 **2 Credits**
Students will become media producers as they take real-world projects from conception to production. They will continue to develop and master skills that are essential to the industry as they function in various professional roles. In addition, the students will gain both breadth and depth in their abilities with the sophisticated tools and equipment involved in professional media production. They will develop an increased understanding of postsecondary and career pathways and will develop plans and portfolios to help them achieve their goals. Completion of the two-course sequence may prepare students for a number of certification exams, helpful for employment in a variety of Television/Media occupations.
(Grades 10-12)
Prerequisite: *Television and Media Production I*

Television and Media Production III (280 hours)
Course 8690 **2 Credits**
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. **(Grades 11-12)**
Prerequisite: *Television and Media Production II*

Welding I (140 hours)
Course 8672 **2 Credits**
Welding is required by a wide variety of industries, anywhere fusible materials and high heat are needed to manufacture, repair, or alter tools and products. Professional welders are in high demand and can earn accordingly. Students in Welding I are taught to use manual welding, cutting, and electric arc welding processes to fabricate and weld metal parts according to diagrams, blueprints, and specifications. Students will also receive all safety-related practices and techniques, including the OSHA 10 card. **(Grades 10-11)**

Welding II (280 hours)
Course 8673 **2 Credits**
This course teaches advanced welding students to fine-tune their craft and to perform V-groove welds in all positions, using multiple welding processes. Students prepare to pass relevant industry certifications. Welding is required by a wide variety of industries, anywhere fusible materials and high heat are needed to manufacture, repair, or alter products. Professional welders are in high-demand and can earn accordingly. **(Grades 11-12)**
Prerequisite: *Welding I*

Welding III (280 hours)
Course 8674 **2 Credits**
This welding capstone course teaches the industry's emerging technologies and how to demonstrate gas tungsten arc welding (GTAW) and shielded metal arc welding (SMAW) pipe tests. Students are prepared to earn relevant industry credentials toward employment in production or manufacturing facilities. **(Grade 12)**
Prerequisite: *Welding II*

Technology and Engineering

Aerospace Technology I
Course 8487 **1 Credit**
Aerospace Technology I offers an introduction to flight, space, and supporting technologies through a hands-on approach. Students explore the aviation and space industries through the history of aviation, working with aerodynamics and aircraft components, addressing maintenance and safety issues, assessing flight conditions, examining airport and flight operations, and analyzing the concepts of rocketry and space. **(Grades 10-12)**

Technical Drawing and Design
Course 8435 **1 Credit**
In this foundation course, students learn the basic language of technical design, while they design, sketch, and make technical drawings, illustrations, models, or prototypes of real design problems. Students develop spatial ability as they apply mathematical concepts to visual representations.
(Grades 9-10)

Digital Visualization
Course 8459 **1 Credit**
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. **(Grades 9)**
Prerequisite Recommended: *Technical Drawing*

Architectural Drawing and Design
Course 8437 **1 Credit**
Students explore architectural design foundations and increase understanding of working drawings, construction techniques, and codes regulating building design. They learn the design process and apply the elements and principles of design to architectural projects. Through producing models and illustrations of all aspects of a building, students create architectural design solutions using CADD (computer aided drafting and design). **(Grades 10-12)**
Prerequisite: *Technical Drawing and Design or Introduction to Engineering Design*

Advanced Drawing & Design
Course 8438 **1 Credit**
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, reverse 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. **(Grades 11-12)**
Prerequisite: *Architectural Drawing and Design*

Project Lead The Way Technology Education

Introduction to Engineering Design (PLTW)
Course 8439 **1 Credit**
In this foundation course in Project Lead the Way (PLTW), students use 3-D computer modeling software as they learn the engineering-design process and solve design problems for which they develop, analyze, and create product models. Students will have the opportunity to take the PLTW course assessment. **(Grades 9-10)**

Aerospace Engineering (PLTW)
Course 8428 **1 Credit**
In this specialized course for Project Lead the Way (PLTW), students are taught about aerodynamics, astronautics, space-life sciences, and systems engineering through hands-on engineering problems and projects. **(Grades 10-12)**
Prerequisite: *Introduction to Engineering Design*

Civil Engineering & Architecture (PLTW)
Course 8430 **1 Credit**
In this specialization course for Project Lead the Way (PLTW), students collaborate on both the development of community-based building and design projects and conceptual design for project presentations. **(Grades 10-11)**
Prerequisite: *Introduction to Engineering Design (PLTW)*

Digital Electronics (PLTW)
Course 8440 **1 Credit**
In this foundation course in Project Lead the Way (PLTW), students use computer simulation to learn about the logic of electronics as they design, test, and construct circuits and devices. They apply control-system programming and explore sequential logic and digital-circuitry fundamentals. Topics in computer circuitry are also presented, including circuitry analysis and an exploration into diodes, transistors, and operational amplifiers. **(Grade 11-12)**
Prerequisite: *Introduction to Engineering Design (PLTW)*

Engineering Design and Development (PLTW)
Course 8443 **1 Credit**
In this capstone course in Project Lead the Way (PLTW), 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. **(Grade 12)**
Prerequisite: *Introduction to Engineering Design (PLTW)*

Principles of Engineering (PLTW)
Course 8441 **1 Credit**
In this foundation course in Project Lead the Way (PLTW), students explore the engineering profession and the fundamental aspects of engineering problem solving. Students study the historical and current impacts of engineering on society, including ethical implications. Mathematical and scientific concepts will be applied to fundamental engineering topics, including mechanics and electrical-circuit theory. **(Grades 10-11)**
Prerequisite: *Introduction to Engineering Design (PLTW)*

Software Engineering (PLTW) [Computer Science Principles]
Course 8470 **1 Credit**
This Project Lead the Way course aims to develop students' computational thinking, generate excitement about career paths that utilize computing, and introduce professional tools that foster creativity and collaboration. Students develop programming expertise and explore the workings of the Internet. Projects and problems include app development, visualization of data, cyber security, and simulation. **(Grade 12)**
Prerequisite: *Introduction to Engineering Design (PLTW) (8439), Principles of Engineering (PLTW)*

Agriculture

Career Strategies
Course 9071 **1 Credit**
Students do an in-depth study of one to four or more career cluster, through a variety of investigative activities. They 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. **(Grades 9-12)**

Greenhouse Plant Production and Management
Course 8035 **2 Credits**
Students are taught the operating procedures for a greenhouse. Units of instruction include developing plant production facilities, science application in plant production, and identification of plants. Business management, leadership development, and marketing skills are emphasized to prepare students for careers in the greenhouse plant production and management industry. **(Grades 11-12)**
Prerequisite: *Horticulture Science*

Horticulture Science
Course 8034 **2 Credits**
Through laboratory activities, students apply scientific principles to the field of horticulture, including the areas of floriculture, landscape design, greenhouse operation, nursery plant production, and turf management. They practice safety, develop leadership traits, use plant-growing media, and identify, propagate, and grow horticultural plants in the greenhouse and land laboratory. **(Grades 10-12)**

Introduction to Animal Systems
Course 8008 **2 Credits**
Students develop competencies in each of the major areas of the Animal Systems career pathway including animal nutrition, reproduction, breeding, care, and management. Students learn agricultural mechanics applicable to animal systems. As with all agriculture courses, students will be exposed to principles of leadership and opportunities within student organizations along with Supervised Agricultural Experience opportunities. (**Grades 9-10)**

Introduction to Plant Systems
Course 8007 **2 Credits**
Students develop competencies in each of the major areas of the Plant Systems career pathway, including applied botany, plant propagation, and plant care and selection. Instructional content also includes an introduction to the various divisions of the plant systems industry. Students learn agricultural mechanics applicable to plant systems.

Landscaping I
Course 8036 **2 Credits**
Landscaping I offers students satisfying career opportunities in varying working environments. The expanding and evolving green industry keeps skilled workers in high-demand occupations with educational and leadership opportunities. This course focuses on preparing students for entry-level employment and advancement in landscape design, landscape construction, and landscape maintenance. **(Grades 10-11)**

Landscaping II
Course 8039 **2 Credits**
Landscaping II offers skilled workers satisfying career opportunities in varying working environments. The expanding and evolving green industry keeps skilled workers in high-demand occupations that feature educational and leadership opportunities. This course focuses on preparing students for entry-level employment in commercial landscaping through hands-on experiences. Students will design landscapes and install components, including lighting, hardscapes, and water features within an environment of the landscaping business enterprise. **(Grades 11-12)**
***Prerequisite**: Landscaping I*

Small Animal Care I
Course 8083 **2 Credits**
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 the tools, equipment, and facilities for small animal care, and provides activities to foster leadership development. FFA and SAE activities are encouraged. **(Grades 10-11)**

Small Animal Care II
Course 8084 **2 Credits**
Students advance their skills in the care and management of small animals, focusing on specific needs of various breeds. Instruction includes handling animals and grooming/caring for coats, as well as technical and maintenance functions related to animal health. The course also includes office-management instruction and affords students the opportunity to practice leadership skills. FFA and SAE activities are encouraged. **(Grades 10-11)**
***Prerequisite:** Small Animal Care I*

Veterinary Science I
Course 8088 **2 Credits**
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. Course content integrates application of academics, development of career competencies, and instruction in course-specific knowledge and skills, such as the use of tools, equipment, and facilities related to veterinary medicine. Business management, leadership, and FFA activities are included in the course. **(Grade 11 12)**
***Prerequisite**: Introduction to Animal System, Small Animal Care I and II*

Veterinary Science II
Course 8089 **2 Credits**
Students expand their knowledge of animal science and the care of animals. They develop more advanced skills and techniques for assisting the veterinarian/technician in the performing first aid and surgery, applying aseptic techniques, performing technical functions, administering medication, handling death and dying, and performing office functions. (Grade 12)
Prerequisite: *Veterinary Science I*

Business and Information Technology

Advanced Entrepreneurship (2nd Sem)
Course 9094 **1 Credit**
This course is designed for students who wish to concentrate on advanced strategies for entrepreneurship, building upon concepts introduced in Entrepreneurship (9093). The focus of the course is on development of a business plan and small business management. Students will establish, market, and maintain a business. (**Grade 12) *Offered at RTC Only***; *Recommended after completing a 2 year CTE sequence.*
Prerequisite: *Entrepreneurship Education*

Computer Information Systems
Course 6612 **1 Credit**
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. **(Grades 10-12)**
Prerequisite: *Keyboarding Applications recommended*

Entrepreneurship Education (1st Sem)
Course 9093 **1 Credit**
This course introduces students to the exciting world of creating, owning, and launching their own business. Students will learn concepts and techniques for planning an innovative business and living the entrepreneurial lifestyle. RTC only. **(Grade 12) *Offered at RTC Only***
Recommended after completing a 2 year CTE sequence

Legal Systems Administration
Course 6735 **1 Credit**
Students explore various areas of law (e.g., civil, criminal, family, real estate, estate, and probate) while preparing for employment in the legal field. Students gain knowledge and skills in legal document preparation, office communications, legal terminology, client services, records management, financial records, and business ethics. Successful completion of this course may lead to an entry-level position in a law office, court office, law enforcement agency, corporate legal department, or to postsecondary education. **(Grades 11-12) *Offered at RTC Only Prerequisite:*** *Keyboarding Applications recommended*

Medical Systems Administration
Course 6730 **1 Credit**
Students learn how to use medical terminology and apply administrative procedures necessary to be productive employees in a healthcare environment. Students will learn how to manage office activities, enhance communication skills, identify legal and ethical issues in health care practices, manage financial functions, and enhance employability skills. **(Grades 11-12) *Offered at RTC Only***
Prerequisite: *Keyboarding Applications recommended*

Family and Consumer Science

Culinary Arts I
Course 8275 **2 Credits**
Students prepare for managerial, production, and service skills used in government, commercial, or independently owned institutional food establishments and related food industry occupations. Their study includes planning, selecting, storing, purchasing, preparing, and serving food and food products; basic nutrition, sanitation, and food safety; the use and care of commercial equipment; serving techniques; and the operation of institutional food establishments. **(Grades 10-12)**
***Prerequisite**: Intro to Culinary Arts*

Culinary Arts II
Course 8276 **2 Credits**
Students will have continuing opportunities to acquire a comprehensive knowledge of the food service industry as well as to expand their technical skills. Students practice kitchen safety and sanitation, apply nutritional principles to food preparation and storage, perform a wide range of more advanced food-preparation techniques including grade manger and baking, refine their dining room serving skills, develop menus, perform on-site and off-site catered functions, and strengthen their business and math skills. **(Grades 10-12)**
***Prerequisite**: Culinary I*

Culinary Arts Specialization
Course 8279 **2 Credits**
The Culinary Arts 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. Depending on the options available in the locality, students specialize in one of the following four areas: baking & pastry food; catering/banquet food; restaurant operation; quantity food preparation. **(Grades 11-12)**
***Prerequisite**: Culinary I and II*

Medical and Health Sciences

Career Strategies
Course 9071 **1 Credit**
Students do an in-depth study of one to four or more career cluster, through a variety of investigative activities. They 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. **(Grades 9-12)**

Dental Careers I
Course 8328 **2 Credits**
Students are introduced to the careers in dentistry, including dentist (general and specialists), hygienist, dental assistant, dental laboratory technician, and dental receptionist. Students practice and learn about many of the skills utilized in these professions while attaining all the skills necessary to become a dental assistant. This course has specific state regulations from a governing medical board or agency. **(Grade 11)**
***Prerequisite**: Introduction to Health and Medical Sciences and/or Medical Terminology*

Dental Career II
Course 8328 **2 Credits**
Units of study include medical emergencies, coronal polishing, oral pathology, dental roentgen ology, nutrition, schedule IV drugs and pharmacology, and advanced laboratory techniques. While attending classes for part of the week, students also have an opportunity to participate in internships in local private dental offices and public health dental facilities, where they participate in all phases of dental care delivery. At the end of the program, students are eligible to take the National Registered Dental Assistant Examination, Radiation Hygiene and Safety examination and Infection Control examination, qualifying those who pass to work as a dental assistant, dental receptionist, patient educator, appointment controller, and dental office manager. This course has specific state regulations from a governing medical board or agency. **(Grade 12)**
Prerequisite: *Dental Assistant I*

Emergency Medical Technician I
Course 8333 **2 Credits**
The tasks for this course represent the National Emergency Medical Services Educational Standards. Students explore and apply the fundamentals of emergency medical services, anatomy, physiology, and medical terminology while demonstrating skills in assessing and managing patient care, including assessing the scene and understanding shock, resuscitation, and trauma. Supervised field experience outside of school hours is required. Successful completion of this course and instructor endorsement qualifies students to enroll in EMT II to complete the program sequence. This course has specific state regulations from a governing medical board or agency. **(Grades 10-11)**
Prerequisite*: Intro to Health and Medical and Medical Terminology / 16 years of age*

Emergency Medical Technician II
Course 8334 **2 Credits**
The tasks for this course represent the National Emergency Medical Services Educational Standards. Students build on their knowledge and skills for providing basic life support by focusing on the areas of emergency medical services (EMS) operations, medical emergencies, and management of special patient populations. Supervised field experience 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 EMT cognitive exam. This course has specific state regulations from a governing medical board or agency. **(Grades11-12)**
Prerequisite*: EMT I*

Emergency Medical Telecommunications
Course 8337 **2 Credits**
Emergency Medical Telecommunications is designed for top entry-level skills needed in a telecommunication environment for rescue, fire, and police. The course provides the beginning telecommunicator with an understanding of situations encountered in an emergency communications environment. Upon completion, the student will be able to: summarize issues involving the telecommunication's role and responsibilities as a member of health and public safety environment; summarize issues involving available resources to a telecommunicator; the importance of maintaining confidentiality, liability and legal issues involving emergency tele communicators and their agencies; summarize the process of stress management for inside and outside a communications department/center.
(Grades11-12)

Human Anatomy and Physiology
Course 4330 **1 Credit**
This laboratory science course provides detailed explanations of the functions of the human body and develops basic knowledge of physiology as represented by the latest advances in scientific research. **(Grades 10-11)**

Introduction to Health and Medical Sciences
Course 8302 **2 Credits**
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. **(Grades 9-11)**

Medical Coding and Billing I
Course 8388 **2 Credits**
Students will be introduced to healthcare systems, how to manage an office, and the electronic medical record as it pertains to the field of medical coding and billing. Students will be exposed to the medical terminology used to describe human anatomy and physiology. Students will also be introduced to the field of health informatics. **(Grades 10-11)**

Medical Coding and Billing II
Course 8389 **2 Credits**
Students will become familiar with the health insurance industry and legal and regulatory issues. Students will learn the principles of medical coding and billing related to reimbursement, claim submission, and payment regarding ICD, CPT, and HCPCS coding systems. Students will consider the impact of fraud and importance of biomedical ethics. **(Grades 11-12)**
Prerequisite: *Medical Coding and Billing I*

Medical Terminology
Course 8383 **2 Credits**
Medical Terminology is designed to help students learn common medical terms essential for safe patient care. Topics are presented in logical order, beginning with each body systems' anatomy and physiology and progressing through pathology, laboratory tests and clinical procedures, therapeutic interventions, and pharmacology. Students learn concepts, terms, and abbreviations for each topic. **(Grades 10-11)**
Prerequisite*: Introduction to Health and Medical Sciences*

Nurse Aide I
Course 8360 **2 Credits**
Nurse Aide I, offered as an occupational preparation course, emphasizes the study of nursing occupations as homes and hospitals is part of the course. This course has specific state regulations from a governing medical board or agency. Related to the health care system. Students study normal growth and development, simple body structure and function, and are introduced to microbes and disease. They receive elementary skill training in patient-nursing assistant relationships; taking and recording of vital signs; cardiopulmonary resuscitation; and bathing, feeding, dressing, and transporting of patients in hospitals and nursing homes. Limited on-the-job instruction in nursing **(Grades 11-12)**
Prerequisite: *Introduction to Health and Medical Sciences and/or Medical Terminology*

Nurse Aide II
Course 8362 **2 Credits**
Nurse Aide II is an occupational preparation course, emphasizing advanced skill training in areas such as catheter care, range of motion, bowel and bladder training, care of the dying, selected procedures for maternal and infant care, and admission and discharge procedures. Students learn diseases and body systems as related to advanced clinical care of the acute medical-surgical patient, the chronically ill, and the elderly. On-the-job instruction in a licensed nursing home is part of the course. This course has specific state regulations from a governing medical board or agency. **(Grades 11-12)**
Prerequisite: *Nurse Aide I*

Pharmacy Technician I
Course 8305 **2 Credits**
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 should be able to pursue many exciting and respected career options or postsecondary study in the pharmacy field. This course has specific state regulations from a governing medical board or agency. **(Grades 10-11)**
Prerequisite: *Introduction to Health and Medical Sciences and/or Medical Terminology*

Pharmacy Technician II
Course 8306 **2 Credits**
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 should be able to pursue many exciting and respected career options or postsecondary study in the pharmacy field. This course has specific state regulations from a governing medical board or agency. **(Grades 11-12)**
Prerequisite: *Pharmacy Technician I*

Sports Medicine I
Course 7660 **2 Credits**
This course of studies provides students with the basic concepts and skill set required for an entry-level position as a sports medicine assistant. It introduces students to topics such as injury prevention, nutrition, first aid/CPR/AED, exercise physiology, and biomechanics. Students study basic human anatomy and physiology, medical terminology, legal and ethical issues in sports medicine, and career preparation. Course competencies have been constructed so as not to go beyond the professional scope of aide/assistant level. Mastery of the material in this course would provide students with a strong background should they wish to pursue certification in areas such as first aid, CPR, AED, and/or personal trainer. **(Grades 11-12)**
Prerequisite*: Introduction to Health and Medical Sciences and/or Medical Terminology*

Sports Medicine II
Course 7662 **2 Credits**
This course of studies provides students with the basic concepts and skill set required for an entry-level position as a sports medicine assistant. It introduces students to topics such as injury prevention, nutrition, first aid/CPR/AED, exercise physiology, and biomechanics. Students study basic human anatomy and physiology, medical terminology, legal and ethical issues in sports medicine, and career preparation. Course competencies have been constructed so as not to go beyond the professional scope of aide/assistant level. **(Grade 12)**
Prerequisite: *Sports Medicine I*

English Core Curriculum

English - Grade 6
Course 1109 **0 Credit**
Honors English - Grade 6
Course H1109* **0 Credit**
Students in sixth grade focus on the continued development of communication, vocabulary, reading, writing, and research. The student will begin the study of word origins and continue vocabulary development by reading and determining the meaning of unfamiliar words and phrases. There is a continued emphasis on reading comprehension by comparing fiction and nonfiction texts, with an emphasis on nonfiction reading. Students will engage in the writing process, to include narrative, expository, persuasive and reflective, with an emphasis on narrative and reflective writing. Students will be expected to have greater control over the conventions of writing and self- and peer-edit writing for capitalization, punctuation, spelling, sentence structure, paragraphing, and Standard English. Students will continue their development of research skills that are foundational to effective critical thinking and responsible use of information by finding, evaluating, and selecting appropriate resources to create a oral, visual, written, or multimodal research product.
***Required**: Grade 6 SOL Test*

English - Grade 7
Course 1110 **0 Credit**
Honors English- Grade 7
Course H1110* **0 Credit**
Students in seventh grade focus on the continued development of communication, vocabulary, reading, writing, and research. Students will continue the study of word origins and roots and begin identifying connotations by reading and determining the meanings of unfamiliar words and phrases. There is a continued emphasis on reading comprehension by comparing fiction and nonfiction texts, with an emphasis on nonfiction reading. Students will engage in the writing process, to include narrative, expository, persuasive and reflective, with an emphasis on expository and persuasive writing. Students will be expected to have greater control over the conventions of writing and self- and peer-edit writing for capitalization, punctuation, spelling, sentence structure, paragraphing, and Standard English. Students will continue their development of research skills that are foundational to effective critical thinking and responsible use of information by finding, evaluating, and selecting appropriate resources to create an oral, visual, written, or multimodal research product.
***Required**: Grade 7 SOL Test*

English - Grade 8
Course 1120 **0 Credit**
Honors English - Grade 8
Course H1120* **0 Credit**
Students in eighth grade focus on the continued development of communication, vocabulary, reading, writing, and research. The student will continue the study of word origins, roots, connotations, and denotations, as well as apply their knowledge of word origins and figurative language to extend vocabulary development. There is a continued emphasis on reading comprehension by comparing fiction and nonfiction texts, with an emphasis on nonfiction reading. Students will engage in the writing process, to include narrative, expository, persuasive and reflective, with an emphasis on expository and persuasive writing. Students will be expected to have greater control over the conventions of writing and self- and peer-edit writing for capitalization, punctuation, spelling, sentence structure, paragraphing, and Standard English. Students will continue their development of research skills that are foundational to effective critical thinking and responsible use of information by finding, evaluating, selecting, and synthesizing appropriate resources to produce a research product.
***Required**: Grade 8 Reading SOL Test and Grade 8 Writing SOL Test*

English - Grade 9
Course 1130 **1 Credit**
HONORS ENGLISH - Grade 9*
Course H1130* **1 Credit**
Students in ninth grade focus on the continued development of communication, vocabulary, reading, writing and research. The student will continue to expand vocabulary using the structural analysis of roots and affixes to understand complex words, as well as apply knowledge of word origins, derivations, and figurative language to extend vocabulary development in authentic texts. There is a continued emphasis on reading comprehension by comparing fiction and nonfiction texts, with an emphasis on nonfiction reading. Students will read, comprehend, and analyze a variety of fiction, nonfiction, poetry and drama. Students will use the recursive writing process to write in a variety of forms, including expository, persuasive, reflective and analytic with an emphasis on persuasion and analysis. Students will be expected to have greater control over the conventions of writing and self- and peer-edit writing for capitalization, punctuation, spelling, sentence structure, paragraphing, and Standard English. Students will continue their development of research skills that are foundational to effective critical thinking and responsible use of information by finding, evaluating, and selecting credible resources to create a research product.

English - Grade 10
Course 1140 **1 Credit**
Honors English - Grade 10*
Course H1140* **1 Credit**
Students in tenth grade focus on the continued development of communication, vocabulary, reading, writing and research. The student will continue to expand vocabulary and extend vocabulary development. In tenth grade, there is a sustained emphasis on reading comprehension by analyzing the cultural and social function and universal themes of a variety of fictional texts from different cultures. There is an increased emphasis on analyzing and synthesizing information from a variety of nonfiction texts to solve problems, answer questions, and generate new knowledge. Students will use the recursive writing process to write in a variety of forms, including expository, persuasive, reflective and analytic with an emphasis on persuasion and analysis. Students will be expected to have greater control over the conventions of writing and write and revise to a standard acceptable both in the workplace and postsecondary education. Students will continue their development of research skills that are foundational to effective critical thinking and responsible use of information by finding, evaluating, and selecting credible resources to create a research product.

English - Grade 11
Course 1150 **1 Credit**
Honors English - Grade 11*
Course H1150* **1 Credit**
Students in eleventh grade focus on the continued development of communication, vocabulary, reading, writing and research. The student will continue to expand vocabulary and extend vocabulary development. In eleventh grade, there is a sustained emphasis on reading comprehension by reading, comprehending, and analyzing relationships among American literature, history and culture. They will conduct comparative analyses of multiple texts that address the same topic, as well as analyze fictional texts by American authors describing the contributions of other cultures and identifying prevalent themes and characterizations, which are reflective of American culture. Students will also read, interpret, analyze and evaluate a variety of nonfiction texts, including employment documents and technical writing. Students will use the recursive writing process to write persuasive/argumentative, reflective, interpretive, and analytic essays with an emphasis on persuasive/argumentation. Students will be expected to have greater control over the conventions of writing and write and revise to a standard acceptable both in the workplace and postsecondary education. Students will be able expected to write and revise to a standard acceptable both in the workplace and postsecondary education. Students will continue their development of research skills that are foundational to effective critical thinking and responsible use of information by analyzing, evaluating, synthesizing, and organizing information from a variety of credible resources to produce a research product.
Required: *EOC Reading SOL Test, EOC Writing SOL Test or appropriate alternative assessment*

English - Grade 12
Course 1160 **1 Credit**
Honors English - Grade 11*
Course H1160* **1 Credit**
Students in twelfth grade focus on the continued development of communication, vocabulary, reading, writing and research. The student will continue to expand vocabulary and extend vocabulary development. In twelfth grade, there is a sustained emphasis on reading comprehension by reviewing multiple texts to identify and evaluate resources to make decisions and solve problems. The focus is on British authors and literature, therefore students will read, comprehend and evaluate the development of British literature and the literature of other cultures while evaluating how authors use key elements to contribute to meaning and interpreting how themes are connected across texts. Students will also read, interpret, analyze and evaluate a variety of nonfiction texts. Students will use the recursive writing process to write persuasive/argumentative, reflective, interpretive, and analytic essays with an emphasis on persuasive/argumentation. Students will be able expected to write and revise to a standard acceptable both in the workplace and postsecondary education. Students will continue their development of research skills that are foundational to effective critical thinking and responsible use of information by analyzing, evaluating, synthesizing, and organizing information from a variety of credible resources.
EOC tests required for students who still need ELA verified credits: *EOC Reading SOL Test, EOC Writing SOL Test or appropriate alternative assessment*

***NOTE ABOUT HONORS COURSES**
Placement is based on information from assessment, observation and teacher recommendation. Students enrolled in Honors are still responsible for the Grade Level English Standards of Learning, but are offered opportunities to explore the curriculum through more rigorous analysis, evaluation, and synthesis of grade level materials.

AP Literature and Composition
Course 1195 **1 Credit**
A college level course that includes both a wide and a deep reading of works from various genres and periods, concentrating on works of recognized literary merit. Students will read to understand a work's complexity, to absorb its richness of meaning, and to analyze how that meaning is shared through its details. In addition students will reflect on the social and historical values texts reflect. Students will also write about literary works by explaining judgments about artistry, social and cultural values, and how the details of the work justify the judgments. Students will learn how to make careful observations of textual details, establish connections among their observations, and make inferences leading to an interpretive conclusion about the meaning and value of a piece of writing.
Required for students who still need ELA verified credits*: EOC Reading SOL Test, EOC Writing SOL Test or appropriate alternative assessment*

AP Language and Composition
Course 1196 **1 Credit**
A college level course providing students with opportunities to write about multiple subjects from a variety of disciplines and to demonstrate an awareness of audience and purpose. Students will move beyond programmatic responses and are encouraged to focus on content, purpose and audience in the organization of their writing. Students will become acquainted with a wide variety of styles from many disciplines and gain understanding of the connections between writing and reading. Students will be asked to analyze how graphics and visual images in texts relate to written texts and serve as alternative forms of text. Also, the informed use of research materials and the ability to synthesize varied sources (to evaluate, use and cite sources) will be integral parts of the course.
Required: *EOC Reading SOL Test, EOC Writing SOL Test or appropriate alternative assessment*

AP Seminar
Course 0244 **1 Credit**
AP Seminar is a year-long course that has students investigate real-world issues from multiple perspectives. Students learn to synthesize information from different sources, develop their own lines of reasoning in research-based written essays, and design and deliver oral and visual presentations, both individually and as part of a team.

AP Research
Course 0243 **1 Credit**
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.
***Prerequisite**: AP Seminar*

English Electives

Middle School
Reading - Grades 6
Course 1106 **0 Credit**
This course offers students the opportunity to learn word attack, fluency, comprehension and vocabulary skills through the use of fiction and nonfiction. Both independent and on-grade level texts from various content areas will be used to develop strategies for independent and grade-level reading success. Students may be placed in a class in which the Language! Live Program is used (Exceptional Education only).
**Students are recommended for placement and continuation based on multiple criteria including results from previous standardized tests, diagnostic assessments, IEPs and on-going quarterly data with teacher observation evidence of reading skills*.
***These courses do not replace the grade level English course*

Reading - Grade 7
Course 1107 **0 Credit**
Students continue learning word attack, fluency, comprehension and vocabulary skills through the use of fiction and nonfiction. Both independent and on-grade level texts from various content areas will be used to develop strategies for independent and grade-level reading success. Students may be placed in a class in which the Language! Live Program is used (Exceptional Education only).
**Students are recommended for placement and continuation based on multiple criteria including results from previous standardized tests, diagnostic assessments, IEPs and on-going quarterly data with teacher observation evidence of reading skills*.
***These courses do not replace the grade level English course*

Reading - Grade 8
Course 1108 **0 Credit**
Students continue learning word attack, fluency, comprehension and vocabulary skills through the use of fiction and nonfiction. Both independent and on-grade level texts from various content areas will be used to develop strategies for independent and grade-level reading success. Students may be placed in a class in which the Language! Live Program is used (Exceptional Education only).
**Students are recommended for placement and continuation based on multiple criteria including results from previous standardized tests, diagnostic assessments, IEPs and on-going quarterly data with teacher observation evidence of reading skills*.
***These courses do not replace the grade level English course*

Public Speaking
Course 51151 **0 credit**
Students will have the opportunity to learn to communicate effectively and improve presentation skills while building self-confidence in a variety of settings. Dramatic games, interview techniques, and preparation of formal presentations will all be used to expand students' abilities to use their voice and ideas as a powerful communication tool.

High School (In order of course number)

Publication Production/ Yearbook
Course 0239 **1 credit**
Students will learn the basics of journalism, photography, graphic design and marketing in the creation and publication of a yearbook.

English Composition
Course 1102 **1 Credit**
Students will develop an understanding of the various purposes and audiences for which we write. The course will develop students' writing techniques across genres including narrative, persuasive, and informational and share their work in authentic settings with authentic audiences. A focus will be placed on how written expression, content development, and organizational format choices can create powerful pieces of communication.

Debate
Course 1153 **1 Credit**
Debate teaches students how to coordinate the written and oral communication process through a study of logical thinking and research techniques culminating in written and oral presentations. Using affirmative and negative teams student will study of the national debate topics and more to present arguments using persuasiveness and logic of evidence in a rational and logical manner to a neutral third party.
Prerequisite: *Public Speaking*

Creative Writing
Course 1171 **1 credit**
Students will learn how to write creatively using works of noted poets and authors as models for their own writing as they produce a school-wide literary publication.

Grade 12 English Capstone
Course 1176 **1 Credit**
This course is designed to give certain students an additional boost for competent and successful entry into college and careers. Students will augment skills in critical reading: critical thinking the fundamentals of academic writing; and exposition, persuasion, and argumentation. Through the research and writing process, students will refine topics; develop and support ideas and hypothesis; investigate, evaluate, and incorporate appropriate resources; edit for effective style and usage; and determine appropriate approaches for a variety of contexts, audiences, and purposes. Skills taught are in conjunction with but not overlapping Grade 12 English curriculum.
Prerequisites: *Successful completion of Grade 11 English, demonstrated minimum proficiency on EOC Reading and Writing tests*

Advanced Composition
Course 1177 **1 Credit**
Students will continue to be immersed in a wide variety of writing genres and maintain a strong emphasis on written expression while writing structured and well-supported essays. Students will create works of their own and analyze, respond to, and edit the work of others in a workshop setting. Both formal and informal writing will occur and students will be exposed to a number of pre- and post-writing strategies.
Prerequisite: *English Composition*

High School Developmental Reading I
Course 1181 **1 Credit**
This course offers students the opportunity to learn word attack, fluency, comprehension and vocabulary building skills primarily through the use of non-fiction material. Texts from across the various contents at both independent and on-grade levels will be used to focus students' strategy use for independent and grade-level reading success. Students may be placed in a class in which the Language! Live Program is used.
**Students are recommended for placement and continuation based on multiple criteria including results from previous standardized tests, diagnostic assessments, IEPs and on-going quarterly data with teacher observation evidence of reading skills*.

High School Developmental Reading II
Course 1182 **1 Credit**
Students continue learning word attack, fluency, comprehension and vocabulary building skills primarily through the use of non-fiction material. Texts from across the various contents at both independent and on-grade levels will be used to focus students' strategy use for independent and grade-level reading success. Students may be placed in a class in which the Language! Live Program is used.
**Students are recommended for placement and continuation based on multiple criteria including results from previous standardized tests, diagnostic assessments, IEPs and on-going quarterly data with teacher observation evidence of reading skills*.

High School Developmental Reading III
Course 1183 **1 Credit**
Students continue learning word attack, fluency, comprehension and vocabulary building skills primarily through the use of non-fiction material. Texts from across the various contents at both independent and on-grade levels will be used to focus students' strategy use for independent and grade-level reading success. Students may be placed in a class in which the Language! Live Program is used.
**Students are recommended for placement and continuation based on multiple criteria including results from previous standardized tests, diagnostic assessments, IEPs and on-going quarterly data with teacher observation evidence of reading skills*.

High School Developmental Reading IV
Course 1184 **1 Credit**
Students continue learning word attack, fluency, comprehension and vocabulary building skills primarily through the use of non-fiction material. Texts from across the various contents at both independent and on-grade levels will be used to focus students' strategy use for independent and grade-level reading success. Students may be placed in a class in which the Language! Live Program is used.
**Students are recommended for placement and continuation based on multiple criteria including results from previous standardized tests, diagnostic assessments, IEPs and on-going quarterly data with teacher observation evidence of reading skills*.

Journalism I
Course 1200 **1 Credit**
Introduction to Media/News Writing. Students are introduced to journalistic writing, styles and formats for such writing, and the possible multiple uses inside a school setting.

Journalism II
Course 1210 **1 Credit**
Students will continue their work with multiple journalistic styles of writing and the multiple ways the writing can be shared through media and news venues. Students will continue to assess and contribute to media/news reporting in the school setting.
Prerequisite: *Journalism* I

Journalism III
Course 1211 **1 Credit**
Students will continue their work with multiple journalistic styles of writing and the multiple ways the writing can be shared through media and news venues. Students will continue to assess and contribute to media/news reporting in the school setting.
Prerequisite: *Journalism I, II*

Journalism IV
Course 1212 **1 Credit**
Students will continue their work with multiple journalistic styles of writing and the multiple ways the writing can be shared through media and news venues. Students will continue to assess and contribute to media/news reporting in and beyond the school setting.
Prerequisite: *Journalism I, II, and III*

Advanced Speech
Course 1302 **1 Credit**
This course provides students the opportunity to continue their exploration into effective communication and master presentation skills in a variety of settings. Students will continue to use group and individual communication activities to build mastery of their presentation skills so that they are comfortable sharing their knowledge and opinions in various settings in front of varied audiences.
Recommended Prerequisite: *Public Speaking*

College Assessments: Standardized Test Preparation
Course 2001 **1 Credit**
Students will explore the strategies and skills needed to register for, participate in, and feel accomplished with College Board Assessments. Emphasis will be on vocabulary-building techniques, verbal reasoning, and advanced reading comprehension skills.

English as a Second Language

English as a Second Language 1A
Course 5732 **1 Credit**
This course will focus on basic building of English language foundations. It will be geared towards new arrivals that have little to no background knowledge in English. The content of the course will be the WIDA Standards for Level I ELs, including basic vocabulary building, basic literacy skills (alphabet, phonics, sight words, etc.) and basic grammar.
Prerequisite: *Must be enrolled in the district's English as a Second Language program.*

English as a Second Language 1B
Course 5733 **1 Credit**
This course will focus on continuing to build basic English language skills. It will be geared towards returning students who have not moved beyond ELP Level I, as measured by the WIDA ACCESS for ELs 2.0 or Alternative ACCESS for ELLs 2.0. The content of the course will be vocabulary building, literacy skills, and grammar, all written in the context of content-based materials.
Prerequisite: *Must be enrolled in the district's English as a Second Language program.*

English as a Second Language Content Support English
Course 5746 **1 Credit**
This course will focus on assisting EL students to achieve success in their core English courses. The content of the course will be based on the content linguistic struggles of the students in the course, focusing primarily on facilitating one-on-one or small group tutoring of students.
Prerequisite: *Must be enrolled in the district's English as a Second Language program.*

English as a Second Language Content Support Math
Course 5735 **1 Credit**
This course will focus on assisting EL students to achieve success in their core Math courses. The content of the course will be based on the content linguistic struggles of the students in the course, focusing primarily on facilitating one-on-one or small group tutoring of students.
Prerequisite: *Must be enrolled in the district's English as a Second Language program.*

English as a Second Language Content Support Science
Course 5737 **1 Credit**
This course will focus on assisting EL students to achieve success in their core Science courses. The content of the course will be based on the content linguistic struggles of the students in the course, focusing primarily on facilitating one-on-one or small group tutoring of students.
Prerequisite: *Must be enrolled in the district's English as a Second Language program.*

English as a Second Language Content Support Social Science
Course 5736 **1 Credit**
This course will focus on assisting EL students to achieve success in their core Social Studies courses. The content of the course will be based on the content linguistic struggles of the students in the course, focusing primarily on facilitating one-on-one or small group tutoring of students.
Prerequisite: *Must be enrolled in the district's English as a Second Language program.*

English as a Second Language Freshman Orientation
Course 5739 **1 Credit**
This course will focus on teaching the Freshmen Orientation course to EL students. It will be geared towards ELP Level I students. The content of the course will be based on the Freshmen Orientation curriculum.
Prerequisite: *Must be enrolled in the district's English as a Second Language program.*

Spanish for Fluent Speakers I
Course 5511 **1 Credit**
This course will reinforce literacy skills and fill in gaps in cultural knowledge to native Spanish-speakers who may have underdeveloped literacy skills in the Spanish language. Students will learn grammar, spelling, basic vocabulary, and communication skills in Spanish while exploring the history and culture of Spanish-speaking countries.
Prerequisite: *Must be enrolled in the district's English as a Second Language program.*

Spanish for Fluent Speakers II
Course 5521 **1 Credit**
This course will focus on continuing to build basic Spanish language skills for native speakers. It will be geared towards returning students who continue to need improvement in Spanish literacy skills. Students will learn grammar, vocabulary building, and oral reading skills in Spanish while exploring the history and culture of Spanish-speaking countries.
Prerequisite: *Must be enrolled in the district's English as a Second Language program and successful completion of Spanish for Native Speakers I*

Fine Arts

High School Fine Arts offerings

Band

Beginning Band-36 weeks
Course 9232 **1 Credit**
This course is designed for the high school students who have not previously had the opportunity to study a band instrument or have had minimal instruction on an instrument. The students will be taught basic tone production, embouchure, intonation, posture, and breathing. (Graded music levels I-II) Musical note reading is developed and refined sequentially. Performances and individual daily practices are required.

Intermediate Band-36 weeks
Course 9233 **1 Credit**
More advanced music is studied. More complex phrasing and style techniques are developed. Musical note reading is refined and music of higher grade levels is mastered (graded music levels II-III). Public performance is required to enhance the learning process. Individual daily practice is required.
***Recommended*:** Middle School Advanced Band or High School Beginning Band.

Advanced Band-36 weeks
Course 9234 **1 Credit**
This course continues in sequence after High School Intermediate Band. Advanced level music is studied. High level thinking skills are reinforced by the student's participation in the concert band. (Graded music levels III-IV) Preparation for concerts, and competitive festivals are all required. Individual daily practice is required. Performances are required.
***Recommended*:** Successful completion of Intermediate Band

Artist Level Band-36 weeks
Course 9244 **1 Credit**
This course continues in sequence after High School Advanced Band. This course is designed to continue in technical sequence from advanced band and offers an advanced level of band participation. An examination of a variety of all literature will be explored. Advanced playing for winds, the use of vibrato, mastery of technique, interpretation of advanced literature, and the refinement of large ensemble playing. Audition for District and All-State String ensembles is expected. Daily practice is required. School related and public performances are required.
***Recommended*:** Successful completion of High School Advanced Band. Teacher recommendation & audition required.

High School Jazz Ensemble-36 weeks
Course 3769 **1 Credit**
This course gives students a laboratory experience in the study of jazz, the true art form indigenous to America. Studies are provided to familiarize the students with the historical development of jazz styles from the beginning of the 20th century through today's idioms. Rehearsal techniques, forms, styles, theory, arranging, improvisation, and electronic music techniques are important areas of emphasis. Scheduled school related and public performances are required.

Chorus

Beginning Chorus-36 weeks
Course 9260 **1 Credit**
This course is designed to help students develop the skills necessary for improved vocal ability and technique. It prepares students for participation in a vocal ensemble. Emphasis is placed on correct posture, breathing, techniques, diction and intonation. Students will also concentrate on sight singing. Public performances are required.

Intermediate Chorus-36 weeks
Course 9285 **1 Credit**
This course is designed to give greater attention to vocal production and the interpretation of traditional and contemporary literature. Emphasis is placed on improving vocal quality, technique and sight singing ability. Participation in scheduled school and public performances are required.
Recommended: Successful completion of high school beginning voice. Teacher recommendation and audition recommended.

Advanced Chorus-36 weeks
Course 9289 **1 Credit**
This course is a continuation of the choral studies from intermediate choir. It provides students with many opportunities to refine their choral skills to a high level of performance. This course will also provide an in-depth music experience that will challenge those students who have achieved a level of development commensurate with requirements of performance at the advanced level. Participation in scheduled public performances is required. Continued development of sight-reading skills is emphasized. Students learn audition techniques for local, regional and state level ensembles.
Recommended: Admission by audition and successful completion of high school Intermediate chorus.

Artist Chorus-36 weeks
Course 9290 **1 Credit**
This course provides music instruction for students, who will perform at the artist level of Chorus. Students will perform high level music in preparation for Honors Choir, All-City Choir, Show Choir, Madrigals, and those ensembles that are not a primary part of the curriculum. Participation in these ensembles provides training in the area of repertoire building, music theory, and performance development. Students learn audition techniques for auditions into local, regional and state level ensembles. Public performances are required to enhance the learning process. Private lessons are strongly encouraged. Daily practice is required.
Recommended: Admission by audition and/or teacher recommendation.

Dance

Modern Dance 1-36 weeks
Course 9311 **1 Credit**
Students experience dance as an art form that develops critical thinking skills, discipline, collaboration, creativity, and physical skills that safely facilitate the execution of dance movement. Students enrich their views of society, themselves, and other cultures through the study of dance history. This course prepares students for further dance study and nurtures a lifelong appreciation of dance as an expressive and accessible art form.
Recommended: An interest in dance and the physical capacity to participate in dance movement.

Modern Dance II-36 weeks
Course 9313 **1 Credit**
Students experience dance as an art form that develops critical thinking skills, discipline, collaboration, creativity, and physical skills that safely facilitate the execution of dance movement. Students enrich their views of society, themselves, and other cultures through the study of dance history. This course prepares students for high level technical dance study and nurtures a lifelong appreciation of dance as an expressive and accessible art form.
***Recommended*:** Completion of Modern Dance I and the physical capacity to participate in dance movement. Recommendation from previous dance instructor.

Dance Movement-36 weeks
Course 9319 **1 Credit**
Students experience dance as an art form that develops critical thinking skills, discipline, collaboration, creativity, and physical skills that safely facilitate the execution of dance movement. Students enrich their views of society, themselves, and other cultures through the study of dance movement and history. This course is a level III advanced dance course designed to prepare students for further advanced dance study and audition preparation for performing ensembles. This course is designed to nurture a lifelong appreciation of dance as an expressive and accessible art form.
***Recommended*:** Completion of at least Dance II in high school and the physical capacity to participate in dance movement.

Modern Dance III-36 weeks
Course 9315 **1 Credit**
Students experience dance as an art form that develops critical thinking skills, discipline, collaboration, creativity, and physical skills that safely facilitate the execution of dance movement. Students enrich their views of society, themselves, and other cultures through the study of dance history. This course prepares students for further dance study and nurtures a lifelong appreciation of dance as an expressive and accessible art form. This course is an intensive course in dance technique, performance & dance history. Students will be required to choreograph for an ensemble. Students will also prepare and participate in auditions into local, regional and state dance competitions and ensembles. School and public performances are required.
Prerequisite: Audition only.

Guitar

High School Guitar I-36 weeks
Course 9245 **1 Credit**
This course is intended for students with little or no experience playing the guitar. Students will learn the proper posture, positioning, tuning, reading basic notation, and left and right hand techniques. In addition, students will learn to play simple melodies and accompaniments. Scheduled school related and public performances are required. Students should solicit instructor's advice before purchasing an instrument to ensure success in the class.

High School Guitar II-36 weeks
Course 9247 **1 Credit**
This course is intended for the intermediate level guitarist. Students will learn to read two lines of music at once, chord structures, pick and strumming patterns, chord progressions, and scales (two octaves). Listening to guitar music and discussing the guitar's role in music of the past and present is a component of this course. Students will learn to play exercises and short pieces alone and in an ensemble. Scheduled school related and public performances are required.
Prerequisite: Completion of beginning guitar course and/or audition in order to assure student readiness for intermediate instruction.

High School Small Instrumental Ensemble Guitar I-36 weeks
Course 9250 **1 Credit**
This course is intended for the advanced guitar student. The student will cover major and minor scales and arpeggios in all twelve keys with a minimum of two octaves. The student will work on improving technical proficiency and will study techniques for playing different styles of music to include jazz, blues, rock, and reggae. Scheduled school related and public performances are required.
Prerequisite: The completion of the intermediate guitar course and/or audition in order to assure student readiness for advanced instruction.

High School Small Instrument Ensemble Guitar II
Course 9251 **1 Credit**
This course is designed to provide music instruction for students who perform guitar that are not primary part of the band or orchestra ensemble. Participation in this course provides training in the area of repertoire building, music theory and performance development. School related and public performances are required. Private instruction is highly encouraged.

Orchestra

Beginning Orchestra-36 weeks
Course 9237 **1 Credit**
This course is designed to provide orchestral music instruction for students who perform on string instruments. Attention is given to the understanding of form and style in the musical periods. Technical concentration on scales, etudes, and beginning-intermediate graded literature is included. Daily practice outside of class is required. Scheduled school related and public performances are required.

Intermediate Orchestra-36 weeks
Course 9238 **1 Credit**
This course is designed to continue in technical sequence from Beginning Strings and offers an intermediate level of orchestral participation. An examination of early European through contemporary literature will be explored. Intermediate level position playing for strings, the use of vibrato, mastery of bowing styles, interpretation of standard literature, and refinement of large ensemble playing for all families of instruments are qualities of extreme value. Daily practice outside of class is required. Scheduled school related and public performances are required.
***Recommended*:** Successful completion of Beginning Orchestra

Advanced Orchestra-36 weeks
Course 9239 **1 Credit**
This course is designed to continue in technical sequence from Intermediate Orchestra and offers an advanced level of string orchestra participation. An examination of early European through contemporary literature will be explored. Position playing for strings, the use of vibrato, mastery of bowing technique, interpretation of standard advanced literature, and the refinement of ensemble playing. Preparation for local, regional, district and state auditions is expected. Daily practice outside of class is required. Scheduled school related and public performances are required.
***Recommended*:** Successful Completion of High School Intermediate Orchestra.

Artist Orchestra-36 weeks
Course 9242 **1 Credit**
This course is designed to continue in technical sequence from advanced orchestra and offers an advanced level of string orchestra participation. An examination of a variety of all literature will be explored. Advanced position playing for strings, the use of vibrato, mastery of bowing technique, interpretation of advanced literature, and the refinement of large ensemble playing. Audition for District and All-State String ensembles is expected. Daily practice is required. School related and public performances are required.
***Recommended*:** Successful completion of High School Advanced Orchestra. Teacher recommendation & Audition required.

Theater

Theater I - Introduction to Theater- 36 weeks
Course 1410 **1 Credit**
This course is designed to provide a general introduction to the dramatic arts including basic acting skills, dramatic structure, and visual elements of theatre production and appreciation of a variety of dramatic styles.

Theater II - Dramatic Literature & Theater-36 weeks
Course 1420 **1 Credit**
This course is designed to provide an Intermediate level of dramatic arts including intermediate technical acting skills, dramatic structure, and visual elements of theatre production and appreciation of a variety of dramatic styles.

Theater III – Introduction to Acting-36 weeks
Course 1423 **1 Credit**
Designed to provide beginning instruction in the history and development of dramatic literature, acting, styles and visual effects through a variety of dramatic styles and techniques.

Theater IV - Advanced Acting-36 weeks
Course 1426 **1 Credit**
Emphasis is placed on different acting techniques, character analysis, scene study and performances. Students will have opportunities to create, read, view, perform, in and respond to plays. The production of plays will be included.
Recommended: Completion of Theater III and teacher recommendation.

Visual Art

Art I/Art Foundations- 36 weeks
Course 9120 **1 Credit**
This is a course designed as a foundation class in Visual Art for high school students. Emphasis is on acquiring basic drawing and painting, as well as the development of technical skills in a variety of media. The course explores historical and contemporary art expressions across culture and ethnic groups. This is a foundation course for students who desire to continue the study of art.

Art II/Intermediate - 36 weeks
Course 9130 **1 Credit**
This course is designed to further develop the students' ability to observe the environs in a conscious manner and to develop abilities for visual self-expression. The course gives depth to the students' understanding of art as they explore the visual worlds, both nature and man-made, enabling them to refine their own concepts and skills. Emphasis is on drawing and painting, as well as the development of technical skills in a variety of media. The course examines historical and contemporary art expressions across culture and ethnic groups. The course exposes students to methods of evaluating their artwork as well as the work of others.

Art III/Advanced Intermediate-36 weeks
Course 9140 **1 Credit**
This course is designed to give students opportunities to broaden and strengthen their artistic skills, knowledge, and attitudes acquired in Art I and II. The course focuses on the student interests and ability to critically analyze works of art and to respond aesthetically to manmade and natural objects. Use of technology in art and individual career planning is emphasized in the course.
Prerequisite: Successful completion of Art I & II.

Art IV/Advanced-36 weeks
Course 9145 **1 Credit**
This course provides for in depth study and personal development in one or more areas of the visual arts. These include drawing and painting, crafts, graphics, sculpture, architecture, and commercial design as well as other areas determined by the needs and skills of the individual student. The student is required to develop a portfolio of artwork.
Prerequisite: Successful completion of Art III and teacher recommendation.

AP Studio Art Drawing Portfolio-36 weeks
Course 9150 **1 Credit**
This is an Advanced Placement (AP) course that is equivalent to an introductory college course. The Advanced Placement Studio Program enables highly motivated students to do college-level work in studio art while still in high school. AP Studio Art is not based on written examination; instead students submit portfolios for evaluation at the end of the school year. Course content is developed according to the College Board's AP curriculum.
***Recommended*:** Permission from art teacher.

AP Studio Art: 2-D Design
Course 9148 **1 Credit**
Students are asked to demonstrate proficiency in 2-D design using a variety of art forms. These could include, but are not limited to: graphic design, typography, digital imaging, photography, collage, fabric design, weaving illustration, painting, printing, etc. A variety of approaches to representation, abstraction, and expression may be part of the students' portfolio.

AP Studio Art: 3-D Design
Course 9149 **1 Credit**
A variety of approaches to representation, abstraction, and expression may be part of the student's portfolio. These might include traditional sculpture, architectural models, apparel, ceramics, three dimensional fiber arts or metal work among others.

AP Art History
Course 9151 **1 Credit**
The AP Art History course is equivalent to a two-semester college survey course exploring the nature of art, art making, and responses to art. By investigating specific course content of 250 works of art characterized by diverse artistic traditions from prehistory to the present, students develop in-depth, holistic understanding of the history of art from a global perspective. Students become active participants in the global art world, engaging with its forms and content. They experience, research, discuss, read, and write about art, artists, art making, responses to, and interpretations of art.

Middle School Fine Arts offerings

Band

Middle School Beginning Band-36 weeks
Course 9230 **0 Credit**
Basic course in beginning instrumental techniques. The student is taught basic tone production, embouchure, intonation, posture, and breathing. Scheduled school related and public performances are required. An interest in music and/or teacher recommendation. Students must have his/her own instrument.

Middle School Intermediate Band-36 weeks
Course 9231 **0 Credit**
This is a basic course in beginning instrumental technique. The student is taught basic tone production, embouchure, intonation, posture and breathing. An interest in music and/or teacher recommendation. Students should have their own instruments.
Prerequisite: Successful completion of Middle School Beginning Band.

Middle School Advanced Band-36 weeks
Course 9229 **0 Credit**
This course which continues in technical sequence from Middle School Intermediate Band involves the study of more advanced music literature emphasizing style and phrasing. Scheduled school related public performances are required. Successful completion of Middle School Beginning Band & Middle School Intermediate Band and recommendation from former instructor. Students should have his/her own instrument.
Prerequisite: Successful completion of Middle School Intermediate Band.

Chorus

Middle School Beginning Chorus-36 weeks
Course 9269 **0 Credit**
This course is designed for early training in choral literature. Emphasis is on the basic fundamentals of music reading, voice care, and singing from a vocal score.
Public performances are required.

Middle School Intermediate Chorus-36 weeks
Course 9270 **0 Credit**
This course continues in the technical sequence from Middle School Beginning Chorus. The students will become familiar with various styles of three and four part choral literature with emphasis placed on appropriate choral techniques. Through listening and performing, students further develop advanced techniques in phrasing, diction and other aspects of choral music interpretation.
Participation in scheduled public performances is required.

Middle School Advanced Chorus
Course 9271 **0 Credit**
This course continues in the technical sequence from Middle School Intermediate Chorus. Experiences are designed to develop skills that range from proper performance position to music reading. Technical concentration on scales, etudes, and medium graded literature is included. Daily practice outside of the orchestra class and private instruction is required. Participation in scheduled public performances are required to enhance learning.
Prerequisite: Successful completion of Beginning and Intermediate chorus and/or audition, and/or recommendation from previous music instructor.

Dance

Middle School Beginning Dance -18 weeks
Course 6305 **0 Credit**
Middle School Beginning Dance -36 weeks
Course 6305M **0 Credit**
Students experience dance as an art form that develops critical thinking skills, discipline, collaboration, creativity, and physical skills that safely facilitate the execution of dance movement. Students enrich their views of society, themselves, and other cultures through the study of dance history. This course prepares students for further dance study and nurtures a lifelong appreciation of dance as an expressive and accessible art form. An interest in dance and the physical capacity to participate in dance movement is expected.

Middle School Intermediate Dance -18 weeks
Course 6306 **0 Credit**
Middle School Intermediate Dance -36 weeks
Course 6306M **0 Credit**
Students experience dance as an art form that develops critical thinking skills, discipline, collaboration, creativity, and physical skills that safely facilitate the execution of dance movement. Students enrich their views of society, themselves, and other cultures through the study of dance history. This course prepares students for further dance study and nurtures a lifelong appreciation of dance as an expressive and accessible art form. Students need to demonstrate an interest in dance and the physical capacity to participate in dance movement.

Middle School Advanced Dance -18 weeks
Course 6307 **0 Credit**
Middle School Advanced Dance -36 weeks
Course 6307M **0 Credit**
Students experience dance as an art form that develops critical thinking skills, discipline, collaboration, creativity, and physical skills that safely facilitate the execution of dance movement. Students enrich their views of society, themselves, and other cultures through the study of dance history. This course prepares students for further dance study and nurtures a lifelong appreciation of dance as an expressive and accessible art form. An interest in dance and the physical capacity to participate in dance movement is expected.

Guitar

Middle School Beginning Guitar
Course 5008 **0 Credit**
This course is designed for the beginning guitar student with no experience. Students will learn to use basic proper guitar technique and the basic understanding of the elements of music. The course will be split into several units that cover various aspects of understanding the instrument. Students will learn to tune their guitars warming-up, group instruction, and independent group practicing and playing. Students will also learn basic maintenance of the instrument and how to change strings, clean the guitar's surface, clean strings, and maintain tuning.

Middle School Intermediate Guitar
Course 5009 **0 Credit**
Students will continue with the techniques and basic skills learned in the beginning guitar class with more in-depth work on technique and understanding. Music will be intermediate level music for high quality performances.

Middle School Advanced Guitar
Course 5010 **0 Credit**
Advanced guitar will include work on and middle school master of the following skills: standard notation, rhythm, melody, form tempo and dynamics. Students in the advanced guitar class will be expected to perform throughout the year in public venue.

Harp

Middle School Beginning Harp- 36 weeks
Course 3711 **0 Credit**
Beginning instructional classes in harp are designed for students recommended by harp instructors or students desiring to study harp. Harp instruction is designed to develop skills that range from proper care and maintenance of the harp, to proper hand positions and note-reading. Techniques for the harp will include: note reading skills, identification of harp parts, corresponding strings, levers, hand position and finger action. The students will also learn pitch names, staff clefs, note alterations, note values, rests, simple time signatures, key signatures, and scales (C, G, D, F, and B flat) and sight reading. This course include solo and ensemble repertoire selected by the harp instructor. Scheduled school related and public performances are required.

Middle School Intermediate Harp- 36 weeks
Course 3712 **0 Credit**
The intermediate level of harp instruction continues in sequence from the beginning level harp instruction. Hand positions and finger action skills, instrument care and maintenance continue to be developed. Technical skills of placing, connecting, placing of four fingers in succession, playing octaves and intervals are learned on this instructional level. Time signatures, key signatures, major and minor scales are expanded. A larger harp repertoire of performance proficiency compositions are studied. Scheduled school related and public performances are required.
***Prerequisite*:** Successful completion of Middle School Beginning Harp and recommendation from former instructor.

Middle School Advanced Harp-36 weeks
Course 3713 **0 Credit**
The technical sequence of instruction continues from Intermediate level harp instruction. Students continue to develop a degree of proficiency in note-reading, rhythm, hand positions, and techniques. Expanded use of pedals on the pedal harp, lever and pedal changes, rolls, glissandos, and muffle techniques are taught. Advance solos, orchestral and ensemble repertoire are performed for concerts and community based performances. Performances of repertoire from varied cultures and composers are studied. Scheduled school related and public performances are required. The student must have successfully completed Middle School Intermediate Harp.
***Prerequisite*:** Recommendation of former music teacher and successful audition.

Orchestra

Middle School Beginning Orchestra-36 weeks
Course 9235 **0 Credit**
This course is a beginning instructional course for strings (violin, viola, cello, and bass violin). Basic fundamental rudiments such as proper performance position, tone production and music reading are introduced. Technical concentration on scales, etudes and simple graded literature is included. Daily practice outside of orchestra class and private instruction are strongly encouraged. Scheduled public performances are required to enhance learning. The student must have an interest in music and physical capacity to perform on one of the string instruments.

Middle School Intermediate Orchestra-36 weeks
Course 9236 **0 Credit**
This course continues in technical sequence of Middle School Beginning Orchestra. The techniques that were introduced in Beginning Orchestra are studied in greater depth. More advanced music literature is studied. Public performance is required. Daily individual practice and private instruction is strongly encouraged.
***Prerequisite*:** Successful completion of Middle School Beginning Orchestra and recommendation from former instructor.

Middle School Advanced Orchestra-36 weeks
Course 9241 **0 Credit**
This course continues in technical sequence from Middle School Intermediate Orchestra. Experiences are designed to develop skills that range from proper performance position to music reading. Technical concentration on scales, etudes, and medium graded literature is included. Daily practice outside of the orchestra class is required. Scheduled public performances are required to enhance learning.
***Prerequisite*:** Successful completion of Middle School Beginning Orchestra and Middle School Intermediate Orchestra and recommendation from former instructor.

Theater

Middle School Beginning Theatre Arts I -18 weeks
Course 1393 **0 Credit**
Middle School Beginning Theatre Arts I -36 weeks
Course 1393M **0 Credit**
This course provides an avenue for students to express themselves creatively through performances. Basic acting skills will be explored along with stagecraft. Students will have the opportunity to perform for the student body and general public.

Middle School Intermediate Theatre Arts -18 weeks
Course 1394 **0 Credit**
Middle School Intermediate Theatre Arts -36 weeks
Course 1394M **0 Credit**
This course provides an avenue for students to express themselves creatively through performances. Basic acting skills will be explored along with stagecraft. Students will have the opportunity to perform for the student body and general public.

Middle School Speech Application/Theatre Arts Grade 8 -36 weeks
Course 1395 **0 Credit**
This course provides an avenue for students to express themselves creatively through performances. Basic acting skills will be explored along with stagecraft. Students will have the opportunity to perform for the student body and general public.

Visual Art

06 Exploratory Art-9 weeks
Course 3505 **0 Credit**
Art exploration is an exploratory course designed to give students information, experiences, and activities leading to an awareness of art as a means of personal achievement. A review of the many diverse areas for career possibilities included. Open to all students with an interest in Visual Arts.

Art Grade 6 -18 weeks
Course 9103 **0 Credit**
Art Grade 6 -36 weeks
Course 9103M **0 Credit**
This course is designed to give students activities and experiences leading to an understanding of the joy of creative involvement, communication of feelings, development of skills, critical judgment and perception; art as a means for improving social order and daily living through its use to produce social change, interior design, art careers; art as a record of cultural heritage, communication through principles and elements of design, communication, and techniques in the related arts. Open to all students with an interest in Visual Arts.

Art Grade 7 -18 weeks
Course 9105 **0 Credit**
Art Grade 7 -36 weeks
Course 9105M **0 Credit**
This course emphasizes the understanding of art as a means to personal fulfillment through activities and experiences related to ideas and subjects of art, design related to materials, uniqueness of an artist and their art; art as a means of improving social order and daily living, art that sells, art that shapes our environment, preservation; art as a record of cultural heritage as related to ethnic groups and modern art.
***Prerequisite*:** Successful completion of 06 Art and recommendation from previous art instructor.

Art Grade 8 -18 weeks
Course 9115 **0 Credit**
Art Grade 8 -36 weeks
Course 9115M **0 Credit**
A course designed for students demonstrating a strong interest and ability in an in depth study of art.
***Prerequisite*:** Recommendation of Art instructor required.

09H Art I- 36 weeks (Advanced 8th graders only)
Course H9120 **1 Credit**
This is a course designed for students meeting the criteria for honors placement in art education. The course has more in-depth assignments in writing and research, museum visits, and portfolio development.
***Prerequisite*:** Recommendation of 8th grade art instructor and permission of Art I art instructor.

Gifted Programs- S.P.A.C.E

Special Program for Academic and Creative Excellence (General Intellectual Aptitude Pull-out Services)

Gifted & Talented Grade 6 -36 weeks
Course 0023 **0 Credit**
The Special Program for Academic and Creative Excellence, SPACE, is designed explicitly for gifted and talented middle school students to think critically, communicate effectively, and develop reasoning and problem-solving skills to maximize their growing academic independence. Students will be presented with challenges increasing in difficulty, complexity, and scope. Students will collaborate on distinct group projects to develop their teamwork /social skills and work on independent assignments that allow them to pursue their personal interests in greater depth. Researched based gifted curriculum will be utilized, such as the Integrated Curriculum Model developed by the Center of Gifted Education at William and Mary.
***Prerequisite*:** Former Elementary SPACE student and/or Teacher Referral.

Gifted & Talented Grade 7 -36 weeks
Course 0024 **0 Credit**
The Special Program for Academic and Creative Excellence, SPACE, is designed explicitly for gifted and talented middle school students to think critically, communicate effectively, and develop reasoning and problem-solving skills to maximize their growing academic independence. Students will be presented with challenges increasing in difficulty, complexity, and scope. Students will collaborate on distinct group projects to develop their teamwork/social skills and work on independent assignments that allow them to pursue their personal interests in greater depth. Researched based gifted curriculum will be utilized, such as the Integrated Curriculum Model developed by the Center of Gifted Education at William and Mary.
***Prerequisite*:** Former SPACE student or Course 0023 and/or Teacher Referral.

Gifted & Talented Grade 8 -36 weeks
Course 0025 **0 Credit**
The Special Program for Academic and Creative Excellence, SPACE, is designed explicitly for gifted and talented middle school students to think critically, communicate effectively, and develop reasoning and problem-solving skills to maximize their growing academic independence. Students will be presented with challenges increasing in difficulty, complexity, and scope. Students will collaborate on distinct group projects to develop their teamwork/social skills and work on independent assignments that allow them to pursue their personal interests in greater depth. Researched based gifted curriculum will be utilized, such as the Integrated Curriculum Model developed by the Center of Gifted Education at William and Mary.
***Prerequisite*:** Course 0023 and/or Course 0024.

History & Social Science

United States History to 1865
Course 2353 **0 Credit**
This course focuses on using skills for historical and geographical analysis to explore the early history of the United States and understand ideas and events that strengthened the union. The course relates to the history of the United States from pre-Columbian times until 1865. Students will continue to learn fundamental concepts in civics, economics, and geography as they study United States history in chronological sequence and learn about change and continuity in our history. They also will study documents and speeches that laid the foundation for American ideals and institutions and will examine the everyday life of people at different times in the country's history through the use of primary and secondary sources.

Honors United States History to 1865
Course H2353 **0 Credit**
This course is designed to increase the academic rigor for students which will provide high school teachers with an idea of the student's willingness to be challenged. The course will prepare students for the high school expectations of success in the area of history and social science. The course will prepare students for the high school expectations of success. The course will focus on using skills for historical and geographical analysis to explore the early history of the United States and understand ideas and events that strengthened the union. The course relates to the history of the United States from pre-Columbian times until 1865. Students will continue to learn fundamental concepts in civics, economics, and geography as they study United States history in chronological sequence and learn about change and continuity in our history. They also will study documents and speeches that laid the foundation for American ideals and institutions and will examine the everyday life of people at different times in the country's history through the use of primary and secondary sources.

United States History: 1865 to the Present
Course 2354 **0 Credit**
Students will continue to use skills of historical and geographical analysis as they examine American history since 1865. The standards for this course relate to the history of the United States from the end of the Reconstruction era to the present. Students should continue to learn fundamental concepts in civics, economics, and geography within the context of United States history. Political, economic, and social challenges facing the nation reunited after Civil War will be examined chronologically as students develop an understanding of how the American experience shaped the world political and economic landscape.
Required: *United States History to 1865.*

Honors United States History: 1865 to the Present
Course H2354 **0 Credit**

This course is designed to increase the academic rigor for students which will provide high school teachers with an idea of the student's willingness to be challenged. The course will prepare students for the high school expectations of success in the area of history and social science. The course will prepare general education students for the expectations of high school level success. Students will continue to use skills of historical and geographical analysis as they examine American history since 1865. The standards for this course relate to the history of the United States from the end of the Reconstruction era to the present. Students should continue to learn fundamental concepts in civics, economics, and geography within the context of United States history. Political, economic, and social challenges facing the nation reunited after Civil War will be examined chronologically as students develop an understanding of how the American experience shaped the world political and economic landscape.

Civics and Economics
Course 2357 **0 Credit**

Standards for Civics and Economics examine the roles citizens play in the political, governmental, and economic systems in the United States. Students examine the constitutions of Virginia and the United States; identify the rights, duties, and responsibilities of citizens; and describe the structure and operation of government at the local, state, and national levels. Students investigate the process by which decisions are made in the American market economy and explain the government's role in it. The standards identify personal character traits, such as patriotism, respect for the law, and a sense of civic duty, that facilitate thoughtful and effective participation in the civic life of an increasingly diverse democratic society.

Honors Civics and Economics
Course H2357 **0 Credit**

This course is designed to increase the academic rigor for students which will provide high school teachers with an idea of the student's willingness to be challenged. The course will prepare students for the high school expectations of success in the area of history and social science, Standards for Civics and Economics examine the roles citizens play in the political, governmental, and economic systems in the United States. Students examine the constitutions of Virginia and the United States; identify the rights, duties, and responsibilities of citizens; and describe the structure and operation of government at the local, state, and national levels. Students investigate the process by which decisions are made in the American market economy and explain the government's role in it. The standards identify personal character traits, such as patriotism, respect for the law, and a sense of civic duty, that facilitate thoughtful and effective participation in the civic life of an increasingly diverse democratic society.

Grade 6-8 - Social Studies
Course 2060- Grade 6 **0 Credit**
Course 2070- Grade 7 **0 Credit**
Course 2086- Grade 8 **0 Credit**

This course focuses on practical life skills utilizing authentic instruction in the area of social studies to address individualized goals and objectives.
NOTE: This course will not count as a history credit for the Standard or Advanced Standard Diploma.

World History & Geography to 1500
Course 2215 **1 Credit**

This course will enable students to explore the historical development of people, places, and patterns of life from ancient times until 1500 A.D. in terms of the impact on Western civilization. The diversity of culture and the evolution of human history will be explored chronologically and geographically from the beginning of time until the Renaissance in Europe. Geographical concepts will be incorporated within the context of world historical events. Students will examine the development of the world's major political, economic, and legal systems; artistic and literary movements; technological changes; trade patterns; religions; and the influential people of history. Special emphasis will be given to the five themes of geography as they relate to regional conflicts, humanity's relationships with the environment, and the foundation of democratic principles, such as citizenship.
Required: *World History and Geography to 1500 SOL Test.*

Honors World History & Geography to 1500
Course H2215 **1 Credit**
This course is designed to increase the academic rigor for students which will provide high school teachers with an idea of the student's willingness to be challenged. The course will prepare students for the high school expectations of success in the area of history and social science. The course will prepare general education students for the expectations of high school level success. This course will enable students to explore the historical development of people, places, and patterns of life from ancient times until 1500 A.D. in terms of the impact on Western civilization. The diversity of culture and the evolution of human history will be explored chronologically and geographically from the beginning of time until the Renaissance in Europe. Geographical concepts will be incorporated within the context of world historical events. Students will examine the development of the world's major political, economic, and legal systems; artistic and literary movements; technological changes; trade patterns; religions; and the influential people of history. Special emphasis will be given to the five themes of geography as they relate to regional conflicts, humanity's relationships with the environment, and the foundation of democratic principles, such as citizenship. In this Honors course map and globe reading, critical thinking, writing, research, and group-process skills are refined.
Required: *World History and Geography to 1500 SOL Test.*

World History & Geography 1500 to Present
Course 2216 **1 Credit**
This course enables students to cover history and geography from 1500 A.D. to the present, with emphasis on Western Europe. Geographic influences on history continue to be explored, but increasing attention is given to political boundaries that developed with the evolution of nations. Significant attention will be given to the ways in which scientific and technological revolutions created new economic conditions that in turn produced social and political changes. Noteworthy people and events of the nineteenth and twentieth centuries will be emphasized for their strong connections to contemporary issues.
Required: *World History and Geography 1500 to present SOL Test.*

Honors World History & Geography 1500 to Present
Course H2216 **1 Credit**
This course is designed to increase the academic rigor for students which will provide high school teachers with an idea of the student's willingness to be challenged. The course will prepare students for the high school expectations of success in the area of history and social science. This course enables students to examine history and geography from 1500 A.D. to the present, with emphasis on Western Europe. Geographic influences on history will continue to be explored, but increasing attention will be given to political boundaries that developed with the evolution of nations. Significant attention will be given to the ways in which scientific and technological revolutions created new economic conditions that in turn produced social and political changes. Noteworthy people and events of the nineteenth and twentieth centuries will be emphasized for their strong connections to contemporary issues. This course is a foundation for complex critical thinking and problem solving.
Required: *World History and Geography 1500 to Present SOL Test.*

Virginia and United States History, Part I
Course 2361 **1 Credit**
One half of the curriculum is presented in one year for a full credit. Study the contributions of minority groups. Learn the political, economic, social, and cultural development of the United States from colonization to World War II.

Virginia and United States History, Part II
Course 2362 **1 Credit**
One half of the curriculum is presented in one year for a full credit. Study the contributions of minority groups. Learn the political, economic, social, and cultural development of the United States from the Great Depression to the present.
Required: *Virginia and United States History SOL Test.*

Virginia and United States History
Course 2360 **1 Credit**
The course focuses on the historical development of American ideas and institutions from the Age of Exploration to the present. While focusing on political and economic history, the standards provide students with a basic knowledge of American culture through a chronological survey of major issues, movements, people, and events in United States and Virginia history. Students should use historical and geographical analysis skills to explore in depth the events, people, and ideas that fostered our national identity and led to our country's prominence in world affairs.
Required: *Virginia and United States History SOL Test*

Honors Virginia and United States History
Course H2360 **1 Credit**
This is an honors level course that focuses on the historical development of American ideas and institutions from the Age of Exploration to the present. While focusing on political and economic history, the standards provide students with a basic knowledge of American culture through a chronological survey of major issues, movements, people, and events in United States and Virginia history. Students should use historical and geographical analysis skills to explore in-depth the events, people, and ideas that fostered our national identity and led to our country's prominence in world affairs.
Required: *Virginia and United States History SOL Test*

AP United States History
Course 2319 **1 Credit**
AP U.S. History is designed to be the equivalent of a two-semester introductory college or university U.S. history course. In AP U.S. History students investigate significant events, individuals, developments, and processes in nine historical periods from approximately 1491 to the present. Students develop and use the same skills, practices, and methods employed by historians: analyzing primary and secondary sources; making historical comparisons; utilizing reasoning about contextualization, causation, and continuity and change over time; and developing historical arguments. The course also provides seven themes that students explore throughout the course in order to make connections among historical developments in different times and places: American and national identity; migration and settlement; politics and power; work, exchange, and technology; America in the world; geography and the environment; and culture and society.
Required: *AP United States History examination upon completion of the course.*

Virginia and United States Government
Course 2440 **1 Credit**
The curriculum examines the structure and functions of our federal form of government. The decision-making processes at the local, state, national, and international levels are emphasized. The foundations of American government, the politics of American democracy, and constitutional rights and responsibilities are explored in depth. United States political and economic systems are compared to those of other nations, with emphasis on the relationships between economic and political freedoms. Economic content includes the United States market system, supply and demand, and the role of the government in the economy. Democratic values and citizen participation are stressed throughout the course.

Honors Virginia and United States Government
Course H2440 **1 Credit**
The curriculum examines the structure and functions of our federal form of government. The decision-making processes at the local, state, national, and international levels are emphasized. The foundations of American government, the politics of American democracy, and constitutional rights and responsibilities are explored in depth. United States political and economic systems are compared to those of other nations, with emphasis on the relationships between economic and political freedoms. Economic content includes the United States market system, supply and demand, and the role of the government in the economy. This course is a foundation for complex critical thinking and problem solving.

AP Government & Politics: United States
Course 2445 **1 Credit**
A college level course that gives students an analytical perspective on government and politics in the United States. This course includes both the study of general concepts used to interpret U.S. politics and the analysis of specific examples. It also requires familiarity with the various institutions, groups, beliefs, and ideas that constitute U.S. Politics.
Required: *AP Government & Politics: United States examination upon completion of the course.*

AP European History
Course 2399 **1 Credit**
The College Board's curriculum is followed and is equivalent to a first-year college course. Emphasis is placed on the political, economic and social survey of the history of modern Europe from the Renaissance to the present. It also includes the background of the ancient and medieval worlds of western civilization. Students in this course are expected to read and interpret points of view and abstract concepts.
Required: *AP European History examination upon completion of the course.*

AP Human Geography
Course 2212 **1 Credit**
The College Board's curriculum is followed and is equivalent to a first-year college course. In this course students are introduced to the systematic study of patterns and processes that have shaped human understanding, use, and alteration of Earth's surface. Students employ spatial concepts and landscape analysis to examine human social organization and its environmental consequences. They also learn about the methods and tools geographers use in their science and practice.
Required: *AP Human Geography examination upon completion of the course.*

Grades 9-12 - Social Studies
Course 2090- Grade 9 **1 Credit**
Course 2200- Grade 10 **1 Credit**
Course 2300- Grade 11 **1 Credit**
Course 2400- Grade 12 **1 Credit**
This course focuses on practical life skills utilizing authentic instruction in the area of social studies to address individualized goals and objectives.
NOTE: This course will not count as a history credit for the Standard or Advanced Standard Diploma.

History & Social Science Electives

AP Psychology
Course 2902 **1 Credit**
The College Board's curriculum is followed and is equivalent to a first-year college course. In this course students are introduced to the systematic and scientific study of the behavior and mental processes of human beings and other animals. Students are exposed to the psychological facts, principles, and phenomena associated with each of the major subfields within psychology. They also learn about the ethics and methods psychologists use in their science and practice.
Required: *AP Psychology examination upon completion of the course.*

African American Studies
Course 2371 **1 Credit**
In this course students will examine significant aspects of the history of African Americans with particular emphasis on the evolution and development of black communities from Africa to enslavement to the present. The black experience from a number of perspectives: history, politics, economics, sociology, psychology, religion and culture will be explored. The progression of black political and social thought, engagement and protest, and the struggle to enact change will also be examined. In doing so, students will investigate the intersections of race, class, and gender. Thus, students will gain a comprehensive introduction to the social, political, legal, and economic roots of the contemporary challenges faced by African Americans.

Sociology
Course 2500 **1 Credit**
In this course students will study human society and social behavior. Positive human relationships are an essential part of a civilized society and how we interact with each other is important so that we can find answers to questions and solve problems in our world. Topics to be covered include culture, violence, deviance, social control, socialization and personality, group behavior, social class, and social institutions. The key component of this course is to study one's self and the society that influences our behavior.

IB Diploma Programme

IB Theory of Knowledge I – Grade 11
Course IB1197 **1 Credit**
Year 1 of a 2-year college-level course. This course is required for IB Diploma candidates and strongly suggested for students taking IB Diploma Programme Courses. In this course, students analyze the role of knowledge and various ways of knowing in multiple disciplines, examine the belief systems inherent in various academic subjects, focus on questioning, clarifying, and expressing ideas through written and oral communication, and reflect on beliefs that affect the acquisition of knowledge. Student progress on the Creativity, Activity, Service (CAS) requirement is monitored. Students also begin the process of writing the Extended Essay. This 2-year course satisfies the requirements for IB-DP.

IB Theory of Knowledge II – Grade 12
Course IB1198 **1 Credit**
Year 2 of a 2-year college-level course. This course is required for IB Diploma candidates and strongly suggested for students taking IB Courses. In this course, students analyze the role of knowledge and various ways of knowing in multiple disciplines, examine the belief systems inherent in various academic subjects, focus on questioning, clarifying, and expressing ideas through written and oral communication, and reflect on beliefs that affect acquisition of knowledge. Student progress on the Creativity, Activity, Service (CAS) requirement is monitored. Students also finish the process of writing the Extended Essay. This course satisfies the requirements for IB-DP.
Prerequisite: *IB Theory of Knowledge I.*

IB English 11 – Grade 11
Course IB1150 **1 Credit**
Year 1 of a 2-year college-level literature course. The course satisfies required content for the State of Virginia EOC English along with the Group 1 requirement of the IB Diploma. The course explores various genres, periods, and places of American and English-language literature and literature in translation, with an eye toward cultural analysis and understanding. Coursework is divided into four parts with two parts being taught each year. In year 1, students study 2 works of different genres for detailed study and 2 works in translation. Students take the SOL English Reading End-of-Course test at the end of year 1. The course prepares students for the IB English Literature Standard Level exam in Year 2, and year 1 students will complete mandatory oral and written work required for IB Assessment.
Prerequisite: *Honors English 10 or equivalent, with passing score on the Virginia EOC Writing test.*

IB English 12 – Grade 12
Course IB1160 **1 Credit**
Year 2 of a 2-year college-level literature course. This course fills the Group 1 requirement of the IB-DP. The course explores various genres, periods, and places of American and English-language Literature and literature in translation, with an eye toward cultural analysis and understanding. Coursework is divided into four parts with two parts being taught each year. In year 2, students study 3 works from new textualities and 3 works from one literary genre. The course prepares students for the IB English Literature Standard Level exams, and students will complete mandatory oral work and formal written literary analyses required for IB assessment.
Prerequisite: *IB English 11.*

IB English 11 HL – Grade 11
Course IB1150 HL **1 Credit**
Year 1 of a 2-year college-level literature course. The course satisfies required content for the State of Virginia EOC English along with the Group 1 requirement of the IB-DP. The course explores various genres, periods, and places of American and English-language literature and literature in translation, with an eye toward cultural analysis and understanding. Coursework is divided into four parts with two parts being taught each year. In year 1, students study 3 works of different genres for detailed study and 3 works in translation. Students take the SOL English Reading End-of-Course test at the end of year 1. The course prepares students for the IB English Literature Higher Level exams in year 2, and students will complete mandatory oral and written work required for IB assessment.
Prerequisite: *Honors English 10 or equivalent, with passing score on the Virginia EOC Writing test.*

IB English 12 HL – Grade 12
Course IB1160 HL **1 Credit**
Year 2 of a 2-year college-level course. This course fills the Group 1 requirement of the IB Diploma. The course explores various genres, periods, and places of American and English-language literature and literature in translation, with an eye toward cultural analysis and understanding. Coursework is divided into four parts with two parts being taught each year. In year 2, students study 4 works from new textualities and 4 works from one literary genre. The course prepares students for the IB English Literature Higher Level exams, and students will complete mandatory oral work and formal written literary analyses required for IB assessment.
Prerequisite: *IB English 11 HL.*

IB French ab initio I – Grade 11
Course IB5152 **1 Credit**
Year 1 of a 2-year college-level course. This course fills the Group 2 requirement for the IB Diploma. For students with little or no previous experience in French who have developed strong language study skills in another language. Through study of vocabulary, linguistic structures, and writing systems, students will learn to communicate clearly in a range of situations in an accelerated time frame. Students will also work to demonstrate an awareness of intercultural elements related to prescribed topics. The class will prepare students for the IB French ab initio Standard Level assessments and exams in year 2.
Prerequisite: *Spanish II or at least two years of successful study of another foreign language with high school credit.*

IB French ab initio II – Grade 12
Course IB5162 **1 Credit**
Year 2 of a 2-year college-level course. This course fills the Group 2 requirement for the IB Diploma. Through study of vocabulary, linguistic structures, and writing systems, students will learn to communicate clearly in a range of modes and situations in an accelerated time frame. Students will also work to demonstrate an awareness of intercultural elements related to prescribed topics. Independently-driven research is required, as are written and oral assessments. The class will prepare students for the IB French ab initio Standard Level assessments and exams.
Prerequisite: *IB French ab initio I.*

IB Japanese ab initio I – Grade 11
Course IB5912 **1 Credit**
Year 1 of a 2-year college-level course. This course fills the Group 2 requirement for the IB Diploma. For students with little or no previous experience in Japanese who have developed strong language study skills in another language. Through study of vocabulary, linguistic structures, and writing systems, students will learn to communicate clearly in a range of situations in an accelerated time frame. Students will also work to demonstrate an awareness of intercultural elements related to prescribed topics. The class will prepare students for the IB Japanese ab initio Standard Level assessments and exams in year 2.
Prerequisite: *Spanish II or at least two years of successful study of another foreign language with high school credit.*

IB Japanese ab initio II – Grade 12
Course IB5922 **1 Credit**
Year 2 of a 2-year college-level course. This course fills the Group 2 requirement for the IB Diploma. Through study of vocabulary, linguistic structures, and writing systems, students will learn to communicate clearly in a range of modes and situations in an accelerated time frame. Students will also work to demonstrate an awareness of intercultural elements related to prescribed topics. Independently-driven research is required, as are written and oral assessments. The class will prepare students for the IB Japanese ab initio Standard Level assessments and exams.
Prerequisite: *IB Japanese ab initio I.*

IB Spanish V – Grade 11
Course IB5552 **1 Credit**
Year 1 of a 2-year college level course. This course fills the Group 2 requirement for the IB Diploma. The course focuses on language acquisition and the development of reading, writing, and conversational skills. Students develop competencies through the study of a range of written and spoken material organized around five themes: communication and media; global issues; social relationships; and two options. The class will prepare students for the IB Spanish B Standard Level assessments and exams in year 2.
Prerequisite: *Spanish II or above.*

IB Spanish IV – Grade 12
Course IB5562 **1 Credit**
Year 2 of a 2-year college-level course. This course fills the Group 2 requirement for the IB Diploma. The course focuses on language acquisition and the development of reading, writing, and conversational skills. Students develop competencies through the study of a range of written and spoken material organized around five themes: communication and media; global issues; social relationships; and two options. Written and oral assessments are required. The class will prepare students for the IB Spanish B Standard Level assessments and exams.
Prerequisite: *IB Spanish V.*

IB Spanish V HL – Grade 11
Course IB5552 HL **1 Credit**
Year 1 of a 2-year college level course. This course fills the Group 2 requirement for the IB Diploma. The course focuses on language acquisition and the development of reading, writing, and conversational skills, with a study of introductory Spanish-language literature. Students develop competencies through the study of a range of written and spoken material organized around five themes: communication and media; global issues; social relationships; and two options. The class will prepare students for the IB Spanish B Higher Level assessments and exams in year 2.
Prerequisite: *Spanish III or above.*

IB Spanish IV HL – Grade 12
Course IB5562 HL **1 Credit**
Year 2 of a 2-year college level course. This course fills the Group 2 requirement for the IB Diploma. The course focuses on language acquisition and the development of reading, writing, and conversational skills, with a study of introductory Spanish-language literature. Students develop competencies through the study of a range of written and spoken material organized around five themes: communication and media; global issues; social relationships; and two options. Written and oral assessments are required. The class will prepare students for the IB Spanish B Higher Level assessments and exams.
Prerequisite: *IB Spanish V HL.*

IB History I HL – Grade 11
Course IB2360 HL **1 Credit**
Year 1 of a 2-year college-level course. The course satisfies required content for the United States/Virginia History course. This course also fills the Group 3 requirement for the IB Diploma. A comprehensive study of Virginia and United States history is followed along with IB History content, including rights and protest. Students examine processes for gathering historical evidence and learn to evaluate its validity. Students take the SOL Virginia and United States History End-of-Course test at the end of year 1. The course prepares students for the IB History Higher Level assessments and examinations in year 2.
Prerequisite: *World History and Geography II: 1500 AD to the Present.*

IB History II HL – Grade 12
Course IB2361 HL **1 Credit**
Year 2 of a 2-year college-level course. The course fills the Group 3 requirement for the IB Diploma. The course includes IB History content, including the global history of the Cold War, authoritarian states, causes and effects of 20th century wars, and aspects of the history of the Americas. Students examine processes for gathering historical evidence and learn to evaluate its validity. Students must conduct required individually-driven research and writing. The course prepares students for the IB History Higher Level assessments and examinations.
Prerequisite: *IB History I HL.*

IB Environmental Systems I – Grade 11
Course IB4280 **1 Credit**
Year 1 of a 2-year college-level course. This course fills the group 4 requirement of the IB Diploma. In this course, students explore both the scientific and the societal aspects of environmental studies. Work is done under eight topics: foundations, ecosystems and ecology, biodiversity and conservation, water and aquatic food production, soil systems and terrestrial food production, atmospheric systems and societies, climate change and energy production, human systems and resource use. Students will create and be assessed on labs and procedure. This course prepares students for the Environmental Systems and Societies Standard Level assessments and exam in year 2.
Prerequisites: *Earth Science, Biology and Geometry.*
Strongly recommended: *Chemistry and Algebra II.*

IB Environmental Systems II – Grade 12
Course IB4281 **1 Credit**
Year 2 of a 2-year college-level course. This course fills the group 4 requirement of the IB Diploma. In this course, students explore both the scientific and the societal aspects of environmental studies. Work is done under eight topics: foundations, ecosystems and ecology, biodiversity and conservation, water and aquatic food production, soil systems and terrestrial food production, atmospheric systems and societies, climate change and energy production, human systems and resource use. Students will create and be assessed on labs and procedure. Students present and analyze data in a clear, concise, and organized manner, using appropriate graphical, diagrammatic and mathematical techniques. This course prepares students for the Environmental Systems and Societies Standard Level assessments and exam.
Prerequisite: *IB Environmental Systems I.*

IB Biology I – Grade 11
Course IB4380 **1 Credit**
Year 1 of a 2-year college-level course. This course fills the Group 4 requirement of the IB Diploma. In this course, students learn the principles of Biology through theoretical and practical applications. Participation in the Group 4 project is mandatory. Students will create and be assessed on labs and procedure. Topics include cell biology, molecular biology, ecology, and genetics. The course prepares students for the Biology Standard Level DP assessments and exam in year 2.
Prerequisite: *Biology*
Strongly recommended: *Chemistry and Algebra II.*

IB Biology II – Grade 12
Course IB4390 **1 Credit**
Year 2 of a 2-year college-level course. This course fills the Group 4 requirement of the IB Diploma. In this course, students learn the principles of Biology through theoretical and practical applications. Participation in the Group 4 project is mandatory. Students will create and be assessed on labs and procedure. Topics include ecology, evolution and biodiversity, and human physiology. Students present and analyze data in a clear, concise, and organized manner, using appropriate graphical, diagrammatic and mathematical techniques. The course prepares students for the Biology Standard Level DP assessments and exam.
Prerequisite: *IB Biology I.*

IB Biology I HL – Grade 11
Course IB4380 HL **1 Credit**
Year 1 of a 2-year college-level course. This course fills the Group 4 requirement of the IB Diploma. In this course, students learn the principles of Biology through theoretical and practical applications. Participation in the Group 4 project is mandatory. Students will create and be assessed on labs and procedure. Topics include cell biology, molecular biology, ecology, genetics and evolution, and plant biology. The course prepares students for the Biology Higher Level DP assessments and exam in year 2.
Prerequisite: *Biology*
Strongly recommended: *Chemistry and Algebra II.*

IB Biology II HL – Grade 12
Course IB4390 HL **1 Credit**
Year 2 of a 2-year college-level course. This course fills the Group 4 requirement of the IB Diploma. In this course, students learn the principles of Biology through theoretical and practical applications. Participation in the Group 4 project is mandatory. Students will create and be assessed on labs and procedure. Topics include metabolism, cell respiration, photosynthesis, genetics and evolution, ecology, evolution and biodiversity, and human physiology. Students present and analyze data in a clear, concise, and organized manner, using appropriate graphical, diagrammatic and mathematical techniques. The course prepares students for the Biology Higher Level DP assessments and exam.
Prerequisite: *IB Biology I HL.*

IB Physics I – Grade 11
Course IB4580 **1 Credit**
Year 1 of a 2-year college-level course. This course fills the Group 4 requirement of the IB Diploma. Students learn the principles of physics through theoretical and practical applications. Participation in the Group 4 project is mandatory. Students will create and be assessed on labs and procedure. Topics include mechanics; thermal physics; waves and wave phenomena; electricity and magnetism; fields; circular motion and gravitation; atomic, nuclear, and particle physics; energy production; and work from the options. The course prepares students for the Physics Standard Level DP assessments and examination in year 2.
Prerequisite: *Algebra II with concurrent enrollment in IB-DP SL Math Studies or equivalent.*

IB Physics II – Grade 12
Course IB4590 **1 Credit**
Year 2 of a 2-year college-level course. This course fills the Group 4 requirement of the IB-DP. Students learn the principles of physics through theoretical and practical applications. Participation in the Group 4 project is mandatory. Students will create and be assessed on labs and procedure. Topics include mechanics; thermal physics; waves and wave phenomena; electricity and magnetism; fields; circular motion and gravitation; atomic, nuclear, and particle physics; energy production; and work from the options. Students present and analyze data in a clear, concise, and organized manner, using appropriate graphical, diagrammatic and mathematical techniques. The course prepares students for the Physics Standard Level DP assessments and examination.
Prerequisite: *IB Physics I.*
Strongly recommended: *Concurrent enrollment in IB Math Studies SL II or equivalent.*

IB Math Studies SL I – Grade 11
Course IB3196 SL **1 Credit**
Year 1 of a 2-year college-level course. This course fills the Group 5 requirement of the IB Diploma. Course content focuses on the application of mathematics outside of the classroom. Core topics include number and algebra; descriptive statistics; logic, sets, and probability; statistical applications; geometry and trigonometry; mathematical models; and an introduction to differential calculus. The course prepares students for enrollment in IB Math Studies SL II or IB Mathematics SL and eventual IB assessment and examination in year 2.
Prerequisite: *Algebra II.*

IB Math Studies SL II – Grade 12
Course IB3196 SL **1 Credit**
Year 2 of a 2-year college-level course. This course fills the Group 5 requirement of the IB-DP. Course content focuses on the application of mathematics outside of the classroom. Core topics include number and algebra; descriptive statistics; logic, sets, and probability; statistical applications; geometry and trigonometry; mathematical models; and an introduction to differential calculus. Completion of an independently-driven mathematical project including original research and data collection is required. The course prepares students for the IB Math Studies SL assessment and exam.
Prerequisite: *IB Math Studies SL I.*

IB Mathematics SL II – Grade 12
Course IB3198 SL **1 Credit**
Year 2 of a 2-year college-level course. This course fills the Group 5 requirement of the IB Diploma. Course content focuses on the application of mathematics outside of the classroom. Core topics include algebra; functions and equations; circular functions and equations; circular functions and trigonometry; vectors; statistics and probability; and calculus. Completion of an independently-driven mathematical exploration is mandatory. The course prepares students for the IB Mathematics SL assessments and examinations.
Prerequisite: *IB Math Studies SL I and teacher recommendation.*

IB Music I – Grade 11
Course IB9294 **1 Credit**
Year 1 of a 2-year college-level course. This course fills the Group 6 requirement for the IB Diploma, and requires proficiency reading music and playing a band instrument. Students will study concepts of musical theory, form, and analysis. The study will involve music of various world genres and time periods, with two prescribed works mandated by the IBO studied in detail. Students will also complete requirements in music performance. The course prepares students for the IB Music SL assessments and exam in year 2.
Prerequisite: *High School Intermediate Band.*

IB Music II – Grade 12
Course IB9295 **1 Credit**
Year 2 of a 2-year college-level course. This course fills the Group 6 requirement for the IB Diploma, and requires proficiency reading music and playing a band instrument. Students will study concepts of musical theory, form, and analysis. The study will involve music of various world genres and time periods, with two prescribed works mandated by the IBO studied in detail. An independently researched project is required. Students will also complete requirements in music performance. The course prepares students for the IB Music SL assessments and exam.
Prerequisite: *IB Music I.*

IB Visual Arts I – Grade 11
Course IB9194 **1 Credit**
Year 1 of a 2-year college-level course. This course fills the Group 6 requirement for the IB Diploma. Students will pursue independent learning through research and artistic production. Independently-organized off-site gallery visits are required outside of school. The course will cover drawing, painting, and 3-D work/design. Students will work with a wide range of media and engage in a cultural awareness of art history, art interpretation, and global perspectives. An independently researched comparative study is required. The course prepares students for the IB Visual Arts SL assessments in year 2.
Prerequisite: *Art II/Intermediate.*

IB Visual Arts II – Grade 12
Course IB9195 **1 Credit**
Year 2 of a 2-year college-level course. This course fills the Group 6 requirement for the IB Diploma. Students will pursue independent learning through research and artistic production. Independently-organized off-site gallery visits are required outside of school. The course will cover drawing, painting, and 3-D work/design. Students will work with a wide range of media and engage in a cultural awareness of art history, art interpretation, and global perspectives. An independently researched comparative study is required. The course prepares students for the IB Visual Arts SL assessments.
Prerequisite: *IB Visual Arts I.*

IB Visual Arts I HL – Grade 11
Course IB9194 **1 Credit**
Year 1 of a 2-year college-level course. This course fills the Group 6 requirement for the IB Diploma and requires higher quality and increased output over the standard level course. Students will pursue independent learning through research and artistic production. Independently-organized off-site gallery visits are required outside of school. The course will cover drawing, painting, and 3-D work/design. Students will work with a wide range of media and engage in a cultural awareness of art history, art interpretation, and global perspectives. An independently researched comparative study is required. The course prepares students for the IB Visual Arts SL assessments in year 2.
Prerequisite: *Art II/Intermediate.*

IB Visual Arts II HL – Grade 12
Course IB9195 **1 Credit**
Year 2 of a 2-year college-level course. This course fills the Group 6 requirement for the IB Diploma and requires higher quality and increased output over the standard level course. Students will pursue independent learning through research and artistic production. Independently-organized off-site gallery visits are required outside of school. The course will cover drawing, painting, and 3-D work/design. Students will work with a wide range of media and engage in a cultural awareness of art history, art interpretation, and global perspectives. An independently researched comparative study is required. The course prepares students for the IB Visual Arts SL assessments.
Prerequisite: *IB Visual Arts I HL.*

Mathematics

Mathematics- Grade 6
Course 3110 **0 Credit**
This course is designed to move from the fundamentals of math to developing and exploring practical math skills on topics including estimation, number theory, geometry, pre-algebra, measurement, and probability and statistics. Students investigate mathematical topics using activities which foster critical thinking skills. While learning mathematics, students will be actively engaged, using concrete materials and appropriate technology such as calculators.
***Required**: Grade 6 Mathematics SOL Test*

General Mathematics – Grade 6
Course 1560 **0 Credit**
This course reinforces and expand students' foundational mathematics skills, such as arithmetic operations that are necessary in everyday life situations-additions, subtraction, use of money, telling time, and use of tools of measurement found around the home. Mathematics instruction will address individualized goals and objectives.

Honors Mathematics - Grade 6/7
Course H3110 **0 Credit**
This rigorous sixth grade mathematics curriculum is designed to prepare students for advanced math. It incorporates all sixth grade standards and some of the seventh grade standards to explore and develop concepts related to variable expressions, equations and inequalities, geometry, rational numbers, probability, formulas, and percent. Students are exposed to problem based learning tasks requiring higher order thinking skills and the ability to reason and communicate mathematically.
***Prerequisites:** Meet placement criteria*
***Required:** Grade 6 Mathematics SOL Test*

Mathematics - Grade 7
Course 3111 **0 Credit**
This course emphasizes the exploration of proportions, percent, discount, taxes, and geometric concepts including area, surface area, and volume of prisms as well as algebraic terminology, expressions, and equations. The development of solving, and applying linear equations and inequalities and organizing and analyzing data to make inferences and predictions will be emphasized. While learning mathematics, students will be actively engaged, using concrete materials and appropriate technology such as calculators.
***Required:** Grade 7 Mathematics SOL Test*

General Mathematics – Grade 7
Course 1570 **0 Credit**
This course focuses on mathematical skills necessary in everyday life. Topics include addition, subtraction, multiplication, and division, borrowing money, use of bank facilities (writing checks, balancing checkbook, savings accounts.) budget making, time work and wages, use of time tables, schedules, measurements, used in the home in cooking, etc., and how to calculate cost in purchasing by dozens, case, carton and gross. Mathematics instruction will address individualized goals and objectives. This course focuses on practical life skills utilizing authentic instruction in the area of language arts to address individualized goals and objectives.

Honors Mathematics - 7 / 8
Course H3111 **0 Credit**
The course highlights objective from 7th grades standards not taught in grade 6 honors and all 8th grade math objectives with concentrating on proportional reasoning. Connections of mathematical concepts to other disciplines and real-world applications allow students to develop and explore concepts related to variable expressions, equations and inequalities, geometry, rational numbers, probability, formulas, and percent. Students are exposed to tasks requiring higher order thinking skills and the ability to reason and communicate mathematically.
Prerequisite: *Successful completion of Mathematics 6/7.*
Required: *Grade 8 Mathematics SOL Test.*

Mathematics - Grade 8
Course 3112 **0 Credit**
Math 8 extends concepts and skills from previous grades and prepares students for the more abstract concepts in algebra. The curriculum includes the components of functions, algebra, geometry, statistics and probability, measurement, numbers, and proportional reasoning. The eighth-grade standards provide students additional instruction and time to acquire the concepts and skills necessary for success in Algebra I. Students will gain proficiency in computation with rational numbers and will use proportions to solve a variety of problems.
Required: *Grade 08 Mathematics SOL Test.*

General Mathematics – Grade 8
Course 1580 **0 Credit**
This course emphasizes practical mathematical skills used in everyday life. Topics include computation of wages, preparation of simple tax forms (local, state, and federal), recordkeeping, budgeting household expenses, installment buying, typical insurance policies, value of credit, and measurements used around the home. Mathematical skills needed by a student for specific areas of work can also be included in this course. Mathematics instruction will address individualized goals and objectives.

General Mathematics - Grade 9-12
Course 1590- Grade 9 **1 Credit**
Course 1600- Grade 10 **1 Credit**
Course 1700- Grade 11 **1 Credit**
Course 1810-Grade 12 **1 Credit**
This course focuses on practical life skills utilizing authentic instruction in the area of mathematics to address individualized goals and objectives.
Note: This course will not count as a mathematics credit for the Standard or Advanced Standard Diploma. It will count as an elective credit.

Mathematics Courses at or above the level of Algebra I

Algebra I
Course 3130 **1 Credit**
Activities used to develop thought processes allows for algebra topics to be integrated with other disciplines while developing a stronger background in mathematics and critical thinking. Focused topics include variables and expressions; solving equations and inequalities; linear, quadratic and exponential functions; graphing and writing linear equations; systems of equations and inequalities; polynomials; factoring; statistics; and rational expressions.
Required: *Algebra I SOL Test*

Algebra I, Part I
Course 3131 **1 Elective Credit***
This course prepares students for Part 2 of the Algebra course required for graduation. In Part 1, students achieve competency in nine areas: fractions, decimals, signed numbers, combining like terms, order of operations, substitution, solving simple and complex equations, and graphing. To have success in Algebra I, Part 2 students must master each of the areas. Students who successfully complete Algebra I, Part 1, must also enroll in Algebra I, Part 2 or Algebra I to receive mathematics credit.
*Refer to the Board of Education's Guidelines on Credit Accommodation

Algebra I, Part II
Course 3132 **1 Credit***
Content in this course is comparable to the second semester of Algebra I. The course offers an extended time frame for the study of each topic and greater opportunities for practice than does Algebra I.
Prerequisite: *Algebra I, Part I* ***(3131)***
Required: *Algebra 1 SOL Test*
*Refer to the Board of Education's Guidelines on Credit Accommodation

Algebra I Honors
Course H3130 **1 Credit**
A rigorous approach to concepts and problem-solving processes contained in the basic structure of Algebra. Intended for students with above average math skills, non-routine problems requiring insight and ingenuity will be included; enrollment determined by 8th grade math performance.
Prerequisite: *Successful completion of previous mathematics course and teacher recommendation*
Required: *Algebra I SOL Test*

Geometry
Course 3143 **1 Credit**
This course emphasizes coordinates, transformational geometry and measurement, theorems, and formal definitions of geometric terms. Students will work with proofs requiring applications of logic. Students will also solve numerical and algebraic problems which apply geometric concepts. Calculators, computers and graphing utilities will be used.
Prerequisite: *Successful completion of previous mathematics course*
Required: *Geometry SOL Test*

Geometry I, Part I
Course 3144 **1 Elective Credit***
This course presents the first semester of Geometry in a year-long class, preparing students for Part 2 of the geometry course required for graduation. The course consists of integrated plane geometry and an introduction to logic and proofs. To have success in Geometry I, Part 2 students must master each of the areas. Students who successfully complete Geometry I, Part 1, must also enroll in Geometry I, Part 2 or Geometry to receive mathematics credit
*Refer to the Board of Education's Guidelines on Credit Accommodation

Geometry I, Part II
Course 3145 **1 Credit***
This course in Euclidean geometry is usually the second in a sequence of college preparatory courses. The course consists of integrated plane, solid, and coordinate geometry.
Prerequisite: Successful completion of Geometry 1, Part 1
Required: *Geometry SOL Test*
*Refer to the Board of Education's Guidelines on Credit Accommodation

Geometry Honors
Course H3143 **1 Credit**
Rigorously paced study of planes and solid figures; practical and theoretical concepts are stressed. Training in thinking by means of deductive proofs and construction of figures in an essential part of this course.
Prerequisite: *Successful completion of previous mathematics course and teacher recommendation*
Required: *Geometry SOL Test*

Algebra, Functions, and Data Analysis
Course 3134 **1 Credit**
This course provides an opportunity for mathematical ideas to be developed in the context of real-world problems. Students will collect and analyze univariate and bivariate data using a variety of statistics and analytical tools. They will learn to attach functional algebra to statistics, allowing for the possibility of standardizing and analyzing data through the use of mathematical models. Students will use transformational graphing and the regression capabilities of graphing calculators to find regression equation, and they will use them to analyze the data and to predict the placement of data points between and beyond given data points.
Prerequisite: *Successful completion of previous mathematics course*

Mathematics Courses at or above level of Algebra II

Algebra II
Course 3135 **1 Credit**
This course extends the concepts taught in Algebra I and includes the study of higher-degree equations, an introduction to conic sections, and the irrational and complex number systems. It is intended for students who plan to attend college or who expect to study higher mathematics in high school.
Prerequisite: *Successful completion of previous mathematics course*
Required: *Algebra II SOL Test*

Algebra II Honors
Course H3135 **1 Credit**
Continuation of Algebra I and contains more material on solving equations and inequalities, radicals, and polynomials. New topic include conics, exponential and logarithmic functions, matrices, and sequences and series.
Prerequisite: *Successful completion of Algebra 1*
Required: *Algebra II SOL Test*

Algebra II/Trigonometry
Course 3137 **1 Credit**
This course is designed for students who need additional preparation in Algebra II and an introduction to Trigonometry. Topics include linear relations, functions sequences and series, right triangle ratios, and trigonometric functions. No end of course test is required.
Prerequisite: *Successful completion of Algebra II*
Required: *Algebra II SOL Test*

Math Analysis/Pre-Calculus
Course 3162 **1 Credit**
This course covers many of the topics previously introduced in the algebra courses but in much greater depth and with more emphasis on derivation. The course includes a review of the properties, and various functions and their properties. Students are introduced to several other types of functions including polynomials, logarithmic and exponential, and circular and trigonometric. Students work with complex numbers and with polar coordinate system. The concept of the limit is introduced through analysis of sequence and series. Limits of functions are introduced and applied to the development of the derivative. Basic differential calculus and its applications are introduced as well. The course emphasizes problem solving and analysis by integrating the use of technology, including the graphing calculator.
Prerequisite: *Successful completion of Algebra II*

Advanced Placement Calculus AB
Course 3177 **1 Credit**
Course content corresponds to the syllabus of the College Board Advanced Placement program. Students will utilize graphing calculators, complete online activities, and various other technologies to gain deeper conceptual understanding for main concepts from College Board curriculum. College credit is given at the discretion of the institution accepting the student and is based on the student's score on the AP Exam. Students enrolled are expected to take the AP Exam.
Prerequisite: *Math Analysis*

Advanced Placement Computer Science A
Course 3185 **1 Credit**
Course content corresponds to the syllabus of the College Board Advanced Placement program. Content is designed to introduce students to the use of interpreted and compiled programming languages, learn to code Java in a well-structured fashion and in good style giving attention to clarity of both code and documentation and use Java library packages, classes, and interfaces and the Java Collections framework within the scope of the course Java subset. College credit is given at the discretion of the institution accepting the student and is based on the student's score on the AP Exam. Students enrolled are expected to take the AP Exam.

Advanced Placement Computer Science Principles
Course 3183 **1 Credit**
AP Computer Science Principles offers a multidisciplinary approach to teaching the underlying principles of computation. The course will introduce students to the creative aspects of programming, abstractions, algorithms, large data sets, the Internet, cyber security concerns, and computing impacts. AP Computer Science Principles also gives students the opportunity to use current technologies to create computational artifacts for both self-expression and problem solving. Together, these aspects of the course make up a rigorous and rich curriculum that aims to broaden participation in computer science.

Advanced Placement Statistics
Course 3192 **1 Credit**
Course content corresponds to the syllabus of the College Board Advanced Placement program. Content includes topics such as frequency tables, models of slope of least squares, probability and statistical inferences. College credit is given at the discretion of the institution accepting the student and is based on the student's score on the AP Exam. Students enrolled are expected to take the AP Exam.
Prerequisite: Math Analysis or Algebra 2/Trig

Mathematics Electives

Foundations of Algebra
Course 1720 **1 Elective Credit**
Foundations of Algebra employs an interactive workplace centered approach to teaching Algebra concepts while covering the Virginia Standards of Learning for Algebra I. The Algebra concepts which are introduced and applied in the context of the workplace include order of operations, solving linear equations, graphing linear equations, nonlinear functions, basic probability, statistics, and systems of equations.
Required: *Elective credit for students meeting criteria. This course must only be taken concurrently with Algebra I.*

SAT Mathematics Prep
Course 1709 **1 Elective Credit**
Course content includes basic algebraic and geometric concepts, the application of graphic, spatial, numerical and symbolic techniques, and problem solving requiring insight and reasoning. Course also includes test-taking strategies for the SAT.

Science

Grade 6 Science
Course 4105 **0 Credit**
The Grade 6 course will emphasize experimental design and the scientific method. Students will explore fundamental concepts in meteorology, ecology, astronomy, and natural resources management as well as emphasize energy sources and their relationships to the natural world.

Honors Grade 6 Science
Course H4105 **0 Credit**
The Grade 6 course will emphasize experimental design and the scientific method. Students will explore fundamental concepts in meteorology, ecology, astronomy, and natural resources management as well as emphasize energy sources and their relationships to the natural world. This course completes all of 6th Grade Science standards at a more challenging level of instruction.

Grade 6 Science/Life Science – Grade 7
Course H4115 **0 Credit**
The Grade 6 course focuses on earth science and environmental science using the basis of scientific investigation and the scientific method beginning with the atomic theory, progressing to a general study of physical geography, weather, and astronomy. Life Science emphasizes a more complex understanding of change, cycles, patterns, and relationships in the living world. Students will be required to complete a long-term, independent, science project. This course completes all of 6th Grade Science standards and half of the Life Science standards at a more challenging level of instruction.
Prerequisite: *Student must meet criteria for placement in this course.*

Life Science – Grade 7
Course 4115 **0 Credit**
The Life Science content is emphasized by studying change, life cycles, patterns, and relationships. Students gain an understanding of these principles through the following: the study of organization and the classification of organisms; the relationship among organisms; populations, communities and ecosystems; and change due to the transmission of genetic information from generation to generation.
Prerequisite: *Successful completion of Grade 6 Science.*

Honors Life Science – Grade 7
Course H4115 **0 Credit**
The Life Science content emphasizes the study of change: life cycles, patterns, and relationships. Students gain an understanding of these principles through the following: the study of organization and the classification of organisms; the relationship among organisms; populations, communities and ecosystems; and change due to the transmission of genetic information from generation to generation. Honors level completes all the Life Science standards at a more challenging level of instruction.
Prerequisite: *Successful completion of sixth grade science.*

Life Science/Physical Science – Grade 8
Course H4125 **0 Credit**
The Life Science content emphasizes the study of change: life cycles, patterns, and relationships. Students gain an understanding of these principles through the following: the study of organization and the classification of organisms; the relationship among organisms; populations, communities and ecosystems; and change due to the transmission of genetic information from generation to generation. Students will be required to complete a long-term, independent, science project. 7th Grade Life Science standards and ½ of the 8th Grade Physical Science at a more challenging level of instruction.
Prerequisite*: Student must meet criteria for placement in this course.*

Physical Science – Grade 8
Course 4125 **0 Credit**
Physical Science emphasizes the nature and structure of matter and the characteristics of energy. Areas of study include the following: the periodic table; physical and chemical changes; nuclear reactions; temperature and heat; sound; light; electricity and magnetism; and work, force, and motion.
***Prerequisite**: Successful completion of Life Science*

Honors Physical Science – Grade 8
Course H4125 **0 Credit**
Physical Science emphasizes the nature and structure of matter and the characteristics of energy. Areas of study include the following: the periodic table; physical and chemical changes; nuclear reactions; temperature and heat; sound; light; electricity and magnetism; and work, force, and motion. Students will be required to complete a long-term, independent, science project. Honors level completes all the 8th Grade Physical Science standards at a more challenging level of instruction.
***Prerequisite**: Student must meet criteria for placement in this course.*

Biology I
Course 4310 **1 Credit**
Biology is a laboratory science course in which students engage in a depth study of the principles of biology. Students will investigate the understanding of living systems and the relationship between structure and function of organisms and systems, the interdependence and interactions of biotic and abiotic components of the environment.
***Required:** Biology SOL Test*

Biology I, Part I
Course 4300 **1 Credit**
The Biology course is designed to provide students with a detailed understanding of living systems. Emphasis continues to be placed on the skills necessary to examine alternative scientific explanations, actively conduct controlled experiments, analyze and communicate information, and gather and use information in scientific literature. The history of biological thought and the evidence that supports it are explored, providing the foundation for investigating biochemical life processes, cellular organization, mechanisms of inheritance, dynamic relationships among organisms, and the change in organisms through time. The importance of scientific research that validates or challenges ideas is emphasized at this level.

Biology I, Part II
Course 4301 **1 Credit**
The Biology course is designed to provide students with a detailed understanding of living systems. Emphasis continues to be placed on the skills necessary to examine alternative scientific explanations, actively conduct controlled experiments, analyze and communicate information, and gather and use information in scientific literature. The history of biological thought and the evidence that supports it are explored, providing the foundation for investigating biochemical life processes, cellular organization, mechanisms of inheritance, dynamic relationships among organisms, and the change in organisms through time. The importance of scientific research that validates or challenges ideas is emphasized at this level. Students will need to complete this course and pass the Standards of Learning assessment in order to receive a verified science credit.
***Prerequisite:** Biology I, Part I*
***Required:** Biology SOL Test*

Honors Biology I
Course H4310 **1 Credit**
Biology is a laboratory science course in which students engage in a depth study of the principles of biology. Students will investigate the understanding of living systems and the relationship between structure and function of organisms and systems, the interdependence and interactions of biotic and abiotic components of the environment. Students will develop a research project for entry into the Metro Richmond STEM Fair and RPS STEM Fair.
Prerequisite: *Meet placement criteria*
Required: *Biology SOL Test*

Biology II: Ecology
Course 4340 **1 Credit**
Students participating in this course will study the physical environment and the living environment. Students will place themselves, local, regional, state and national ecological issues and their importance into the greater sphere of the earth and its sustainability. Concepts that will be covered include adaptation and natural selection; the physical environment and climate; population ecology, growth models, and life history patterns; communities, competition, parasitism, mutualism, and human interactions; ecosystem productivity, energy flow, nutrient cycling, and biogeochemical cycles; and biogeography, biodiversity, and global environmental change. Students will develop a research project for entry into the Metro Richmond STEM Fair and RPS STEM Fair.
Prerequisite: *Biology I*

Biology II: Genetics
Course 4350 **1 Credit**
Students will gain a broad understanding of genetics through hands-on laboratory work, expert speakers, and group projects. They will talk with local physicians and scientists about the latest research and clinical applications in genetics, and follow fictional families through the process from clinical diagnosis of genetic condition to receiving testing results. Students will study the most up to date topics in genetics including the application of genetics and biotechnology to industry, agriculture, research, forensics, evolution and disease. This class has a considerable laboratory component. Students will develop a research project for entry into the Metro Richmond STEM Fair and RPS STEM Fair.
Prerequisite: *Biology I*

Biology II: Human Anatomy & Physiology
Course 4330 **1 Credit**
This laboratory course gives an explanation of the chemical and physical phenomena underlying the structure and function of systems of the human body. Identifies, explains functions of and describes chemical networking of the various body parts in relation to the total system. Students will investigate the intricate machinery that makes the body work, relating the functional anatomy and physical geography of organs and organ systems to the physiological functions which they perform. Students will also explore the delicate web of interaction among body systems, the importance of maintaining homeostatic balance within this web, and the medical implications of disturbing this balance. Students will develop a research project for entry into the Metro Richmond STEM Fair and RPS STEM Fair
Prerequisite: *Biology I*

AP Biology
Course 4370 **1 Credit**
Advanced Placement Biology is a second-year, laboratory-centered biology course designed to help student develop an understanding of how biological information is collected, how it is interpreted, and how hypotheses are formulated to make further predictions. Students focus on three broad content areas: the molecular and cellular, the organism, and the population. In this college-level course, which may require two periods, the major emphasis is on laboratory observations and experimentation.
Required: *AP Biology Exam*

Earth Science I
Course 4210 **1 Credit**
Earth Science is a laboratory-based, course that provides students with an opportunity to explore the various physical phenomena that affect the earth. This course, which includes research design concepts, helps students become more aware of their surroundings through the study of astronomy, space science, meteorology, oceanography, physical geology, and environmental resources. Students will develop a research project for entry into the Metro Richmond STEM Fair and RPS STEM Fair.
Required: *Earth Science SOL Test*

Earth Science I, Part I
Course 4200 **1 Credit**
This laboratory course provides a basic overview of Earth Science concepts. Earth Science Part 1 covers the following: the nature of scientific, Earth's matter, Earth's chemistry, the history of the Earth, and the patterns of Earth's changing surface. This course will introduce topics as Earth's revolution and rotation, as well as the advantages and disadvantages of renewable and nonrenewable resources.

Earth Science I, Part II
Course 4201 **1 Credit**
Earth Science Part II is laboratory course that provides an overview of Earth Science concepts, such as meteorology, oceanography, physical geology, and environmental resources. Students will need to complete this course and pass the Standards of Learning assessment in order to receive a verified science credit.
Prerequisite: Earth Science Part I.
Required: *Earth Science SOL Test*

Honors Earth Science I
Course H4210 **1 Credit**
Honors Earth Science is lab-based, course designed to give students a foundation in earth science ideas as well as the opportunity to use the principles of experimental design in a laboratory investigation. Students are required to complete a project for this course. Students will become familiar with the following topics: geology, oceanography, meteorology, astronomy, and space science. Students will develop a research project for entry into the Metro Richmond STEM Fair and RPS STEM Fair.
Prerequisite: *Meet placement criteria*
Required: *Earth Science SOL Test*

Earth Science II: Oceanography
Course 4250 **1 Credit**
Oceanography is a second level Earth Science course designed to be a more in-depth treatment of the oceanography concepts presented in first year Earth Science. It is a broad survey course dealing mainly with physical oceanography and covering such topics as the geology and geography of ocean basins; physical properties of seawater; marine chemistry; salinity and density; circulation of the oceans, waves and tides; and oceanographic instruments, tools, and methods. Emphasis is also placed on ocean policy and ocean ecology. Students will develop a research project for entry into the Metro Richmond STEM Fair and RPS STEM Fair.
Prerequisite: *Earth Science I*

Earth Science II: Advanced Topics in Earth Science
Course 4220 **1 Credit**
Students will be introduced to scientific research, prepare students for presenting at science conferences. Students experience an authentic research experience and are encouraged to consider college with an eye to a career in science, whether that is research, teaching, or industry. Students will be required to participate in the Metro Richmond Science Fair. The following topics will be explored: earthquakes and seismology, geophysics, glaciers, volcanoes, sedimentology and quaternary geology. Students will develop a research project for entry into the Metro Richmond STEM Fair and RPS STEM Fair.
Prerequisite: *Earth Science I*

Earth Science II: Astronomy
Course 4260 **1 Credit**
Astronomy is a laboratory science course that explores the tools and techniques of the astronomer, the solar system, exploration of space, universal laws, stellar evolution, and formation of galaxies and the origin of the universe. Students will develop a research project for entry into the Metro Richmond STEM Fair and RPS STEM Fair
Prerequisite: *Earth Science I*

Environmental Science
Course 3003 **1 Credit**
This course serves as a foundation course for students enrolling in Biology or Earth Science the following year. Major concepts studied include, energy, earth's surface and interior, renewable and nonrenewable resources, pollutions, and environmental issues of the world. Students will identify and analyze environmental problems, both natural and human-made; evaluate the relative risks associated with these problems; and examine alternative solutions for resolving or preventing them. It integrates the study of many components of our environment, including the human impact on our planet. Instruction should focus on student data collection and analysis. Some concepts are global; in those cases, interpretation of global data sets from scientific sources is strongly recommended. It would be appropriate to utilize resources on the Internet for global data sets and interactive models. Whenever possible, careers related to environmental science should be emphasized.

AP Environmental Science
Course 4270 **1 Credit**
The AP Environmental Science course is designed to be the equivalent of a one-semester, introductory college course in environmental science. AP Environmental Science is designed to provide students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world. Environmental science is interdisciplinary and embraces a wide variety of topics from different areas of study including the earth systems and resources, the living world, population, land and water, energy resources and consumption, pollution, and global change.
Required: *AP Environmental Science Exam*

Chemistry I
Course 4410 **1 Credit**
Chemistry is a laboratory science course in which students will study the following: topics such as atomic theory, compounds and bonding, chemical reactions, gases and solutions, moles and stoichiometry, as well as the appropriate safety precautions when working with chemicals and laboratory equipment. Students will develop a research project for entry into the Metro Richmond STEM Fair and RPS STEM Fair.
Required: *Chemistry SOL Test*

Honors Chemistry
Course H4410 **1 Credit**
Chemistry is a laboratory science course in which students engage in a depth study of the principles of chemistry. This course includes topics such as matter and energy, atomic theory, compounds and bonding, chemical reactions, gases and solutions, moles and stoichiometry, as well as the appropriate safety precautions when working with chemicals and laboratory equipment, and laboratory activities. Students will develop a research project for entry into the Metro Richmond STEM Fair and RPS STEM Fair Honors Chemistry will provide the foundation needed for AP Chemistry.
Prerequisite: *Meet placement criteria*
Required: *Chemistry SOL Test*

AP Chemistry
Course 4470 **1 Credit**
This course is designed to offer college-level general chemistry experiences with emphasis on chemical calculations, the mathematical formulations of principles, and laboratory work. This AP course is approved and certified by the College Board. The AP Chemistry course is designed to be the equivalent of the general inorganic chemistry course usually taken during the first year in college. It is required that all students satisfactorily complete the lab component of this class. AP Chemistry students attain a depth of understanding of chemistry fundamentals and of laboratory experiences that goes beyond that covered in first year chemistry. All major topics of chemistry are covered.
Required: *AP Chemistry Test*

Physics
Course 4510 **1 Credit**
Designed for students who plan to take physics in college, this introductory laboratory course in the basic laws of the physical universe stresses both practical and theoretical applications of physics. This course offers a combination of theoretical and practical studies such as mechanics that analyze motions and forces; study of energy with applications to work and power; thermodynamics; properties of waves (light and sound); electricity and magnetism; and atomic physics leading to an understanding of the basic principles of physics. Students will develop a research project for entry into the RPS STEM Fair.

Honors Physics
Course H4510 **1 Credit**
Designed for students who plan to take physics in college, this introductory course is an accelerated and rigorous course. This course focuses on the advanced study of topics in general physics, Newtonian mechanics, matter, oscillations and waves, electricity and magnetism, and modern physics. The inquiry-based approach emphasizing principles of experimental design, scientific problem solving, and research skills requires students to use principles and concepts that are taught and to apply them in a logical, reasoned, and deductive manner to their work. Students explore in depth the nature and characteristics of energy and its interaction with matter. Students will develop a research project for entry into the Metro Richmond STEM Fair and RPS STEM Fair.

AP Physics
Course 4570 **1 Credit**
In this college-level algebra-based physics course, students will study major topics in physics outlined by College Board AP Physics 1 including: motion, forces, simple harmonic motion, conservation of energy, conservation of momentum, rotational motion, electrostatics, circuits, electromagnetism and waves.
Required: *AP Physics Test*

9-12 Science
Course 2600 **1 Credit**
Course 2700 **1 Credit**
Course 2713 **1 Credit**
Course 2712 **1 Credit**
This course focuses on practical life skills utilizing authentic instruction in the area of science to address individualized goals and objectives.
Note: This course will not count as a science credit for the Standard or Advanced Standard Diploma.

World Languages

Spanish Exploratory
Course 5504 **0 Credit**
This course provides an exploration of the language and culture. There is an increased emphasis on vocabulary acquisition and verbal communication.

Spanish IA
Course 5513 **0.5 Credit**
This course introduces the skills of listening comprehension, speaking, reading and writing in the target language. Focus is on vocabulary acquisition, pronunciations, and basic grammar. Students are introduced to a variety of Hispanic customs and cultures.

Spanish IB
Course 5515 **0.5 Credit**
This course continues with the development of the skills of listening comprehension, speaking, reading and writing. Focus continues on verbal and written comprehension, increased vocabulary, and grammatical structures.

Spanish I
Course 5510 **1 Credit**
In the beginning course, students gain an understanding of the components of a world language and of the study skills necessary to learn a world language. As students begin to develop skills in listening, speaking, reading, and writing, they engage in active practice in real-life situations and in a variety of cultural contexts.

Spanish for Fluent Speakers I
Course 5511 **1 Credit**
The course is intended for students whose dominant language is Spanish, but who lack expertise in reading and writing in their native language. Concentration is placed on the problem areas of native speakers and will include the study of Spanish grammar and a selection of short stories by renowned Spanish and Latin American authors.
Pre-requisites: *Oral Proficiency and Literacy in Spanish*

Spanish II
Course 5520 **1 Credit**
In the second year, students continue to develop skills in listening, speaking, reading, and writing and to engage in active practice in real-life situations. Cultural study of the areas of the world where the language is spoken is expanded.

Spanish III
Course 5530 **1 Credit**
In the third year, students complete their study of basic grammar of the language and continue to learn to communicate in real-life situations with increasing precision and accuracy. Students explore the use of the language in a wide range of cultural contexts.

Spanish IV
Course 5540 **1 Credit**
In the advanced levels of world language, students use the language to engage in a variety of activities which require the student to seek information and to produce language to communicate with each other. Students are expected to make oral and written presentations in the target language on a variety of more complex cultural topics. Students are expected to use the target language on a daily basis in everyday classroom conversation.

French I
Course 5110 **1 Credit**
In the beginning course, students gain an understanding of the components of a world language and of the study skills necessary to learn a world language. As students begin to develop skills in listening, speaking, reading, and writing, they engage in active practice in real-life situations and in a variety of cultural contexts.

French II

Course 5120 **1 Credit**

In the second year, students continue to develop skills in listening, speaking, reading, and writing and to engage in active practice in real-life situations. Cultural study of the areas of the world where the language is spoken is expanded.

French III

Course 5130 **1 Credit**

In the third year, students complete their study of basic grammar of the language and continue to learn to communicate in real-life situations with increasing precision and accuracy. Students explore the use of the language in a wide range of cultural contexts.

French IV

Course 5140 **1 Credit**

After successful completion of French III in the advanced levels of world language, students use the language to engage in a variety of activities that require the students to seek information and to produce language to communicate with each other. Students are expected to make oral and written presentations in the target language on a variety of more complex cultural topics. Students are expected to use the target language on a daily basis in everyday classroom conversation.

American Sign Language I

Course 5990 **1 Credit**

The purpose of ASL 1 is to provide a foundation of signing production and comprehension. The first-year students will be able to communicate and interact within the context of a variety of everyday situations such as family, school life, eating, shopping, and traveling. The first-year goal is to develop the foundational semiotic skills to help students transition to year two ASL class. The first year of ASL will be the introduction of basic inquiry, following directions and developing elementary receptive skills after 8 units of instruction. Moreover, students will gain an increased understanding of Deaf culture, with specific attention paid to education in the Deaf community, development of assisted communication technology, and interactions between Deaf and hearing communities.

American Sign Language II

Course 5990 **1 Credit**

The purpose of ASL 2 is predicated on an increased upward trajectory of signing production and comprehension, and an introduction of the ASL gloss. Through the second-year students will increase their communication and interaction within the context of a variety of everyday situations such as family, school life, eating, shopping, and traveling. Although the second year is a natural complement of the first it does evolve with student understanding and language abstraction is enhanced during the 8 units of instruction. In addition, students will gain an increased understanding of Deaf culture, with specific attention paid to education in the Deaf community, development of assisted communication technology, and interactions between Deaf and hearing communities.

SECTION VI: International Baccalaureate Programme

Thomas Jefferson High School
IB Application Cohort Requirements

Thomas Jefferson students living in-zone or attending TJHS through open enrollment: Zoned or open enrollment students who wish to qualify to participate in the full IB Diploma programme in 11th grade are encouraged to apply to the IB Middle Years Programme in 9th grade for early identification and attention to the selection of coursework that will fill all prerequisites. All 9th and 10th grade courses at Thomas Jefferson are IB Middle Years courses taught using IB methodology and assessment measures. Students at Thomas Jefferson may elect to take DP coursework for one or more courses depending upon their strengths and fulfillment of the prerequisites. Zoned and open enrollment students must maintain good standing in their DP courses to matriculate from the first to the second year of the course.

Information for Students Applying to the IB Diploma Programmes

Entry for 9th grade (Middle Years Programme)

Preferred prerequisite coursework: To enter the IB Middle Years Programme at 9th grade and be on the track for the full IB Diploma, it is helpful for students to have coursework completed in Algebra I, Earth Science, and Spanish. However, IB options are available if students have not had this coursework.

9th Grade Coursework

8 required subject groups; preliminary coursework to enter 11th grade as a Full Diploma student

- Honors English 9
- Biology
- World History II
- Math (Geometry or Algebra II)
- Arts (Music or Visual Arts)
- Spanish (I, II, III, or IV)
- Health and PE 9
- CTE elective (Students may take any CTE elective offered that fits their schedule)

Additional IB Requirement for 9th Grade

Community Service requirement = 30 hours of documented service / due May 1

If students have not had Algebra I before entering 9th grade, they may still enroll and take Algebra I. However, if the student wishes to qualify to be a full diploma candidate taking DP math by 11th grade, then he or she will need to take summer school for geometry between 9th and 10th grades. Then the

student must take and pass Algebra II in 10th grade. Otherwise, the student will become a Diploma Programme courses student at 11th grade.
If additional science credits are needed, the student can also take earth science through summer school.

Entry for 10th grade (Middle Years Programme)

Prerequisite coursework: Students need to have completed the above coursework successfully.

10th Grade Coursework
8 required subject groups; preliminary coursework to enter 11th grade as a Full Diploma student

Honors English 10
Chemistry
Government
Algebra II or Math Analysis with a prerequisite of Algebra II
Arts (Music or Visual Arts)
Spanish (II, III, IV, or V)
Health and PE 10
Economics and Personal Finance

Additional IB Requirements for 10th Grade

Community Service requirement = 30 hours of documented service / due May 1
Personal Project

Maintaining Successful Progress in the Middle Years Programme: To remain in the IB Programme, students must maintain their grades with at least C grades. Two D grades or one F grade for any marking period will place a student in Academic Intervention status. Students are expected to improve grades by taking advantage of any tutoring opportunities and improving study habits in order to quickly regain student in good standing status. In addition, students are expected to complete 30 hours of service each year (grades 9 & 10). To be eligible for Diploma Course offerings, students must maintain grades and make progress toward meeting Virginia Advanced Studies Diploma requirements and prerequisites for DP coursework.

For those students who, for various reasons, struggle with the full course load for the cohort and are repeatedly in Academic Intervention, decisions are made in consultation with students and their families on a case-by-case basis about the possibility of success in IB programmes. If academic progress is insufficient to the point of not meeting requirements for graduation or not allowing for a minimum of four DP courses, then a student is removed from the cohort and returned to his or her zoned high school.

Every effort is made to intervene and correct student performance early and empower students to succeed. It is the expectation that students will not only pass, but will thrive in their courses. Students are encouraged to attend summer school for any course that they have not successfully completed for verified credit. It is recognized that some capable students will struggle with particular course requirements and need summer school options in order to remain on track for graduation and for the Diploma Programme through full diploma or courses options.

Entry for 11th grade (Year One of the Diploma Programme)

IB Diploma Programme courses are limited to students in 11th and 12th grade. All DP courses are taught over two years. Students may not take two levels of the same course (i.e. Spanish SL and Spanish HL). *Students matriculating to the Diploma Programme from the Middle Years Programme:* Cohort students in good standing and pursuing the full IB Diploma choose from the course options in the table below for 11th and 12th grade coursework. They select three courses at Higher Level (HL) and three at Standard Level (SL). They also take the Theory of Knowledge course to fill DP core requirements. In addition, students may choose an available elective or a study hall.

Theory of Knowledge is a required course for all students in 11th and 12th grade attending TJHS through IB application. Upon successful completion of IB coursework, IB application cohort students are required to proceed to the next level along the continuum of IB courses.

Students applying to the IB Diploma Programme starting in 11th grade: 11th grade application students must have earned adequate course credit to fit a minimum of three Diploma Programme courses and Theory of Knowledge into their 11th- and 12th-grade schedules while completing all requirements for the Virginia Advanced Studies Diploma. Students in this group will take a minimum of three courses from Groups 1-6 and Theory of Knowledge. Diploma Programme courses currently offered and their prerequisites are listed in the following table:

Diploma Programme Course HL = Higher Level SL = Standard Level n.b. all DP courses are taught over two years. Students must be in 11th or 12th grade to enroll in a DP course.	**Prerequisite** n. b. Generally, DP students have already completed Economics and Personal Finance and the 2-year P. E. requirement before entering the Diploma Programme. These and other requirements for the Virginia Advanced Studies Diploma must fit into a student's 2-year DP Plan if they have not been met prior to the 11th grade.
Group 1: Language and Literature	
IB-DP English SL I	1140 English – Grade 10 or equivalent; passing score on EOC Writing SOL.
IB-DP English HL I	1140 English – Grade 10 or equivalent; passing scores on EOC Writing SOL.
Group 2: Acquired Language	
IB-DP Language *ab initio* SL I (French or Japanese)	At least 2 years of successful study of another foreign language with high school credit.
IB-DP Spanish SL I	5520 Spanish II or equivalent.
IB-DP Spanish HL I	5530 Spanish III or equivalent.
Group 3: Individuals and Society	

IB-DP History HL I	2 years of successful study of high school social studies, to include H2216 Honors World History and Geography: 1500 A.D. to the Present or equivalent and a passing score on the accompanying SOL test. n. b. Students will fill requirements for and take the VA/US History SOL in year 1 of DP History HL. Students who have not taken VA/US Government before entering the Diploma Programme will be required to meet this Virginia State requirement concurrently with their DP History studies.
Group 4: Sciences	
IB-DP Biology SL I	4310 Biology I or equivalent with a passing SOL score.
IB-DP Biology HL I	4310 Biology I or equivalent with a passing SOL score.
IB-DP Physics SL I	3135 Algebra II or equivalent with passing SOL scores and concurrent enrollment in IB3196 IB Math Studies SL I or equivalent.
IB-DP Environmental Systems and Societies SL I	4210 Earth Science or equivalent with a passing SOL score, 4310 Biology or equivalent with a passing SOL score, and 3143 Geometry with a passing SOL score.
Group 5: Mathematics	
IB-DP Math Studies SL I	3135 Algebra II or equivalent with passing SOL scores.
Group 6: The Arts	
IB-DP Music SL I	9233 Intermediate Band or equivalent.
IB-DP Visual Arts SL I	9130 Art II / Intermediate or equivalent.
IB-DP Visual Arts HL I	9130 Art II / Intermediate or equivalent.
DP Core	
IB-DP Theory of Knowledge I	Required course for all Full Diploma and DP Courses students.

Creativity, Activity, Service	Required student-selected extracurricular experiences spanning 18 consecutive months (September of junior year to April of senior year) for all Full Diploma and DP Courses students.
Extended Essay	Requirement for all Full Diploma students and strongly recommended for students in the DP Courses cohort.

Maintaining Successful Progress in the Diploma Programme: Students must maintain good grades in both years of their DP coursework. Full Diploma students with two grades of D or one grade of F in their DP coursework and DP Courses students with one grade of D or F in a DP course at the end of any marking period are in Academic Intervention status. Grades must be brought up immediately to at least a C to regain good academic standing. DP students whose final grades at the end of 11th grade still place them in Academic Intervention status may not be eligible to continue to the second year of the courses in which they earned a grade of D or F. As a result, students may be moved from a Full Diploma to a DP Courses status or may be required to return to their zoned school for 12th grade if they are ineligible to continue in at least three DP courses and Theory of Knowledge.

12th grade (Year Two of the Diploma Programme)

Because 12th grade coursework is the continuation of courses begun in 11th grade, students are not accepted as new IB students in 12th grade unless transferring from a high school where they participated in an IB-DP with coursework compatible with that offered at TJHS.

Full Diploma students continue with their chosen 3 HL courses, 3 SL courses, and core requirements: Theory of Knowledge; Creativity, Activity, Service; and Extended Essay. Continued success with their coursework is expected. Students must maintain grades in their selected courses and complete IB requirements as agreed upon, including the Creativity, Activity, Service requirements and Extended Essay. Math students may complete the second year of Math Studies SL or move into Math SL, based on student performance.

Students' courses are registered with the International Baccalaureate Organization in the first quarter of the 12th grade year in preparation for assessments and examinations required for each course. This marks the student's and the school's intention that all course requirements will be completed and submitted per IBO policy.

SECTION VII: Career and Technical Education - Career Clusters

Career and Technical Education (CTE) - Career Clusters

The National Career Clusters® Framework provides a vital structure for organizing and delivering quality CTE programs through learning and comprehensive programs of study. In total, there are 16 Career Clusters in the National Career Clusters Framework, representing more than 79 Career Pathways to help students navigate their way to greater success in college and career.

As an organizing tool for curriculum design and instruction, Career Clusters provide the essential knowledge and skills for the 16 Career Clusters and their Career Pathways. It also functions as a useful guide in developing programs of study bridging secondary and postsecondary curriculum and for creating individual student plans of study for a complete range of career options. As such, it helps students discover their interests and their passions, and empowers them to choose the educational pathway that can lead to success in high school, college and career.

Career Clusters help students investigate careers and design their courses of study to advance their career goals. For this reason, Virginia has adopted the nationally accepted structure of career clusters, career pathways and sample career specialties or occupations. A Career Cluster is a grouping of occupations and broad industries based on commonalities. Within each career cluster, there are multiple career pathways that represent a common set of skills and knowledge, both academic and technical, necessary to pursue a full range of career opportunities within the pathway – ranging from entry level to management, including technical and professional career specialties.

Agriculture, Food & Natural Resources
The Agriculture, Food and Natural Resources cluster is about the production, processing, marketing, distribution, financing and development of agricultural commodities and resources including food, fiber, wood products, natural resources, horticulture, and other plant and animal products/resources.

Architecture & Construction
The Architecture and Construction cluster is about careers in designing, planning, managing, building and maintaining the built environment.

Arts, A/V Technology & Communications
The Arts, A/V Technology and Communications cluster is about designing, producing, exhibiting, performing, writing and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services.

Business Management & Administration
Business Management and Administration careers encompass planning, organizing, directing and evaluating business functions essential to efficient and productive business operations.

Education & Training
The Education and Training cluster is about planning, managing and providing education and training services and related learning support services.

Finance
The Finance cluster is about planning, services for financial and investment planning, banking, insurance and business financial management.

Government & Public Administration
The Government and Public Administration cluster is about executing governmental functions to include Governance; National Security; Foreign Service; Planning; Revenue and Taxation; Regulation; and Management and Administration at the local, state, and federal levels.

Health Science
The Health Science cluster is about planning, managing, and providing therapeutic services, diagnostic services, health informatics, support services and biotechnology research and development.

Hospitality & Tourism
Hospitality & Tourism encompasses the management, marketing and operations of restaurants and other foodservices, lodging, attractions, recreation events and travel related services.

Human Services
The Human Services cluster is about preparing individuals for employment in career pathways that relate to families and human needs such as counseling, personal care, and consumer services.

Information Technology
The Information Technology cluster is about entry –level, technical, and professional, careers related to the design, development, support, and management of hardware, software, multimedia, and systems integration services.

Law, Public Safety, Corrections & Security
Law, Public Safety, Corrections & Security will require planning, managing, and providing legal, public safety, protective services and homeland security, including professional and technical support services.

Manufacturing
Manufacturing cluster entails planning, managing and performing the processing of materials into intermediate or final products and related professional and technical support activities such as production planning and control, maintenance and manufacturing/process engineering.

Marketing
Marketing cluster encompasses planning, managing, and performing marketing activities to reach organizational objectives.

Science, Technology, Engineering & Mathematics
Science, Technology, Engineering & Mathematics cluster will require planning, managing, and providing scientific research and professional and technical services (e.g., physical science, social science, engineering) including laboratory and testing services, and research and development services.

Transportation, Distribution & Logistics
Transportation, Distribution & Logistics cluster entails planning, management, and movement of people, materials, and goods by road, pipeline, air, rail and water and related professional and technical support services such as transportation infrastructure planning and management, logistics services, mobile equipment and facility maintenance.

SECTION VIII: College Credit Options

Richmond Public Schools is proud to provide several options for students to earn College Credit while in high school through Reynolds Community College. Currently, there are three options available for rising juniors and seniors which are explained below. Any student wishing to take dual enrollment courses should contact their school counselor during the sophomore or junior year to plan for the following year. Further details regarding the dual enrollment process can be found in the JSR Dual Enrollment Handbook. http://reynolds.edu/get_started/dual_enrollment/forms/Dual_Enrollment_Handbook.pdf

Early College Academy (ECA)

The Reynolds Early College Academy (ECA) provides high school students the opportunity to earn an associate degree while completing the requirements for their high school diploma. A sample student course sequence is included below. Students will apply to ECA in 10th grade and take the required college coursework for the associate degree during the 11th and 12th grade at the Downtown Campus for Reynolds Community College.

Dual Enrollment

Richmond Public Schools has an agreement to offer college-level courses on campus at Reynolds Community College or at the high school location. All high school students who have been approved to participate may receive both high school and college credit for any courses needed to fulfill requirements for the high school diploma. Tuition for these courses will be paid by Richmond Public Schools. These students may not register for developmental courses or for health and physical education courses. Students must complete the JSR Dual Enrollment course form to participate.

Concurrent Enrollment

High school juniors and seniors may be permitted to enroll in college level courses prior to graduating from high school. In addition, students at the freshman and sophomore level must have permission from the Reynolds college president prior to enrolling. The Concurrent Enrollment Form must be signed by the parent or legal guardian and the principal or designee for each requested semester or term. Individual families are responsible for all tuition, books, and fees associated with concurrent enrollment courses.

ECA Requirements

In keeping with the VA Plan for Dual Enrollment and JSRCC Admission Standards all students, regardless of course request, must minimally score at the Ability-to-Benefit level on the VPT Placement Test in order to be eligible to participate in dual enrollment offerings. Students must also complete a Dual and Enrollment Course Request and Residency Form .

Reynolds administers the Virginia Placement Test (VPT) for math and English. Dual Enrollment students must meet college readiness requirements before they can participate in any Dual Enrollment class. In addition to placement tests, college readiness can also be met through PSATs, SATs, Algebra I or Algebra II SOLs. In addition to college readiness, both VCCS Policy and Reynolds Policy require that students enrolling in a dual enrollment course must meet all course pre-requisites. Many Dual Enrollment courses only require college readiness for enrollment (for example, Auto, Pharmacy Tech, Dental Assisting, Fire Science, and EMS). Students are expected to place into courses that are transferable (for example, English, History, Psychology). Placement test results will determine student placement.

Dual Enrollment Placement Test Waivers

Students who score a minimum of 480 on Critical Reading/Writing (ERW combined score) sections of the SAT are waived from taking the placement test. Students who are interested in taking a math

course, who have scored at least a 530 on the math section of the SAT, are waived from taking the VPT Math placement test. Waivers only apply to students taking a math course below the MTH 163 level. Students requesting MTH 163 and above must take the VPT Math placement test. Students requesting science courses with math prerequisites (chemistry or physics), must take the VPT Math placement test. Students who score a minimum of 18 on the English section of the ACT, and 18 on the reading section, are waived from taking the placement test. PSAT scores may not be used to waive the VPT requirement for eligibility to enroll in ENG 111. For more information consult the Reynolds Community College Dual Enrollment Handbook.

Students should consult college catalogues about the transfer of college credit between colleges and universities as policies may vary.

EARLY COLLEGE ACADEMY COURSEWORK

	Grade 9	Grade 10	Grade 11			Grade 12	
	Yearlong	Yearlong	Fall	Spring	Maymester	Fall	Spring
English	English 9	English 10	English 111*	English 112*	n/a	English 242*	English 244*
Science	Honors Biology or Honors Earth Science	Honors Biology or Honors Chemistry	Biology II, Chemistry II, Earth Science II, Physics, or AP Science			Bio 101*	Bio 102*
History	World History I; World History II; World Geography	World History I; World History II; World Geography	HIS 121*	HIS 122*	n/a	PLS 211*	PLS 212*
World Language	WL Level I or Higher	WL Level II or Higher	SPA 101*	SPA 102*	SPA 102*	n/a	n/a
Health & PE	9 Health & PE	10 Health & PE	Elective/Study Hall		HLT 115*	Elective/Study Hall	
Arts	Sequential Elective 1	Sequential Elective II	Elective/Study Hall		ITE 115*	Elective*	Elective*
Mathematics	Algebra 1	Geometry or Algebra II	Math Lab*	MTH 163* or MTH 170*	n/a	Math 270* or Math 240*	n/a

**Denotes courses taken at JSR Downtown Campus. All other courses taken through serving high school*
Note - Honors courses in 9th and 10th grade are recommended, not required

Reynolds Community College Dual Enrollment Courses

English

ENG 111 College Composition I

Course DE1600 **RPS 0.5 Credit/RCC 3 Credits**

Introduces students to critical thinking and the fundamentals of academic writing. Through the writing process, students refine topics; develop and support ideas; investigate, evaluate, and incorporate appropriate resources; edit for effective style and usage; and determine appropriate approaches for a variety of contexts, audiences, and purposes. Writing activity of contexts, audiences, and purposes. Writing activities will include exposition and argumentation with at least one researched essay. ENG 111 has been designated as a "writing intensive" course according to standards developed by the English department.

Prerequisite: *Placement recommendation for ENG 111 or placement recommendation for co-requisites ENG 111 and ENF 3. ENG 111 is a prerequisite for ENG 112. Lecture 3 hours per week.*

ENG 112 College Composition II

Course DE1601 **RPS 0.5 Credit/RCC 3 Credits**

Continues to develop college writing with increased emphasis on critical essays, argumentation, and research, developing these competencies through the examination of a range of texts about the human experience. Requires students to locate, evaluate, integrate, and document sources and effectively edit for style and usage. ENG 112 has been designated as a "writing intensive" course according to standards developed by the English department.

Prerequisite: *ENG 111 or its equivalent and the ability to use word processing software; a grade of "C" or better in ENG 111 is recommended. Lecture 3 hours per week.*

ENG 242 Survey of American Literature II

Course DE1345 **RPS 0.5 Credit/RCC 3 Credits**

Examines American literary works from the late-nineteenth century to the present, emphasizing the ideas and characteristics of the American national literature. Involves critical reading and writing. ENG 242 has been designated as a "writing intensive" course according to standards developed by the English department. ENG 241 and ENG 242 may be taken out of order.

Prerequisite: ENG 112 or its equivalent. Lecture 3 hours per week.

ENG 244

Survey of English (British) Literature II

Course DE1346 **RPS 0.5 Credit/RCC 3 Credits**

Examines major English (British) texts from the Romantics to the contemporary period, emphasizing the critical ideas and traditions of the English (British) literary tradition. Involves critical reading and writing. ENG 244 has been designated as a "writing intensive" course according to standards developed by the English department. ENG 243 and ENG 244 may be taken out of order.

Prerequisite: ENG 112 or its equivalent.

MATH

MTH 163 Precalculus I

Course DE3230 **RPS 0.5 Credit/RCC 3 Credits**

Prepares students for applied calculus or elementary discrete mathematics. Presents college algebra and matrices and algebraic, exponential, and logarithmic functions.

Prerequisites: *Placement recommendation for MTH 163 and completion of Algebra I, Algebra II, and Geometry, or equivalent. (Credit will not be awarded for more than one of the following: MTH 163 or MTH 166.) Lecture 3 hours per week.*

MTH 170 Foundations in Contemporary Mathematics

Course DE3199 **RPS 0.5 Credit/RCC 3 Credits**

Covers topics in the mathematics of social choice, management sciences, statistics, and growth. Uses physical demonstrations and techniques to teach the power and utility of mathematics.

***Prerequisite*:** Placement recommendation for MTH 170 or completion through MTE. Lecture 3 hours per week.

MTH 240 Statistics

Course DE3232 **RPS 0.5 Credit/RCC 3 Credits**

Presents an overview of statistics, including descriptive statistics, elementary probability, probability distributions, estimation, hypothesis testing, and correlation and regression.

Prerequisite: *A placement recommendation for MTH 240 and MTH 163 or MTH 166, MTH 170, or equivalent. (Credit will not be awarded for both MTH 240 and MTH 241.) Lecture 3 hours per week.*

MTH 270 Applied Calculus

Course DE3231 **RPS 0.5 Credit/RCC 3 Credits**

Introduces limits, continuity, differentiation and integration of algebraic and transcendental functions, techniques of integration, and partial differentiation.

Prerequisites: *MTH 163 or MTH 166 or equivalent. (Credit will not be awarded for both MTH 270 and MTH 271.) Lecture 3 hours per week.*

HISTORY

HIS 121 United States History I

Course DE2949 **RPS 0.5 Credit/RCC 3 Credits**

Surveys the United States history from its beginning to the present. HIS 121 and HIS 122 need not to be taken in sequence. Part 1 of 2.

Prerequisite: *Placement in ENG 111 or placement in co-requisites ENG 111 and ENF 3.*

HIS 122 United States History II

Course DE2360 **RPS 0.5 Credit/RCC 3 Credits**

Surveys the United States history from its beginning to the present. HIS 121 and HIS 122 need not be taken in sequence. Part II of II.

Prerequisite: Placement in ENG 111 or placement in Co-requisites ENG 111 and ENF 3. Lecture 3 hours per week.

PLS 211 United States Government I

Course DE2977 **RPS 0.5 Credit/RCC 3 Credits**

Teaches structure, operation, and process of national, state, and local governments. Includes in-depth study of the three branches of the government and of public policy. PLS 211 and PLS 212 need not be taken in sequence. Part 1 of 2.

Prerequisite: *Placement in ENG 111 or placement in co-requisites ENG 111 and ENF 3. Lecture 3 hours per week.*

PLS 212 United States Government II

Course DE2978 **RPS 0.5 Credit/RCC 3 Credits**

Teaches structure, operation, and process of national, state, and local governments. Includes in-depth study of the three branches of the government and of public policy. Political Science 211 and 212 need not be taken in sequence. Part 2 of 2.

Prerequisite: *Placement in ENG 111 or placement in co-requisites ENG 111 and ENF 3. Lecture 3 hours per week.*

SCIENCE

BIO 101 General Biology I

Course DE4700 **RPS 0.5 Credit/RCC 3 Credits**

Focuses on foundations in cellular structure, metabolism, and genetics in an evolutionary context. Explores the core concepts of evolution; structure and function; information flow, storage and exchange; pathways and transformations of energy and matter; and systems biology. Emphasizes process of science, interdisciplinary approach, and relevance of biology to society. Part I of a two-course sequence.

Prerequisite: *Completion of ENF 2 and MTE 1-3, if required by placement test. Lecture 3 hours. Recitation and Laboratory 3 hours. Total 6 hours per week.*

BIO 102 General Biology II

Course DE4701 **RPS 0.5 Credit/RCC 3 Credits**

Focuses on diversity of life, anatomy and physiology of organisms, and ecosystem organization and processes in an evolutionary context. Explores the core concepts of evolution; structure and function; information flow, storage and exchange; pathways and transformations of energy and matter; and systems biology. Emphasizes process of science, interdisciplinary approach, and relevance of biology to society. Part 2 of a part two-course sequence.

Prerequisite: *Satisfactory completion of BIO 101. Lecture 3 hours. Recitation and Laboratory 3 hours. Total 6 hours per week.*

Personal Wellness Elective

HLT 115 Introduction to Personal and Community Health

Course DE7600 **RPS 0.5 Credit/RCC 1 Credit**

Introduces and focuses on the principles of personal and community health. *Lecture 1 hour per week.*

World Language (8 credits)

SPA 101 Beginning Spanish I

Course DE5112 **RPS 0.5 Credit/RCC 4 Credits**

Introduces understanding, speaking, reading, and writing skills and emphasizes basic Spanish sentence structure. Incorporates exposure to the arts, culture, and literature of the area of the arts, culture, and literature of the areas of the world where Spanish is spoken. Part 1 of 2. *Lecture 4 hours per week. May include an additional hour of oral drill and practice per week.*

SPA 102 Beginning Spanish II

Course DE5113 **RPS 0.5 Credit/RCC 4 Credits**

Introduces understanding, speaking, reading, and writing skills and emphasizes basic Spanish sentence structure. Incorporates exposure to the arts, culture, and literature of the area of the arts, culture, and literature of the areas of the world where Spanish is spoken. Part 2 of 2.

Prerequisite: *SPA 101. Lecture 4 hours per week. May include an additional hour of oral drill and practice per week.*

FRE 101 Beginning French I

Course DE5110 **RPS 0.5 Credit/RCC 4 Credits**

Introduces understanding, speaking, reading, and writing skills and emphasizes basic French sentence structure. Incorporates exposure to the arts, culture, and literature of the areas of the world where French is spoken. Part 1 of 2. *Lecture 4 hours per week. May include one additional hour of oral practice per week.*

FRE 102 Beginning French II

Course DE5111 **RPS 0.5 Credit/RCC 4 Credits**

Introduces understanding, speaking, reading, and writing skills and emphasizes basic French sentence structure. Incorporates exposure to the arts, culture, and literature of the areas of the world where French is spoken. Part 2 of 2.

Prerequisite: *FRE 101 or equivalent. Lecture 4 hours per week. May include one additional hour of oral practice per week.*

Approved Electives

ART 100 Art Appreciation

Course DE9150 **RPS 0.5 Credit/RCC 3 Credits**

Introduces art from prehistoric times to the present day. Describes architectural styles, sculpture, photography, printmaking, and painting techniques.

Prerequisite: *Placement in ENG 111 or placement in co-requisites ENG 111 and ENF 3. Lecture 3 hours per week.*

ART 101 History and Appreciation of Art I

Course DE9151 **RPS 0.5 Credit/RCC 3 Credits**

Presents the history and interpretation of architecture, sculpture, and painting. Begins with prehistoric art and follows the development of western civilization to the present. ART 101 and 102 may be taken out of order. Part 1 of 2.

Prerequisite: *Placement in ENG 111 or placement in co-requisites ENG 111 and ENF 3. Lectures 3 hours per week.*

ART 102 History and Appreciation of Art II

Course DE9152 **RPS 0.5 Credit/RCC 3 Credits**

Presents the history and interpretation of architecture, sculpture, and painting. Begins with prehistoric art and follows the development of western civilization to the present. ART 101 and 102 may be taken out of order. Part 2 of 2.

Prerequisite: *Placement in ENG 111 or placement in co-requisites ENG 111 and ENF 3. Lectures 3 hours per week.*

CST 151 Film Appreciation I

Course DE9153 **RPS 0.5 Credit/RCC 3 Credits**

Provides students with a critical understanding of film through the discussion and viewing of motion pictures with emphasis upon the study of film history and the forms and functions of film. Students will develop skills to analyze the shared social, cultural, and historical influences of films and their contexts.

Prerequisites: *Placement in ENG 111 or placement in co-requisites ENG 111 and ENF 3. Lectures 3 hours per week.*

GEO 200 Intro to Physical Geography

Course DE2945 **RPS 0.5 Credit/RCC 3 Credits**

Studies major elements of the natural environment, including Earth-Sun relationship, land forms, weather and climate, and natural vegetation and soils. Introduces the student to types and uses of maps.

Prerequisite: *Placement in ENG 111 or placement in co-requisites ENG 111 and ENF 3. Lecture 3 hours per week.*

GEO 210 People and the Land: Introduction to Cultural Geography

Course DE2946 **RPS 0.5 Credit/RCC 3 Credits**

Focuses on the relationship between culture and geography. Presents a survey of modern demographics, landscape modification, material and non-material culture, language, race and ethnicity, religion, politics, and economic activities. Introduces the student to types and uses of maps.

Prerequisites: *Placement in ENG 111 or placement in co-requisites ENG 111 and ENF 3. Lecture 3 hours per week.*

GEO 220 World Regional Geography

Course DE2947 **RPS 0.5 Credit/RCC 3 Credits**

Studies physical and cultural characteristics of selected geographical regions of the world. Focuses upon significant problems within each of the regions and examines the geographical background of those problems. Introduces the student to types and uses of maps.

Prerequisite: *Placement in ENG 111 or placement in co-requisites ENG 111 and ENF 3. Lecture 3 hours per week.*

HIS 101 History of Western Civilization I

Course DE2952 **RPS 0.5 Credit/RCC 3 Credits**

Examines the development of western civilization from ancient times to the present. Begins with ancient times and ends with the seventeenth century. HIS 101 and HIS 102 need not be taken in sequence. Part 1 of 2.

Prerequisite: *Placement in ENG 111 or placement in co-requisites ENG 111 and ENF 3. Lecture 3 hours per week.*

HIS 102 History of Western Civilization II

Course DE2948 **RPS 0.5 Credit/RCC 3 Credits**

Examines the development of western civilization from ancient times to the present. Begins with mid seventeenth century and continues through modern times. HIS 101 and HIS 102 need not be taken in sequence. Part 2 of 2.

Prerequisite: *Placement in ENG 111 or placement in co-requisites ENG 111 and ENF 3. Lecture 3 hours per week.*

HUM 100 Survey of the Humanities

Course DE2953 **RPS 0.5 Credit/RCC 3 Credits**

Introduces the humanities through the art, literature, music, and philosophy of various cultures and historical periods.

Prerequisite: *Placement in ENG 111 or placement in co-requisites ENG 111 and ENF 3. Lecture 3 hours per week.*

HIS 141 African-American History I

Course DE2950 **RPS 0.5 Credit/RCC 3 Credits**

Surveys the history of black Americans from their African origins to the present. HIS 141 and HIS 142 need not to be taken in order. Part 1 of 2.

Prerequisite*: Placement in ENG 111 or placement in co-requisites ENG 111 and ENF 3. Lecture 3 hours per week.*

HIS 142 African-American History II

Course DE2951 **RPS 0.5 Credit/RCC 3 Credits**

Surveys the history of black Americans from their African origins to the present. HIS 141 and HIS 142 need not to be taken in order. Part 2 of 2.

Prerequisite: *Placement in ENG 111 or placement in co-requisites ENG 111 and ENF 3. Lecture 3 hours per week.*

HUM 260 Survey of Twentieth-Century Culture

Course DE2954 **RPS 0.5 Credit/RCC 3 Credits**

Explores literature, visual arts, philosophy, music, and history of our time from an interdisciplinary perspective. *Lecture 3 hours per week.*

ITE 115 Introduction to Computer Applications and Concepts

Course DE2115 **RPS 0.5 Credit/RCC 3 Credits**

Covers computer concepts and internet skills and uses a software suite which includes word processing, spreadsheet, database, and presentation software to demonstrate skills required for computer literacy.

Prerequisite**:** Keyboarding skills. Lecture 3 hours per week.

MUS 121 Music Appreciation I

Course DE9222 **RPS 0.5 Credit/RCC 3 Credits**

Increases the variety and depth of the of the student's interest, knowledge, and involvement in music and related cultural activities. Acquaints the student with traditional and twentieth-century music literature, emphasizing the relationship music literature, emphasizing the relationship music has as an art form with man and society. Increases the student's awareness of the composers and performers of all eras through listening and concert experiences. *Lecture 3 hours per week.*

MUS 225 The History of Jazz
Course DE9223 **RPS 0.5 Credit/RCC 3 Credits**
Studies the underlying elements of jazz, concentrating on its cultural and historical development from earliest stages to the present. No previous knowledge of music is required. *Lecture 3 hours per week.*

PHI 101 Introduction to Philosophy I
Course DE2955 **RPS 0.5 Credit/RCC 3 Credits**
Introduces a broad spectrum of philosophical problems and perspectives with an emphasis on the systematic questioning of basic assumptions about meaning, knowledge, reality, and values.
Prerequisite: *Placement in ENG 111 or placement in co-requisites ENG 111 and ENF 3. Lecture 3 hours per week.*

PHI 220 Ethics
Course DE2966 **RPS 0.5 Credit/RCC 3 Credits**
Provides a systematic study of representative ethical systems.
Prerequisite: *Placement in ENG 111 or placement in co-requisites ENG 111 and ENF 3. Lecture 3 hours per week.*

PSY 200 Principals of Psychology
Course DE2116 **RPS 0.5 Credit/RCC 3 Credits**
Surveys the basic concepts of psychology. Covers the scientific study of behavior and mental processes, research methods and measurement, theoretical perspectives, and application. Includes biological basis of behavior, learning, social interactions, memory, and personality; and other topics, such as sensation, perception, consciousness, thinking, intelligence, language, motivation, emotion, health, development, psychological disorders, and therapy.
Prerequisite: *Placement in ENG 111 or placement in co-requisites ENG 111 and ENF 3. Lecture 3 hours per week.*

PSY 230-Developmental Psychology
Course DE2979 **RPS 0.5 Credit/RCC 3 Credits**
Studies the development of the individual from conception to death. Follows a life-span perspective on the developmental tasks of the person's physical, cognitive, and psycho-social growth.
Prerequisite: *Placement in ENG 111 or placement in co-requisites ENG 111 or placement in co-requisites ENG 111 and ENF 3. Lectures 3 hours per week.*

PSY 235 Child Psychology
Course DE2980 **RPS 0.5 Credit/RCC 3 Credits**
Studies development of the child from conception to adolescence. Investigates physical, intellectual, social, and emotional factors involved in the child's growth.
Prerequisite: *Placement in ENG 111 or placement in co-requisites ENG 111 and ENF 3. Lecture 3 hours per week.*

SDV 100 College Success Skills

Course DE2100 **RPS 0.5 Credit/RCC 3 Credits**

Assists students in transition to college. Provides overviews of college policies, procedures, and curricular offerings. Encourages contacts with other students and staff. Assists students toward college success through information regarding effective study habits, career and academic planning, and other college resources available to students. Strongly recommended for beginning students. Required for graduation. *Lecture 1 hour per week.*

ECA students only.

SOC 200 Principles of Sociology

Course DE2981 **RPS 0.5 Credit/RCC 3 Credits**

Introduces fundamentals of social life. Presents significant research and theory in areas, such as culture, social structure, socialization, deviance, social stratification, and social institutions.

Prerequisite: *Placement in ENG 111 or placement in co-requisites ENG 111 and ENF 3. Lecture 3 hours per week.*

SOC 210 Survey of Physical and Cultural Anthropology

Course DE2982 **RPS 0.5 Credit/RCC 3 Credits**

Examines physical characteristics and lifestyles of human ancestor and present populations. Explores cultures from around the world to study diverse adaptations made by humans.

Prerequisite: *Placement in ENG 111 or placement in co-requisites ENG 111 and ENF 3. Lecture 3 hours per week.*

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