Patrick Henry High School
William Fleming High School

PROGRAM OF STUDIES

2026-2027 School Year



Roanoke City PUBLIC SCHOOLS

201 Campbell Ave. SW
Roanoke, VA 24011
www.rcps.info

We Are One #RCPSProud

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MESSAGE FROM THE SUPERINTENDENT

Dear Students and Parents/Guardians:

As Superintendent of Roanoke City Public Schools, it is my goal that all students are provided with a robust and rewarding educational program. We want all students to graduate not only with a diploma, but also with a resume of skills and experiences that will last a lifetime and that will prepare them for college, the workforce, and for the military.

The demands of the 21st century necessitate that students receive strong academic preparation for the world of work or continuing education. Our school system must be responsive to the challenges that our society places on its citizens and offer students essential academic skills. Students must be involved in learning experiences that provide them with the skills and attributes they will need for success in a world that demands greater expertise in technology, critical problem solving, and the ability to adapt to rapidly changing workplace demands.

This High School Program of Studies is a call to action for students and their parents/guardians. Inside you will find graduation requirements for the various diploma types, sample four-year plans of study, comprehensive course listings and description of each high school course and programs offered. Information informing students of course selections and registration procedures is included. I encourage students to take the most rigorous courses available as they pursue graduation.

Our partnership with Virginia Western Community College provides many dual enrollment opportunities. All students must remember that because of the Community Access College Program (CCAP), everyone who meets the requirements can go to college. Seize your opportunities.

Roanoke City Public Schools will continue to develop and promote school programs, based on best practices, to ensure that all students have the opportunity to build successful futures.

Sincerely,



Verletta White, Ed.D.

Superintendent

Pathways to Student Success

Early Literacy

- RCPS will ensure students are reading at or above grade level by the end of 3rd grade.

Academics

- RCPS will eliminate achievement and opportunity gaps, while simultaneously accelerating academic growth for every student in reading and math.

Post-Secondary Success

- RCPS will improve access to and achievement in advanced courses and career and technical education (CTE) programs for every student.
- RCPS will increase on-time high school graduation rates overall and by reporting group.

Overall Well-Being and Sense of Belonging

- RCPS will foster inclusive, safe, and welcoming learning communities for students, staff, and families.
- RCPS will invest in the whole child by promoting student participation in the arts and co/extra-curricular activities that interest them, such as athletics and school clubs.







Portrait of a Graduate



In RCPS, we aspire to have graduates who are . . .

Innovative

- Approach challenges with a growth mindset
- Nurture their curiosity and creativity
- Are open-minded and responsive to new and diverse perspectives

Resilient

- Adapt to evolving job opportunities in a changing world
- Think critically and collaboratively to solve complex problems
- Persevere to reach their maximum potential

Dedicated

- Lead by example and with integrity
- Contribute to their communities and on a global scale in meaningful ways
- Authentically engage with others and always seek to find understanding

Empowered

- Can imagine a life they envision for themselves
- Inspire others to act
- Possess all the tools needed to achieve their dreams

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SECTION I: EDUCATIONAL REQUIREMENTS

GRADUATION REQUIREMENTS

The requirements for a student to earn a diploma from a Virginia high school shall be those in effect when that student enters the ninth grade for the first time.

RISING 6th – 12th GRADE
GRADUATING CLASSES OF 2022-2030

STANDARD DIPLOMA 22 credits		ADVANCED STUDIES DIPLOMA 26 credits	
ENGLISH	**4**	**ENGLISH**	**4**
MATH	**3**	**MATH**	**4**
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 approved by the board to satisfy this requirement. AP Computer science A or IB Computer science course credit earned by students may be considered a mathematics course credit.		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. Algebra, Functions, and Data Analysis can be used as a fourth course in this sequence but must be taken prior to Algebra II. Algebra II is a requirement for the Advanced Studies Diploma.	
LABORATORY SCIENCE	**3**	**LABORATORY SCIENCE**	**4**
Courses shall include three selections from two different science disciplines: 1) Earth Science, 2) Biology, Ecology (classified under Biology), 3) Chemistry,and 4) Physics.		Courses shall include four selections from three different science disciplines: 1) Earth Science, 2) Biology, Ecology (classified under Biology), 3) Chemistry,and 4) Physics.	
HISTORY/SOCIAL SCIENCE	**3**	**HISTORY/SOCIAL SCIENCE**	**4**
US and VA History (required) US and VA Government (required) Students may choose one from the following courses: World Geography, World History I, World History II, AP World History.		US and VA History (required) US and VA Government (required) Students may choose two from the following courses: World Geography, World History I, World History II, AP World History	
HEALTH AND P.E.*	**2**	**HEALTH AND P.E.***	**2**
ECONOMICS AND PERSONAL FINANCE**	**1**	**ECONOMICS AND PERSONAL FINANCE****	**1**
*** All students must receive training in first aid, CPR, and AED. This training will be included in the RCPS Health and PE 9 curriculum.** ****** All students must complete one online course for graduation. Students completing the required RCPS Economics and Personal Finance course (which includes an online component) satisfy this requirement.			
WORLD LANGUAGES	**0**	**WORLD LANGUAGES**	**3 or 4**
		Three years of one language or two years each of two languages.	
FINE ARTS/WORLD LANGUAGES/CAREER AND TECHNICAL EDUCATION	**2**	**FINE ARTS/CAREER AND TECHNICAL EDUCATION**	**1**
See course listing for options. Students must earn an industry credential in a CTE course.		See course listing for options. See additional graduation requirements.	
ELECTIVES	**4**	**ELECTIVES**	**2 or 3**
Students graduating with a Standard Diploma must include at least two **sequential electives** which may include courses from a variety of options.		Students in Advanced Studies Program may or may not be enrolled in advanced level courses. Two sequential electives are required.	
Of the total credits shown above, students must earn a minimum of FIVE verified credits from the following disciplines:		**Of the total credits shown above, students must earn a minimum of FIVE verified credits from the following disciplines:**	
English 11 *Writing & Reading/Literature/Research	**2**	English 11 *Writing & Reading/Literature/Research	**2**
Mathematics	**1**	Mathematics	**1**
Science	**1**	Science	**1**
History/Social Science	**1**	History/Social Science	**1**
*The writing SOL can be earned through locally developed and locally scored “authentic performance assessments”.		*The writing SOL can be earned through locally developed and locally scored “authentic performance assessments”.	
VERIFIED CREDIT means passing the course and the end-of-course SOL test.			

Additional graduation requirements for the freshman class of 2018 and beyond.

Demonstration of the 5 Cs

Students shall acquire and demonstrate foundational skills in critical thinking, creative thinking, collaboration, communication, and citizenship in accordance with the Profile of a Virginia Graduate approved by the board.

Advanced Placement, Honors, or International Baccalaureate Course or Career and Technical Education Credential

In accordance with the Standards of Quality, students shall either (i) complete an Advanced Placement, honors, or International Baccalaureate course,or approved work-based experience, or (ii) earn a career and technical education credential approved by the board, except when a career and technical education credential in a particular subject area is not readily available or appropriate or does not adequately measure student competency, in which case the student shall receive satisfactory competency-based instruction in the subject area to satisfy the standard or advanced studies diploma requirements. The career and technical education credential, when required, could include the successful completion of an industry certification, a state licensure examination, a national occupational competency assessment, or the Virginia workplace readiness assessment.

Career Investigations:

(6th graders and beyond) Students will utilize an online platform (Major Clarity) to explore careers and begin development of an Academic and Career plan (ACP).

GRADUATION (DIPLOMA) SEALS OF ACHIEVEMENT

BOARD OF EDUCATION SEAL OF BILITERACY will be awarded to students who earn a Board of Education approved diploma and (i) pass all required End-of-Course Assessments in English, reading, and writing at the proficient or higher level; and (ii) be proficient at the intermediate-mid level or higher in one or more languages other than English, as demonstrated through an assessment from a list to be approved by the Superintendent of Public Instruction. This assessment is at the student's expense.

BOARD OF EDUCATION SEAL will be awarded to students who complete the requirements for Standard or Advanced Studies Diploma with an average grade of "A".

CAREER AND TECHNICAL EDUCATION SEAL will be awarded to students who earn either a Standard or Advanced Studies Diploma, complete a prescribed sequence of courses in a career and technical education concentration, and (a) maintain a "B" or better average in each course, or (b) pass an examination in a career and technical education concentration, or (c) acquire a professional license in a career and technical education field from the Commonwealth of Virginia.

CTE CREDENTIAL beginning with graduating class of 2017, students must earn board approved CTE credential.

EXCELLENCE IN CIVICS EDUCATION SEAL will be awarded to students who meet each of the following four criteria: 1) Satisfy the requirement to earn a Standard or Advanced Studies Diploma: AND 2) Complete Virginia and United States History and Virginia and United States Government courses with a grade of "B" or higher in each course; 3) Complete 50 hours of voluntary participation in community service or extracurricular activities related to civics AND 4) Have good attendance and no disciplinary infractions as determined by local school board policies.

EXCELLENCE IN SCIENCE AND THE ENVIRONMENT SEAL is awarded to students who enter the **ninth grade for the first time in the 2018-19** year and thereafter, and meet the following criteria: 1) Earn a Standard or Advanced Studies Diploma; 2) Complete at least three first-level board-approved laboratory science courses and at least one rigorous advanced-level or postsecondary-level laboratory science course, each with a grade of "B" or higher; 3) Complete laboratory or field-science research and present that research in a formal, juried setting; 4) 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.

GOVERNOR'S SEAL will be awarded to students who complete the requirements for an Advanced Studies Diploma with an average grade of "B" or better, and successfully complete college-level coursework that will earn nine transferable college credits (2 AP, 2 dual, or 1 AP and 1 dual).

STEM SEAL shall be awarded to students who earn either a Standard Diploma or an Advanced Studies Diploma and satisfy all Math and Science requirements for the Advanced Studies Diploma with a "B" average or better in all coursework, and successfully complete more than 50 hours or more work-based learning opportunity in a STEM area, and satisfy all requirements for a Career and Technical Education concentration (A concentration is a coherent sequence of two or more state-approved courses as identified in the course listing within the CTE Administrative Planning Guide, and pass one of the following: a Board of Education CTE STEM-H credential examination, or an examination approved by the Board that confers a college-level credit in a STEM field.

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.

- 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 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.

FINE ARTS & 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 (CTE). The Standards of Accreditation do not require that courses used to satisfy the requirement of Fine Arts or CTE be approved by the Board. Therefore, local school officials should use their own judgment in determining which courses students take to satisfy this requirement.

NOTE: Credit accommodations provide alternatives for students with disabilities to earn 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 alternate pathways and flexibility, students receiving accommodations must earn 22 standard credits and five verified credits to graduate with a Standard Diploma.

Demonstration of the five Cs - Students shall acquire and demonstrate foundational skills in critical thinking, creative thinking, collaboration, communication, and citizenship in accordance with the Profile of a Virginia Graduate approved by the board.

WORK-BASED LEARNING

The career-planning component of the Profile of a Virginia Graduate provides an opportunity for students to learn more about career paths and employment options. Students should contact their school counselor to learn more about work-based learning opportunities including but not limited to job shadowing, mentoring, service learning, and/or internships (paid or non-paid). All internships (paid or non-paid) must be secured through the ROTEC Work-Based Learning Coordinator and will be made available to current seniors.

TRANSFER COURSES FOR CREDIT

Students are not allowed to transfer courses for credit from institutions of higher learning unless prior approval is received by Roanoke City's Assistant Superintendent of Student Success and Support Services. **Approval will only be granted in extenuating circumstances.**

APPLIED STUDIES DIPLOMA

Students with disabilities receiving special education who do not meet the requirements for a diploma as set forth in the Standards of Quality and the Standards of Accreditation may be awarded an Applied Studies diploma. Only students with a current IEP (Individualized Education Program) are eligible for this diploma option. The student with disabilities who successfully completes the requirements as set forth in the student's IEP may be awarded an Applied Studies diploma.

CERTIFICATE OF COMPLETION

Students who complete the credit requirements for a standard diploma, but who fail to verify a satisfactory number of credits by passing the corresponding SOL assessments or substitute assessments will receive a Certificate of Completion. Students receiving a Certificate of Completion may continue to retake the required SOL assessments to earn a Standard diploma in subsequent years.

PATHWAYS TO COLLEGE

Roanoke City Public Schools students have the opportunity to complete a General Education Certificate or earn an Associate of Science Degree by successfully participating in dual enrollment opportunities available through Virginia Western Community College (VWCC) while earning a high school diploma. Some courses must be taken independently, either at VWCC or through distance learning. Most distance learning courses will be offered by VWCC and taught by VWCC faculty. However, the students will meet at scheduled times in a computer lab at their high school with a teacher who will serve as a facilitator to keep them progressing through the class and proctor their assignments as needed.

SECTION II: POLICIES & PROCEDURES

GRADING SYSTEM & WEIGHTED CREDIT

The 4.0 grading system is used to determine GPA (grade point average) as follows:

A – 4 Points D – 1 Point

B – 3 Points F – 0 Points

C – 2 Points

"College-level" courses (Advanced Placement and Dual Enrollment) grant an additional one point when students successfully complete course requirements. These are preceded by two asterisks in the course descriptions. Courses that are designated Advanced Placement, Advanced Placement/Dual Enrollment, or Dual Enrollment classes in ROTEC that are terminal courses leading to industry certification are the only courses that will receive weighted credit. Beginning in the 2016-2017 school year, students transferring into Roanoke City Public Schools will have their grade point average calculated according to the RCPS system.

RANK IN CLASS

Rank in class is based on all subjects and is computed on all grades earned for eight semesters from ninth grade through the second semester of the senior year. All Carnegie unit courses taken prior to grade 9 are also used in determining the grade point average (GPA) and class rank. Special diploma candidates, certificate of completion candidates, and ungraded students are not ranked. Students with a GPA of 4.0 and above will be ranked by the second decimal place.

Rank in class is based on all credit bearing courses at the middle school and high school level.

GRADING SCALE

A = 90-100 D = 60-69

B = 80-89 F = 59 and below

C = 70-79

Conferences with parents/guardians are scheduled during the school year to share information concerning the student's progress and to plan for the student's educational program. At least two opportunities are given to include the student, parent/guardian, and school counselor for the purpose of planning the student's educational program. In addition to scheduled conferences, a student's progress is reported through regular interim reports and report cards. Additional conferences with teachers and other school staff members are encouraged. Please contact the school to arrange additional conferences.

STUDENT PROMOTION POLICY

Promotion for grade classification purposes is based upon the minimum number of standard credits accumulated as follows:

10th grade (Sophomore) – 5 credits

11th grade (Junior) – 10 credits

12th grade (Senior) – 16 credits

THE STANDARDS OF LEARNING TESTS

The Virginia Standards of Learning Tests (SOL) are assessments designed to evaluate the extent to which students have learned the content and skills specified by the Virginia Board of Education. These academic standards adopted by the State Board of Education were established to facilitate and ensure rigorous and challenging educational programs in all schools. If the State Board of Education adjusts or changes SOL testing or score requirements, RCPS will communicate that information with students and their families.

At the secondary level, the SOL Assessments are administered as end-of-course tests for English Reading, English Writing, Algebra I, Algebra II, Geometry, Virginia and United States History, World History I, World History II, World Geography, Earth Science, Biology, and Chemistry. In order to earn a Standard or Advanced Studies diploma, students must earn a certain number of verified credits, in addition to the units of credits requirements.

The State Board of Education has approved other tests, such as certain Advanced Placement (AP) Tests and certain SAT exams that may be used for meeting verified graduation requirements. Your school counseling office can provide you with information about optional test acceptance.

The State Board of Education has developed the Alternative Assessment for students who have traditionally been exempted from state assessment programs. The Alternative Assessment is designed for students who are pursuing a functional curriculum within an IEP. The Special Education staff at your school should be contacted for information about this assessment option.

Students may retake high school end-of-course tests as often as the school division's testing schedule will permit. Students who score 375 – 399 on an end-of-course SOL test are eligible for an expedited retake. Students must retake the test before the next scheduled test administration within the state designated time.

SOL ASSESSMENT ADMINISTRATION DATES

Fall: Students who take and do not pass end-of-course SOL tests during the spring administration may choose to re-take the failed tests during the fall administration. Students do not have to be enrolled in the course to re-

take the SOL tests, but they are required to participate in a remediation program. The fall testing is done as late in the semester as possible. Schools will notify students who qualify for the fall administration.

Spring: Students enrolled in grades 3, 4, 5, 6, 7, 8 and credit bearing high school courses will be administered SOL tests required by the Virginia Board of Education during the spring. Writing components of the English SOL tests are administered in early spring, and the remaining SOL tests are given about four weeks before the end of the school year.

Students, who after remediation, fail a second retake of an end-of-course SOL test, but pass the course and achieve one score of 375 or better, may be awarded a locally verified credit.

For students entering the ninth grade for the first time prior to the 2018-2019 academic year:

- No more than three locally awarded verified credits may be awarded.
- Locally awarded verified credits cannot be applied toward an Advanced Studies diploma.
- Students who are no longer in school who would now be eligible for a locally awarded verified credit in English or mathematics may now earn a locally awarded verified credit, provided that all criteria is met.

For students entering the ninth grade for the first time in the 2018-2019 academic year and beyond:

- No more than one locally awarded verified credit may be awarded.
- Locally awarded verified credits can be applied toward either a Standard or an Advanced Studies diploma.

Contact the school counselor or principal for more information about locally awarded verified credits. The Locally Awarded Verified Credit award is subject to change according to Virginia Department of Education direction.

SAT, PSAT/NMSQT, AND ACT COLLEGE ADMISSIONS TESTS

The Scholastic Assessment Test (SAT) is required for college acceptance by many colleges. The SAT assesses critical reading and math through Algebra II. Scores on each section will range from 200-800 (total score range: 400-1600). Students are encouraged to take the SAT in their late junior and early senior years.

The Preliminary SAT (PSAT)/National Merit Scholarship Qualifying Test (NMSQT) also measures critical reading skills, math problem solving skills and writing skills (no essay). The PSAT/NMSQT is a junior-level test; however, freshmen and sophomores may benefit by taking it earlier so they can identify areas of weakness to focus on and improve their later performance on the PSAT and/or SAT. **Only those students who take, or retake, the PSAT/NMSQT in their junior year are eligible to enter the competition for scholarships and recognition from the National Merit Scholarship Corporation.**

The American College Testing (ACT) is another admissions test that is accepted at most four-year colleges and universities in the United States. The ACT consists of five tests: English, Mathematics, Reading, Science Reasoning, and an optional Writing test. The main four tests are scored individually on a scale of 1–36, and a Composite score is provided which is the whole number average of the four scores. Students are encouraged to take the ACT in their late junior and early senior years.

When deciding whether to take the SAT and/or the ACT, students should consult with their school counselors. Different institutions place different emphases on standardized tests such as the SAT and ACT, compared to other factors of evaluation such as class rank, grade point average, and extracurricular activities.

Information about tests, registration, fees, and test dates is available in the school counseling offices.

SCHOOL POLICIES

ROANOKE CITY PUBLIC SCHOOLS' POLICY MANUAL

A copy of the manual that contains policies approved by the school board is located on the Roanoke City Public Schools' web site at http://www.rcps.info.

INDEPENDENT STUDY POLICY (RCPS POLICY MANUAL IKG)

"Roanoke City Public Schools recognizes local responsibility for ensuring that all credits accumulated toward graduation requirements are valid, reflect appropriate course rigor, and follow Standards of Learning (SOL). These same standards apply to independent study.

Middle or high school Carnegie units and middle school credits will be granted to students who successfully complete independent study directed by Roanoke City Public Schools personnel or by an accredited college providing the student has approval by a committee comprised of the principal, guidance coordinator, subject area supervisor, and department chairman one week prior to enrollment in the course. The student and teacher of the independent study must submit all documentation to the committee at least two weeks prior to enrollment to allow the committee time to review the material. The committee will evaluate the course on the following criteria: course syllabus, tests, reading material, grading scale, and SOL connections."

Adopted – October 10, 2000 Revised: March 7, 2006
Reviewed: August 11, 2020

GENERAL INSTRUCTIONS FOR REGISTRATION

Students should follow these instructions for completing the registration form:

- Students select seven (7) courses they wish to take, including appropriate required courses and alternates. (Refer to the graduation requirements section which follows these general instructions and policies.)
- Seniors and juniors are given priority for elective classes to fulfill graduation requirements. Electives will be open to ninth and tenth grade students according to space availability.
- Students are urged to read the course descriptions carefully and to note prerequisites before making selections.
- Students review their course selections with their parent/guardian and determine their educational and career plans.
- **Students who fail to register will have course selections made by the school counseling staff.**
- Students registering for the first time should call for an appointment with the school registrar. **Course offerings are contingent upon sufficient enrollment and staffing.**
- Students should use the following steps in selecting courses:

- Select courses in required subjects based on graduation requirements. Required courses failed during the regular academic year must be completed successfully before enrollment in the next level course.
- Select courses that meet educational and career goals: college preparatory, business education, technical education, etc.
- Select interest courses: art, music, business, etc. School counselors will assist students in the selection of courses on both an annual and a long-range basis. Students who need assistance should make an appointment with their counselor.
- Parent/guardians who have questions about course selections should call their student's counselor.
- In order to meet requirements for the Virginia Standard Diploma, students must earn elective credits in at least two sequential electives.

COURSE ADJUSTMENT POLICY

Changes from one course to another will be made under the following circumstances **only**:

- Failure of a course which is a prerequisite for a selected course
- Failure of a course which is a graduation requirement
- Completion of a selected course in summer school
- Change in the diploma type
- Grouping adjustments and/or balancing of classes by administration
- Recommendation of screening and/or eligibility committee. IEP, or 504 Team
- Administrative error
- Students may be removed from an elective not needed for graduation to be placed in a course for credit recovery

The following regulations apply to dropping courses, course credit, and repeating courses:

- Credit will be given only upon successful completion of a course.
- **A student may repeat a course to strengthen his/her background in a subject area, but only one credit will be granted for the course. Both grades will be shown on the transcript, but only the higher grade will be used to calculate class rank. Repeat classes do not count in the VHSL "Pass Five" rule.**
- Transfer students from other accredited high schools will be given an exemption to this policy. Individual transcripts will be evaluated, and the students will be placed in courses based upon their individual merits.
- Students are not permitted to audit classes.
- New courses will not be added after 3 weeks of the course unless approved by assistant superintendent with principal recommendation.
- Courses may not be dropped after 8 weeks of the course unless approved by assistant superintendent with principal recommendation.

SECTION III: PROGRAMS & SERVICES

PROGRAMS

THE ROANOKE VALLEY GOVERNOR'S SCHOOL FOR SCIENCE AND TECHNOLOGY

The Governor's School is a regional center for the study of advanced courses in science, mathematics, computer applications, and technology. Students must apply for admission and are chosen competitively. Students must have successfully completed Algebra I and Geometry prior to enrollment. Students who score around the 90th percentile on standardized tests, who are seeking admission to highly selective colleges and universities, and who have maintained at least a 3.3 GPA are well suited for Governor's School.

The Governor's School grades on a semester system and progress reports are sent home six times a year. Grades earned at the Governor's School are reported to the student's home school to be placed on the student's transcripts. Because the Governor's School is a half-day program, rank in class and grade point averages are not computed. The home high school calculates the class rank and grade point average using its own individual system of weighting and the Governor's School grades.

Applications are submitted through the student's home school. Address questions to the Governor's School at (540) 853-2116 or visit the RVGS Web Site at

http://www.rvgs.k12.va.us.

GOVERNOR'S SCHOOL COURSES

SCIENCE		
**4571	RVGS Physics	1.0 credit
**4421	RVGS Chemistry	1.0 credit
**4361+	RVGS Biology	2.0 credits
**4471	AP Chemistry	2.0 credits
**4271	AP Environmental Science	2.0 credits
**4572	AP Physics	2.0 credits
MATH		
**3138	RVGS Algebra II	1.0 credit
**3172	RVGS Pre-Calculus	1.0 credit
**3177	AP Calculus AB	1.0 credit
**3181+	AP Accelerated Calc. BC	1.0 credit
**3180	AP Calculus BC	1.0 credit
**3193 +	AP Statistics	1.0 credit
**3178+	Multivariable Calculus	1.0 credit
ELECTIVES		
**4616	Applied Chem. Research	.5 credit
**6691	Biotechnology	.5 credit
**4613	Directed Study	.5 credit
4617	Fund. of Research	.5 credit
**3202	Mentorship	.5 credit
**3204	Product Design	.5 credit
**8441	Engineering Res. & Design	.5 credit
**4614	Environmental Research	.5 credit
**6692	Computational Bio. & Bioinformatics	.5 credit
**2904	Research Psychology	.5 credit
**6189	Python Coding	.5 credit

**College-level course for weighted credit
+Dual enrollment with Virginia Western Community College

To offer innovative curricula, the Governor's School updates its course offerings each spring with new research electives and online courses related to applications of science and technology. These courses are offered based on student interest, enrollment, and faculty availability. Courses are posted each spring at: http://www.rvgs.k12.va.us.

ADVANCED PLACEMENT

The Advanced Placement (AP) Program of the College Board involves college-level courses and exams for high school students. These courses are challenging. AP courses take more time, require more work, give greater opportunity for individual progress, and go into greater depth than other high school courses. Each college decides which AP examination scores it will accept for credit and/or advanced placement. The benefits of Advanced Placement credit are numerous and include taking advanced courses in the AP subject, exploring other subjects of interest, joining honors and other special programs, and saving college tuition fees. **Roanoke City Public Schools will pay a portion of the exam cost; students must pay the remainder by March. Contact your school counselor for specific fee information. Financial assistance for AP fees may be available for students who qualify. Please see your School Counseling Coordinator for details.**

DUAL ENROLLMENT

RCPS students will continue to have the opportunity to be enrolled in dual enrollment (DE) courses, both academic and technical, through an agreement between the school division and Virginia Western Community College (VWCC). In addition, all coursework required for an Associate of Science Degree or General Education Certificate will be made available to students, either virtually or in the traditional classroom setting so that students are able to earn a two-year degree prior to high school graduation.

All dual enrollment courses meet the same academic requirements as the college courses offered on the campus of VWCC. Program requirements include recommendation by the home school and an admissions application on file at VWCC at the time of registration. Upon successful completion of each semester course, the appropriate unit of high school credit and semester hours of college credit will be awarded. If a student fails a dual enrollment course and Virginia Western requests reimbursement of tuition costs, the student is responsible for payment. Fees for Dual Enrollment are announced annually depending on Virginia Western's tuition cost. As of the fall semester of 2025, dual enrollment courses taken within RCPS with RCPS instructors, there will be no cost to students. Dual enrollment courses taken in other formats may have tuition and fees. Contact your school counselor for financial assistance if needed.

Please note that the GPA earned from Dual Enrollment courses carry over if the student attends a Virginia community college or other higher education institution. The GPA earned through VWCC could impact the student's admission into a higher education institution and/or the student's eligibility for financial aid. **Students who have an average of C or below at the time of the withdrawal without penalty time period may be counseled to withdraw from the dual enrollment section of the course. Students with an average of D or below will be removed from the DE course at semester.**

Students must complete all admission and registration requirements of Virginia Western Community College before enrolling in Dual Enrollment courses. Students are required to meet the Virginia Western Community College placement standards as part of the admission process.

As required by § 22.1-215.3 of the Code of Virginia (HB 1892), a notice will be provided to parents/guardians of students with disabilities to outline your child's legal rights and responsibilities when enrolling in dual enrollment (DE) courses. These courses may be offered at your child's high school or through a partnering community college or four-year institution.

EARLY COLLEGE SCHOLARS PROGRAM

The Early College Scholars program allows eligible high school students to earn at least 15 hours of transferable college credit while completing the requirements for an Advanced Studies Diploma. Students earning a college degree in seven semesters instead of eight can save an average of $5,000 in expenses. To qualify for the Early College Scholars program, a student must have a "B" average or better; be pursuing an Advanced Studies Diploma; and take and complete college-level course work (i.e., Advanced Placement, International Baccalaureate, Cambridge, or dual enrollment) that will earn at least 15 transferable college credits. Early College Scholars are supported by Virtual Virginia and the Commonwealth College Course Collaborative. Virtual Virginia provides statewide access to college-level courses while the Commonwealth College Course Collaborative defines the subjects high school students can complete and receive college degree credit from participating public and private colleges and universities.

VIRTUAL VIRGINIA (VVA)

Virtual Virginia is a state online course provider that offers required or supplemental courses as available. See your counselor for details regarding these opportunities. Virtual Virginia courses are rigorous and require good organizational skills and study habits. Students who are not successful in a VVA course will need to enroll in the course at their home school. Participation may be denied if the Virtual Virginia School Review Team determines that participation would be detrimental to the student's academic progress. Students will follow the academic calendar developed and provided by VVA, including drop and add dates.

SCHOOL COUNSELING SERVICES

The high school counseling staff functions predominantly to help students achieve success in completing an educational plan through academic, career, and personal/social counseling services that will result in the completion of a high school diploma or certificate. Parents/guardians are encouraged to become actively involved in this planning process by meeting regularly with the school counseling staff.

School counselors maintain college and other post-high school information that may be useful to all secondary students. Furthermore, school counselors provide opportunities for parents/guardians and students to meet annually to ensure that the student is aware of any educational and career opportunities that may become available, including scholarship information, information relating to full and part-time employment, and vocational training programs. The school counseling office maintains educational records in each high school. Educational records are not released to third parties without prior parental consent or as otherwise provided by law.

Materials used in the school counseling program are available for parent review in each school. Interested parents should schedule an appointment with the school counselor for this purpose.

It shall be the policy of the Roanoke City School Board, with respect to academic, career, and personal/social counseling, that parents will notify the school division in writing if the student is not to participate in any part of the counseling program. The Roanoke City School Board affirms that parents are the student's first teachers and that public schools should serve to strengthen family and parental support. No student will be required to participate in any counseling program to which the student's parents object.

Counseling techniques which are beyond the scope of the professional certification or training of professional school counselors, including hypnosis or other psychotherapeutic techniques, are prohibited.

DECLARATION OF NONDISCRIMINATION

Roanoke City Public Schools ("RCPS") does not discriminate on the basis of race, color, religion, age, sex, disability, national origin, pregnancy, or marital status in its programs and activities, and provides equal access to the Boy Scouts and other designated youth groups.

Students who have questions or concerns regarding compliance with the School Division's nondiscrimination policy JB (including protection under IDEA, ADA, Section 504 and Title IX) should contact:

Dr. Hayley Poland
Asst. Supt. of Student Success and Support Services
Compliance Officer & Title IX Coordinator
Section 504
201 Campbell Avenue
Roanoke, Virginia 24011
(540) 853-1393
hpoland@rcps.info

Alternate Compliance Officer
Dr. Nick Pontius
Executive Director of Special Education
201 Campbell Avenue SW
Roanoke, VA 24011
(540) 853-2468
npontius@rcps.info

Employee Complaints:
Dominick McKee
Chief Human Resources Officer
201 Campbell Avenue SW
Roanoke, VA 24011
(540) 853-2502

Alternate Compliance Officer
Jennifer Bailey
Executive Director for Human Resources
PO Box 13145
Roanoke, VA 24013
(540) 853-2502

SECTION IV: COURSES

Course Load: All students shall be expected to carry the number of classes required to meet the minimum standards necessary for graduation, the student's chosen program of studies, and attendance requirements of the state.

ENGLISH

Instruction and assessment in English courses are based on the VDOE Standards of Learning (SOL) for English for each grade level.

Reading SOL Test
Students in grades 9-11 are prepared for the English SOL End of Course (EOC) Reading Test, which they take in Grade 11. The EOC Reading SOL Test is used to determine verified credit in reading (a graduation requirement).

Writing SOL Test
Students in grades 9-11 are prepared for the English SOL End of Course (EOC) Writing Test, which they take in Grade 11. The EOC Writing SOL Test is used to determine verified credit in writing (a graduation requirement).

1171, 1172, 1173
Creative Writing I, Creative Writing II, Creative Writing III (1 credit each)
Grades 9, 10, 11, 12
Recommended Background: *C or higher in English class(es), keen interest in writing*
Prerequisite for CW II and CW III: *Completion of prior CW class with C or higher*
Students learn skills associated with writing poetry, fiction, and creative nonfiction, experimenting with different forms and techniques. Emphasis is placed on the recursive writing process. In addition, students explore contemporary creative writing applications (blogging, social media, podcast writing, etc.) and examine writing as a career. This course focuses on creating, revising, editing, and publishing creative writing. It does not focus on teaching fundamentals of English grammar, punctuation, or sentence structure. To be successful, students in this course require a strong ability to work independently and self-motivation.

9197-1, 9197-2, 9197-3
Yearbook I, Yearbook II, and Yearbook III (1 credit each)
Grades 9, 10, 11, 12
Prerequisite: Commercial Photography I, Photography, Instructor Permission

In **Yearbook I,** students learn the principles of layout, design, copywriting, and photography. Students will use Photoshop and other publishing software to create pages for the yearbook. *Students should be prepared to commit outside of school time to this class.*

In **Yearbook II,** students advance their layout, design, copywriting, and photography skills as they layout pages for the yearbook. Students in Photojournalism II may take on leadership roles as section editors. *Students should be prepared to commit outside of school time to this class.*

In **Yearbook III,** students refine their layout, design, copywriting, and photography skills and may take on higher level leadership roles as editors. *Students should be prepared to commit outside of school time to this class.*

1200
Journalism I (1 credit)
Grades 9, 10, 11, 12
Recommended Background: *C or higher in English class(es), keen interest in writing*
Students explore the role of journalism throughout history and in the contemporary world. Students develop communication skills in writing, designing, and editing. They learn to conduct interviews and craft articles. In addition, this course teaches students to read and view mass media with a critical eye. They will examine, discuss, and compare online media and print media. This course focuses on creating, revising, editing, and presenting information with a journalistic approach. It does not focus on teaching fundamentals of English grammar, punctuation, or sentence structure. To be successful, students in this course require a strong ability to work independently and self-motivation.

1210
Journalism II (1 credit)
Grades 9, 10, 11, 12
Prerequisite: *Successful completion of Journalism I with a C or higher*
Students apply techniques of layout and design and further develop journalistic writing through creation and publication of articles. Students continue to explore the role of journalism throughout history and in the contemporary world. In addition, this course teaches students to read and view mass media with a critical eye. They will examine, discuss, and compare online media and print media. This course focuses on creating, revising, editing, and presenting information with a journalistic approach. It does not focus on teaching fundamentals of English grammar, punctuation, or sentence structure. To be successful, students in this course require a strong ability to work independently and self-motivation.

1211, 1212
Journalism III, Journalism IV (1 credit each)
Grades 9, 10, 11, 12

Prerequisites:
Journalism III – *Successful completion of Journalism II with a C or higher*
Journalism IV – *Successful completion of Journalism III with a C or higher*
Students apply techniques of layout and design and fine tune their journalistic writing and style. Students develop a sense of journalistic professionalism and explore the role of journalism in society. In addition, this course teaches students to read and view mass media with a critical eye. They will examine, discuss, and compare online media and print media. This course focuses on creating, revising, editing, and presenting information with a journalistic approach. It does not focus on teaching fundamentals of English grammar, punctuation, or sentence structure. To be successful, students in this course require a strong ability to work independently and self-motivation.

1300
Public Speaking and Debate (1 credit)
Grades 9, 10, 11, 12
This course introduces students to the fundamentals of public speaking, oral interpretation, and debate. Emphasis will be on forensics and debate competition as well as development of personal speaking skills.

1130
English 9 (1 credit)
In ninth grade, students build upon prior English skills and knowledge. Instruction and assessment are guided by the VDOE Standards of Learning for Grade 9. Emphasis is on four strands of knowledge and skill: reading (fiction and nonfiction), writing, multimodal literacy & communication, and research. Reading and vocabulary instruction will prepare students for the SOL End of Course Reading Test in Grade 11. Students will learn about and practice a variety of types of writing; however, particular emphasis is placed on analytical and persuasive writing in grade 9. Writing instruction will prepare students for the SOL End of Course Writing Test in Grade 11.

1132
Advanced English 9 (1 credit)
Prerequisite: at least pass/proficient (400+) on the Reading and Writing SOL tests for Grade 8 OR teacher recommendation; students transferring from schools without SOL testing should have earned a B or higher in English 8 or C or higher in an advanced English 8 course at the previous school
This is an advanced level course that focuses on fostering critical thinking and prepares students for success in further advanced study in English, including Advanced Placement and Dual Enrollment. Pacing, level of instructional materials, and achievement expectations are accelerated and/or call for greater depth of study than English 9. Strong work skills and self-motivation are required. Instruction and assessment are guided by the VDOE Standards of Learning for Grade 9. Emphasis is on four strands of knowledge and skill: reading (fiction and nonfiction), writing, multimodal literacy & communication, and research. Reading and vocabulary instruction will prepare students for the SOL End of Course Reading Test in Grade 11. Students will learn about and practice a variety of types of writing; however, particular emphasis is placed on analytical and persuasive writing in grade 9. Writing instruction will prepare students for the SOL end of Course Writing Test in Grade 11.

1140
English 10 (1 credit)
Prerequisite: English 9
In tenth grade, students build upon prior English skills and knowledge. Instruction and assessment are guided by the VDOE Standards of Learning for Grade 10. Emphasis is on four strands of knowledge and skill: reading (fiction and nonfiction), writing, multimodal literacy & communication, and research. Reading and vocabulary instruction will prepare students for the SOL End of Course Reading Test in Grade 11. Students will learn about and practice a variety of types of writing; however, particular emphasis is placed on persuasive and analytical writing in grade 10. Writing instruction will prepare students for the SOL end of Course Writing Test in Grade 11.

1142
Advanced English 10 (1 credit)
Prerequisite: completion of Advanced English 9 with a C or higher, completion of English 9 with an B or higher OR teacher recommendation
This is an advanced level course that focuses on fostering critical thinking and prepares students for success in further advanced study in English, including Advanced Placement and Dual Enrollment. Pacing, level of instructional materials, and achievement expectations are accelerated and/or call for greater depth of study than English 10. Strong work skills and self-motivation are required. Instruction and assessment are guided by the VDOE Standards of Learning for Grade 10. Emphasis is on four strands of knowledge and skill: reading (fiction and nonfiction), writing, multimodal literacy & communication, and research. Reading and vocabulary instruction will prepare students for the SOL End of Course Reading Test in Grade 11. Students will learn about and practice a variety of types of writing; however, particular emphasis is placed on persuasive and analytical writing in grade 10. Writing instruction will prepare students for the SOL end of Course Writing Test in Grade 11.

****1144**
English 10: Advanced Placement Seminar (1 credit)
Prerequisite: completion of Advanced English 9 with a C or higher, completion of English 9 with an B or higher OR teacher recommendation

AP Seminar helps students build foundational writing, collaboration, research, and presentation skills for future

success in high school, college, and career. Students investigate real-world issues from multiple perspectives, gathering and analyzing information from various sources in order to develop credible and valid evidence-based arguments. AP Seminar is a prerequisite for AP Research. Completing AP Seminar and all its required assessment components is necessary for students to develop the skills to be successful in AP Research. In AP Research, students cultivate the skills and discipline necessary to conduct independent research and inquiry in order to produce and defend their scholarly work.

1150
English 11 (1 credit)
Prerequisite: *English 10*
In eleventh grade, students build upon prior English skills and knowledge. Instruction and assessment are guided by the VDOE Standards of Learning for Grade 11. Emphasis is on four strands of knowledge and skill: reading (fiction and nonfiction), writing, multimodal literacy & communication, and research. Reading and vocabulary instruction will prepare students for the SOL End of Course Reading Test. Students will learn about and practice a variety of types of writing; however, particular emphasis is placed on persuasive and argumentative writing in grade 11. Writing instruction will prepare students for the SOL end of Course Writing Test. Students in Grade 11 English will take the end of course (EOC) SOL reading and writing tests.

****1196**
Advanced Placement Language and Composition/Dual Enrollment (1 credit)
Prerequisite: *Completion of Advanced English 10 with a C or higher, completion of English 10 with an B or higher*
Instruction and assessment in this course are guided by the College Board's Advanced Placement Language and Composition course curriculum as well as Virginia Western Community College's dual enrollment course requirements. This course surveys American literature and nonfiction texts with focus on rhetorical analysis, argument, advanced English, and grammar skills. A fee is required for the AP exam. A fee is required for dual enrollment. Waivers or reductions may be available for these fees, based upon need. Prior to enrolling in DE, students must meet the Virginia Western Community College placement requirements. Successful completion of DE coursework may result in Western Virginia Community College credit. College credit may result from AP exam completion, dependent upon the student's exam score and individual college or university credit transfer policies. Students in AP Language and Composition/Dual Enrollment English 11 will take the end of course (EOC) SOL reading and writing tests.

1160
English 12 (1 credit)
Prerequisite: *English 11*
In twelfth grade, students build upon prior English skills and knowledge. Instruction and assessment are guided by the VDOE Standards of Learning for Grade 12. Emphasis is on four strands of knowledge and skill: reading (fiction and nonfiction), writing, multimodal literacy & communication, and research. Students will learn about and practice a variety of types of writing; however, particular emphasis is placed on persuasive and argumentative writing in grade 12. Students in English 12 also learn workplace and career reading and writing skills, including resume and cover letter writing and job applications. English for college and career readiness will also be emphasized. Students who have not passed the end of course (EOC) SOL reading and writing tests will complete those tests or state-approved test alternatives as seniors in order to earn required verified graduation credits in English.

****1195**
Advanced Placement Literature and Composition/Dual Enrollment (1 credit)
Prerequisites:
English 11 to AP Lit & Comp/DE -- Complete English 11 with B or higher and passing score on EOC Reading Test
AP Lang & Comp/DE to AP Lit & Comp/DE -- Complete AP Lang & Comp/DE with C or higher
Instruction and assessment in this course are guided by the College Board's Advanced Placement Literature and Composition course curriculum as well as Virginia Western Community College's dual enrollment course requirements. This course focuses on literary themes, world literature, and writing composition. A fee is required for the AP exam. A fee is required for dual enrollment. Waivers or reductions may be available for these fees, based upon need. Prior to enrolling in DE, students must meet the Virginia Western Community College placement requirements. Successful completion of DE coursework may result in Western Virginia Community College credit. College credit may result from AP exam completion, dependent upon the student's exam score and individual college or university credit transfer policies.

ENGLISH FOR ENGLISH LEARNERS (EL)

5810
EL Success I (1 credit)
In this course, EL students who meet the criteria below will develop skills across the four domains of reading, writing, speaking, and listening, as well as the social language and cultural norms needed for school and social discourse. Students will learn strategies for navigating new core academic content in English, science, social studies, and mathematics. Students engage in explicit, scaffolded instruction to build academic vocabulary, language structures, and comprehension of grade-appropriate texts while strengthening listening and speaking skills for basic academic discourse. The course emphasizes foundational literacy, including letter recognition, phonics, decoding, reading comprehension strategies, and the exploration of a variety of fiction and nonfiction texts. Students also develop essential writing skills such as composing complete sentences, brief paragraphs, and short written responses.

Criteria: Students are identified as newcomers with little or no prior English proficiency and who are not SLIFE.

5820

EL Success II (1 credit)

In this course, EL students who meet the criteria below will learn strategies for navigating core academic content in English, science, social studies, and mathematics. Students engage in explicit, scaffolded instruction to build academic vocabulary, language structures, and comprehension of grade-appropriate texts while strengthening listening and speaking skills for classroom collaboration. The course emphasizes foundational literacy, including decoding, reading comprehension strategies, and the exploration of a variety of fiction and nonfiction texts. Students also develop essential writing skills such as composing complete sentences, crafting paragraphs, and producing short written responses.

Criteria: WIDA ACCESS composite of 1.0-2.9, WIDA Literacy score of 1.0-2.4. Not identified as Long Term EL or approaching

5830

EL Success III (1 credit)

In this course, EL students who meet the criteria below will build on foundational skills to navigate core academic content with greater independence. Students receive explicit, scaffolded instruction to expand academic vocabulary, refine language structures, and comprehend more complex grade-level texts. They will strengthen listening and speaking skills for extended discussions and collaborative tasks, while advancing their reading through the study of longer and more challenging fiction and nonfiction. Students also develop their writing by producing cohesive paragraphs, multi-paragraph responses, and basic essays, preparing them for the demands of Advanced ELD and mainstream coursework.

Criteria: WIDA ACCESS composite of 1.0-2.9 and a WIDA Literacy score of 2.5-3.4, and not identified as long-term EL or approaching, or WIDA ACCESS composite of 3.0-3.9 and a WIDA reading or writing score of 1.0-2.9, and not identified as Long Term EL or approaching

5831

EL Success IV (1 credit)

In this course, EL students who meet the criteria below will strengthen and refine their English proficiency as they work toward full literacy and academic independence. This course provides explicit, targeted instruction to deepen academic vocabulary, enhance complex language structures, and improve comprehension of rigorous grade-level texts. Students further advance their listening and speaking skills through more complex academic discourse. Students broaden their reading abilities through tasks that require analyzing, evaluating, and synthesizing information from a wide range of fiction and nonfiction. Writing instruction emphasizes crafting well-organized multi-paragraph responses, essays, and content-area writing that meet high school academic expectations. Through sustained practice in academic discourse, close reading, and structured writing, students develop the advanced literacy skills needed for success in mainstream courses and beyond.

5832

EL Literacy and Numeracy I (1 credit each)

This course for English learners identified as SLIFE, will provide a responsive learning environment that builds foundational literacy, sociolinguistic skills, academic habits, and background content knowledge.

Students will receive explicit, scaffolded instruction in early literacy skills—such as directionality, letter recognition, phonics, decoding, and basic comprehension—connected to a variety of grade-appropriate text and content. Students develop listening, speaking, reading, and writing skills while learning the social language and cultural norms needed for school interactions. Instruction also supports students in navigating core academic language of English language arts, math, science, and social studies. Students practice producing words, complete sentences, and short written responses with connected sentences as they build key academic vocabulary and language structures.

5833

EL Literacy and Numeracy II (1 credit)

This course for English learners who continue to meet SLIFE criteria after completing SLIFE ELD I, will provides targeted instruction that strengthens foundational literacy, sociolinguistic skills, academic habits, and background content knowledge. Students receive explicit, scaffolded instruction to improve decoding, apply comprehension strategies, and read a variety of grade-appropriate fiction and nonfiction texts. Students will expand academic vocabulary and language structures needed to understand and discuss core content in English language arts, math, science, and social studies. They will practice strategies for completing classroom tasks and participating in collaborative academic conversations with increasing complexity and rigor. Writing instruction focuses on producing complete sentences, connected sentences, organized paragraphs, and short written responses.

5834

EL Capstone (1 credit)

This course is for any level EL senior who has not met graduation requirements. The course will provide additional, targeted content and language intervention and support to meet those requirements.

WORLD LANGUAGES

5110

French I (1 credit)

Grades 9, 10, 11, 12
Introduces listening, speaking, reading, and writing skills in French. Stresses skills leading to communication.

5120
French II (1 credit)
Grades 9, 10, 11, 12
Prerequisite: French I with C or higher or teacher recommendation
Continues the development of the four basic skills. Develops proficiency with the language as the basis for all class work and independent practice.

5130
French III (1 credit)
Grades 9, 10, 11, 12
Prerequisite: French II with C or higher or teacher recommendation
Expands grammar and vocabulary to raise the level of proficiency required for self-expression both in oral and written forms. Strongly recommended for college-bound students.

5140
French IV (1 credit)
Grade 10, 11, 12
Prerequisite: French III with C or higher or teacher recommendation
Continues proficiency-based instruction. Emphasizes composition and Modern literature. Strongly recommended for college-bound students.

5150
French V (1 credit)
Grades 11, 12
Prerequisite: French IV with C or higher or teacher recommendation
Reviews grammar, expands cultural experiences, increases oral proficiency, and interprets works of art, literature, and drama.

****5170**
Advanced Placement French (1 credit)
Grades 11, 12
Prerequisite: French V with C or higher and recommendation of French IV teacher
Continues proficiency-based instruction. Emphasizes composition and introduces modern literature. Strongly recommended for college-bound students or for those who hope to be exempt from the college language requirement. **College credit may be given as a result of the test score on the required AP French exam taken in May.**

5310
Latin I (1 credit)
Grade 9, 10, 11, 12
Introduces the language through translation of simple selections. Supplements reading with the application of various skills including pronunciation and comprehension. Places emphasis on vocabulary.

5320
Latin II (1 credit)
Grades 9, 10, 11, 12
Prerequisite: Latin I with C or higher or teacher recommendation
Presents more advanced reading selections with the continued application of skills (pronunciation, comprehension, grammar, and vocabulary). Continues attention to the influence of the Latin language upon present-day culture.

5330
Latin III (1 credit)
Grade 9, 10, 11, 12
Prerequisite: Latin II with C or higher or teacher recommendation
Includes the readings and studies of various Roman writers. Reviews language forms as well as the cultural influences of the Romans. Strongly recommended for college-bound students.

5340
Latin IV (1 credit)
Grades 11, 12
Prerequisite: Latin III with C or higher or teacher recommendation
Continues readings and studies of various Roman writers. Studies the influence of Roman life, literature, and the Latin language upon present-day life.

5350
Latin V (1 credit)
Grades 11, 12
Prerequisite: Latin IV with C or higher or teacher recommendation
Presents advanced reading selections with continued application of skills (pronunciation, comprehension, grammar, and vocabulary).

5510
Spanish I (1 credit)
Grades 9, 10, 11, 12
Introduction to reading, writing, and speaking Spanish. Introduces grammar and listening skills, and various cultural aspects of Spanish-speaking countries.

5511
Spanish for Fluent Speakers I: Heritage Language Course (1 credit)
Grades 9, 10, 11, 12
This course is designed to meet the needs of students who have home backgrounds in Spanish, serving as a bridge into advanced modern language courses. Instruction in this course allows Spanish speakers to maintain strengths in their heritage language while developing new skills, particularly in academic vocabulary, reading, writing.

5520
Spanish II (1 credit)
Grades 9, 10, 11, 12
Prerequisite: Spanish I or Spanish I-A and Spanish I-B with C or higher or teacher recommendation
Continues the development of the aural-oral skills. Includes a review and expansion of the fundamental structures of the Spanish language with increased emphasis on writing and Hispanic culture.

5530
Spanish III (1 credit)
Grades 9, 10, 11, 12
Prerequisite: Spanish II with C or higher or teacher recommendation
Reviews grammatical structures and stresses self-expression through composition and conversation. Provides opportunities and experiences for the development of the ability to read Spanish with comprehension. Emphasizes the history, culture, and civilizations of Spanish-speaking people. Strongly recommended for college-bound students.

5540
Spanish IV (1 credit)
Grades 9, 10, 11, 12
Prerequisite: Spanish III with C or higher or teacher recommendation
Offers advanced instruction and experiences in grammar, composition, and conversation. Places emphasis on the literature and civilization of Spanish-speaking peoples. Prepares students for occupations in which conversational skills are important. Strongly recommended for college-bound students or for those who hope to be exempted from the college language requirement.

5550
Spanish V (1 credit)
Grades 10, 11, 12
Prerequisite: Spanish IV with C or higher or teacher recommendation
Focuses on conversation and utilizes authentic materials used at a native level. Requires critical thinking, writing, and discussion. Includes current topics from all Spanish-speaking countries.

****5570**
Advanced Placement Spanish Language (1 credit)
Grades 11, 12
Prerequisite: Spanish V with C or higher and recommendation by Spanish IV teacher
Refines grammar skills. Refines speaking, reading, writing, and listening skills. **College credit may be given as a result of the test score on the required AP Spanish exam.**

****5580**
Advanced Placement Spanish Literature (1 credit)
Grade 12
Prerequisite: Advanced Placement Spanish Language with C or higher or teacher recommendation Continued study of Spanish with emphasis on Spanish Literature. **College credit may be given as a result of the test score on the required AP Spanish exam.**

****5999**
Spanish for Career Applications (1 credit/weighted +.5)
Grades 10, 11, 12
Prerequisite: Level 3 or equivalency test
The course is intended for students who have completed Spanish 3 and are interested in exploring applications of Spanish in a career cluster. Students will explore the cross disciplinary focus, preparing them to exit high school with communicative competence in business, law enforcement, health science, and government /public administration. This course will improve students' Spanish proficiency as they deepen their understanding of more complex syntax in business writing and sharpen their communicative skills; will foster cultural competency for today's multicultural world; and will enhance their ability to apply their language skills in specific fields of study. Classes will be conducted entirely in Spanish.

Credits in English as a Second Language (ESL)* Credit for grades 9-12 English as a Second Language (ESL) courses may be counted for world language credit using the following course
codes:

*Credit for a single ESL course may be given in the area of world language or electives.

Credits for Demonstrated Proficiency - Credits may be granted for demonstrated proficiency in a language other than English to students who achieve a minimum score on an approved assessment using the following score to credit ratios:

Course	VA Codes	SCED Codes
ESL I	5710	01008/I
ESL II	5720	01008/II
ESL III	5730	01008/III
ESL IV	5731	01008/IV

Qualifying Score	Number of Credits
Novice High	One (1) credit
Intermediate Low	Two (2) credits
Intermediate Mid	Three (3) credits

HEALTH AND PHYSICAL EDUCATION

Two units in Health and Physical Education are needed to fulfill graduation requirements. The Health and Physical Education Department offers a program that is designed to stimulate mental, emotional, social and physical growth and development. Physical Education is concerned with the growth of the entire person through the medium of active participation. The Health curriculum is designed to stimulate

an interest in healthful behavior and living through emphasis on daily practice, habits, and attitudes.

First-time ninth grade students in the 2016-2017 school year and beyond are required to receive training in emergency first aid, CPR, and the use of an AED, including hands-on practice of the skills necessary to perform CPR, in order to earn a Standard or Advanced Studies Diploma.

7320
Health Education I (1/2 credit)
Emphasizes an application of health knowledge. Provides instruction in fitness, first aid, CPR, disease prevention, family life education, internet safety, substance abuse and prevention.

7425
Health Education II (1/2 credit)
Prerequisite: Health I
Emphasizes an application of health knowledge. Instruction provided in consumer health, mental health, family life education, internet safety, substance abuse and prevention. Driver's Education will be completed during the first portion of the face-to-face course.

7310
Physical Education I (1/2 credit)
Teaches the skills, rules, and regulations necessary to participate in the games of flag football, basketball, floor hockey, lacrosse, volleyball, soccer and softball. Develops physical fitness through aerobic activities, fitness activities, and dance activities. Prepares the student to evaluate personal fitness levels, establish goals and develop a personal fitness plan.

7410
Physical Education II (1/2 credit)
Teaches the skills, rules, and regulations necessary to participate in the activities of golf, archery, tennis, badminton, pickleball, table tennis and the recreational games of bowling, shuffleboard, and horseshoes. Develops physical fitness through aerobic activities, fitness activities, and dance activities. Prepares the student to evaluate personal fitness levels, establish goals, and develop a personal fitness plan.

7300-1
Health and Physical Education I (1 credit)
Physical Education and Classroom Health Education are taught as a combined year-long course. In addition to Physical Education activities, classroom units are taught in first aid, physical fitness, personal and family survival, drug and alcohol awareness, disease prevention and control, consumer health, environmental health and mental health. Family Life education is included in the course. Emergency First Aid, CPR and AED training with hands-on practice of the skills necessary to perform cardiopulmonary resuscitation will be required as part of the Health I curriculum for graduation.

7300-2
Health and Physical Education II (1 credit)
Prerequisite: Health & Physical Education I
Physical Education and Health Education are taught as a combined year-long course. In addition to Physical Education activities, the classroom phase of Driver Education is included in the classroom instruction. Students must complete and pass the 36 hours of classroom to receive their DEC-1 card. This is required before the student can participate in a Behind the Wheel program for licensure. Also taught in the classroom are lessons on drugs and alcohol, mental and social-emotional well-being. Family Life education is included in the course.

NOTE: Advanced Physical Education courses do NOT count towards physical education graduation requirements.

7640
Advanced Physical Education- Strength and Fitness I (1 credit)
Provides students with the basic knowledge of strength development and the variety of training regimens used for strength and endurance muscle development. Students are required to implement a personal strength and fitness routine and maintain a strength and nutrition log.

7650
Advanced Physical Education- Strength and Fitness II (1 credit)
Prerequisite: Must have successfully completed Strength and Fitness I.
Teaches students to design and modify personal fitness plans specifically designed for strength and fitness conditioning. Examines the structure, function, and physiology of the skeletal and muscular systems and how they relate to strength conditioning. Analyzes the role of proper nutrition and the development of strength and overall fitness levels. Explores changes in muscular development in relationship to correct practices of fitness and strength conditioning. Explores prevention of sports related injuries. Students are required to maintain a personal fitness log.

7660
Advanced Physical Education- Strength and Fitness III (1 credit)
Prerequisite: Must have successfully completed Strength and Fitness II.
Increased personalized fitness goals for increased lifetime fitness. Builds upon the student's personal fitness plan designed for strength and fitness conditioning. Students will learn, in greater depth, the structure, function, and physiology of the skeletal and muscular systems and how they relate to strength conditioning. Proper nutrition and the development of strength and overall fitness levels will

be continued. Continued development of proper form and technique for strength and conditioning exercises. Students are required to maintain a personal fitness log. Works to improve the student's skill, knowledge and ability in strength and conditioning.

7670

Advanced Physical Education- Strength and Fitness IV (1 credit)
Prerequisite: Must have successfully completed Strength and Fitness III.
Students will design and modify personal fitness plans specifically designed for strength and fitness conditioning. Examines the structure, function, and physiology of the skeletal and muscular systems and how they relate to strength conditioning. Analyzes the role of proper nutrition and the development of strength and overall fitness levels. Explores changes in muscular development in relationship to correct practices of fitness and strength conditioning. Students will increase ability, skill and knowledge in the areas of strength and conditioning. Students are required to maintain a personal fitness log.

MATHEMATICS

3130

Algebra I (1 credit)
Grades 9, 10, 11, 12
The study of Algebra I assists students in generalizing patterns and representing relevant, contextual situations with algebraic models. The *Standards* require students to use algebra as a tool for representing and solving a variety of contextual problems. Tables and graphs will be used to interpret algebraic expressions, equations, and inequalities and to analyze behaviors of functions. These Standards include a transformational approach to graphing functions and writing equations when given the graph of the equation. Transformational graphing builds a strong connection between algebraic and graphic representations of functions. Technology tools will be used to assist in teaching and learning.

3131

Algebra I Part I (1 credit)
Grade 9
Algebra I Part I is the first course of a two-course algebra sequence covering the same topics as Algebra I. In this two-course sequence, students have additional time to develop the algebraic skills needed to succeed in higher mathematics. The course focuses on the development of problem-solving skills and the acquisition of mathematical vocabulary and symbols. The active engagement of students along with the use of manipulatives and technology will allow students to develop an understanding of the mathematical principles they are learning. This sequence of courses is for students who have been identified as needing additional support in algebraic and mathematical concepts. Students will take the Algebra I Standards of Learning test at the end of Algebra I Part II. This course may be offered as a double-block semester-long course.

3132

Algebra I Part II (1 credit)
Grade 10
Prerequisite: Algebra I Part I
Algebra I Part II is the second part of a two-course algebra sequence covering the same topics as Algebra I. In this two-course sequence, students have additional time to develop the algebraic skills needed to succeed in higher mathematics. The course focuses on the development of problem-solving skills and the acquisition of mathematical vocabulary and symbols. The active engagement of students along with the use of manipulatives and technology will allow students to develop an understanding of the mathematical principles they are learning. This course may be offered as a double-block semester-long course.

3134

Algebra, Functions, and Data Analysis (AFDA) (1 credit)
Grades 9, 10, 11, 12
Prerequisite: Algebra I or Geometry
Algebra, Functions, and Data Analysis is designed for students who have successfully completed the standards for Algebra I. Within the context of mathematical modeling and data analysis, students will study functions and their behaviors, systems of inequalities, probability, and experimental design and implementation. Data will be generated by practical applications arising from science, business and finance. Students will solve problems that require the formulation of linear, quadratic, exponential, or logarithmic equations or a system of equations. Technology is used extensively.

3143

Geometry (1 credit)
Prerequisite: Algebra I or Algebra I Part II
The course includes an emphasis on developing reasoning skills through the exploration of geometric relationships including properties of geometric figures, trigonometric relationships, and mathematical proofs. In this course, students use various types of reasoning, justification, and methods of direct and indirect proof and interpret and determine the validity of conditional statements. The *Standards* emphasize two- and three-dimensional reasoning skills, coordinate and transformational geometry, and the use of geometric models to solve problems. Technology tools and dynamic geometry applications will be used to assist in teaching and learning.

3144

Geometry Part I (1 credit)

Prerequisite: Algebra I or Algebra I Part II
Geometry Part I is the first part of a two-course sequence covering the same topics as Geometry. In this two-course sequence students have additional time to develop the algebraic and geometric skills needed to succeed in higher mathematics. The course focuses on the development of problem-solving skills and the acquisition of mathematical vocabulary and symbols. The active engagement of students along with use of manipulatives and technology will allow students to develop an understanding of the mathematical principles they are learning. This sequence of courses is for students who have been identified as needing additional support in developing skills in geometric and mathematical concepts. This course may be offered as a double-block semester course.

3145

Geometry Part II (1 credit)
Prerequisite: Geometry Part I
Geometry Part II is the second part of a two-course sequence covering the same topics as Geometry. In this two-course sequence, students have additional time to develop the algebraic and geometric skills needed to succeed in higher mathematics. The course focuses on the development of problem-solving skills and the acquisition of mathematical vocabulary and symbols. The active engagement of students along with use of manipulatives and technology will allow students to develop an understanding of the mathematical principles they are learning. This course may be offered as a double-block semester course. Students will take the Geometry Standards of Learning test.

3135

Algebra II (1 credit)
Prerequisite: Algebra I and Geometry or Geometry Part II
This course includes a thorough treatment of advanced algebraic concepts through the study of functions, equations, inequalities, systems of equations, polynomials, rational and radical equations, complex numbers, and curves of best fit. Emphasis will be placed on contextual applications and modeling throughout the course of study. Oral and written communication concerning the language of algebra, logic of procedures, and interpretation of results should also permeate the course. The *Standards* include a transformational approach to graphing functions using translation, reflection, dilation, and rotation to generate a "family of functions" from a given "parent" function to build a strong connection between algebraic and graphic representations of functions. Students will vary the coefficients and constants of an equation, observe the changes in the graph of the equation, and make generalizations that can be applied to many graphs. Technology tools will be used to assist in teaching and learning.

****3137**

Algebra II/Trigonometry (1 credit)
Prerequisite: Algebra I and Geometry and department approval
This course includes a thorough treatment of advanced algebraic concepts through the study of functions, equations, inequalities, systems of equations, polynomials, rational and radical equations, complex numbers, and curves of best fit, as outlined in the Algebra II course. In addition, students will explore trigonometric relationships in right triangles and circular functions. Technology tools will be used to assist in teaching and learning.

3160

Functions, Statistics, and Trigonometry (1 credit)
Prerequisite: Algebra II or Algebra II/Trigonometry
Students examine a variety of mathematical topics including data analysis, functions, conditional probability, discrete random variables, binomial and normal distributions, trigonometry, and sequences and series. Connections between various mathematical representations and topics, modeling and applications, and communications are emphasized. Technology is used extensively.

****3162**

PreCalculus (1 credit)
Prerequisite: Algebra II/Trigonometry;
Functions, Statistics and Trigonometry; or
Algebra II (with department recommendation)
Pre-Calculus integrates and extends topics studied in previous mathematics courses. Introductory calculus topics, including limits and continuity, are presented. Technology is used. **Course may also be taken for dual enrollment credit. Students must meet the Virginia Western Community College placement requirements to be eligible for Dual Enrollment.**

****3170**

AP Precalculus (1 credit)
Prerequisite: Algebra II/Trigonometry;
Functions, Statistics and Trigonometry; or
Algebra II (with department recommendation)
AP Precalculus is an advanced course designed to prepare students for college-level mathematics and build a strong foundation for calculus. This course delves into a comprehensive study of functions, trigonometry, algebraic concepts, and analytical geometry, providing students with the necessary skills to excel in future mathematical endeavors.

****3177**

Advanced Placement Calculus AB (1 credit)
Prerequisite: PreCalculus and meeting Virginia Placement Test scores required for Dual Enrollment This course is intended for students who have a thorough knowledge of algebra, geometry, trigonometry, and analytic geometry.

Topics taught include elementary functions, limits, differential and integral calculus. Technology is used. This course meets the requirements of MTH-175 at Virginia Western Community College. **Colleges may award credit as a result of the AP exam score.**

****3179**

Advanced Placement Calculus BC (1 credit)
Prerequisite: AP Calculus AB
This course is for students who have a thorough knowledge of algebra, geometry, trigonometry, and analytic geometry. All topics offered in AP Calculus AB, plus additional topics are included. The use of technology is required. **Colleges may award credit as a result of the AP exam score.**

****3185**

Advanced Placement Computer Science A (1 credit)
Prerequisite: Algebra II
AP Computer Science A is both a college-prep course for potential computer science majors and a foundation course for students planning to study in other technical fields such as engineering, physics, chemistry, and geology. The course emphasizes programming methodology, procedural abstraction, and in-depth study of algorithms, data structures, and data abstractions, as well as detailed examination of a large case study program. Instruction includes preparation for the AP Computer Science A examination. **Colleges may award credit as a result of the AP exam score.**

****3192**

Advanced Placement Statistics (1 credit)
Grades 10, 11, 12
Prerequisite: Functions, Statistics and Trigonometry; Pre-calculus; Algebra II/Trigonometry; or Algebra II (seniors only with department recommendation)
This course is an in-depth study in the field of statistics. Students will explore and describe data, design experiments, and use techniques of inference for drawing conclusions and making decisions. Technology will be used extensively. The ability to read in the field and write justifications will be developed in this course. **Colleges may award credit as a result of the AP exam score.**

3205

Algebra Skill Development (1 credit)
Grades 9, 10, 11, 12
Algebra Skill Development provides differentiated instruction in Algebra concepts to strengthen students' algebraic skills to prepare them to take the Algebra I SQL test and reinforce skills necessary for success in higher level mathematics courses. Graphing calculators will be used extensively. This is an elective course.

3206

Geometry Skill Development (1 credit)
Grades 9, 10, 11, 12
Geometry Skill Development provides differentiated instruction in Geometry concepts to strengthen students' algebraic skills to prepare them to take the Geometry SQL test and reinforce skills necessary for success in higher level mathematics courses. Graphing calculators will be used extensively. This is an elective course.

2911

Data Science (1 credit)
Prerequisite: Algebra II
Through the use of open-source technology tools, students will identify and explore problems that involve the use of relational database concepts and data-intensive computing to find solutions and make generalizations. Students will engage in a data science problem-solving structure to interact with large data sets as a means to formulate problems, collect and clean data, visualize data, model using data, and communicate effectively about data formulated solutions.

SCIENCE

3003

Environmental Science (1 credit)
Grades: 9, 10, 11, 12
Provides students with the skills and content necessary for them to look at current and future environmental issues, both natural and man-made, through a critical lens and to provide a platform to make informed decisions. Provides foundational content that would prepare students to enter into either Earth Science I or Biology I.

4210

Earth Science I (1 credit)
Grades 9, 10, 11, 12
Presents a connection to the study of the Earth's composition, structure, processes, and history; its atmosphere, fresh water, and oceans; and its environment in space. Technology is used to collect, analyze, and report data. Interpretation of maps, charts, and profiles are emphasized. Emphasizes the impact humans have on the environment. Plate tectonics, the rock cycle, weather and climate, and the solar system and the universe are major topics of study. Scientific inquiry utilizes science skills to solve problems.

4240

Earth Science II: Geology (1 credit)
Grades 10, 11, 12
Prerequisite: Earth Science I
Students will study plate tectonics, maps, karst topography, rocks, and minerals. Emphasis will be placed on the geology within this region through field experiences and GPS/GIS technology.

4260

Earth Science II: Astronomy (1 credit)
Grades 9, 10, 11, 12

Prerequisites: Earth Science I
Explores objects in space, how they are formed and their connection to the universe. Traces the history, impact, and advantages of space exploration. Emphasizes the use of scientific investigation and research while solving problems. Covers the impacts of the universe on past and present cultures. After school sky watches are optional.

****4270**
Advanced Placement Environmental Science (1 credit)
Grades 10, 11, 12
Prerequisites: Biology and either completed or enrolled in Chemistry I
Provides students with scientific principles, concepts, and methodologies necessary to understanding the interrelationships of the natural world. Identifies and analyzes natural and man-made environmental problems; evaluates associated risks and examines alternative solutions for these problems. Perspectives include geological, biological, environmental, chemical, and geographic points of view. **Colleges may award credit as a result of the AP exam score.**

4310-1
Biology I (1 credit)
Grades 9, 10, 11, 12
Prerequisite: Earth Science I or Environmental Science
Provides students with a detailed understanding of living systems. Emphasizes the investigating of biochemical processes, cellular organization, mechanisms of inheritance, dynamic relationships among organisms, and the change in organisms over time. Provides opportunities for students to do science research projects.

****4310-2**
Advanced Biology I (1 credit)
Grades 9, 10, 11, 12
Prerequisite: Earth Science I
Provides a broad and rigorous survey of biological topics, including cell and molecular biology, heredity, evolutionary change, interactions between organisms, and classification. Strong focus is placed on preparation for future work in AP science and college courses by stressing an analytical mindset and writing on scientific topics. Laboratory experiences and experimental design are featured in this class along with a science fair project. Topics will be discussed from an application perspective in addition to a full study of the basic science.

4330
Biology II: Human Anatomy and Physiology (1 credit)
Grades 10, 11, 12
Prerequisite: Biology I
Examines the structures and functions of the human body from the cellular level through the entire organism. Uses experimentation and multi-media instruction to enhance understanding of the human body. Explores causes, prevention, and symptoms of human diseases.

4340
Biology II: Ecology (1 credit)
Grades 10, 11, 12
Prerequisite: Biology I
Provides a balanced understanding of how organisms interact with living and non-living parts of the environment. Emphasizes development of critical thinking and decision-making skills. Focuses on investigative activities in class, in field activities, and through use of technology.

****4370**
Advanced Placement Biology (Dual Enrollment) (1 credit)
Grades 10, 11, 12
Prerequisite: Biology I and either completed or enrolled in Chemistry I
Offers rigorous study of cellular and molecular biology, ecology, evolution, animal and plant anatomy and physiology, and animal behavior. Extensive laboratory experience emphasizes the development of experimental design as well as the collection, analysis, and interpretation of data. **Colleges may award credit as a result of the AP exam score. Students must meet the Virginia Western Community College placement requirements to be eligible for Dual Enrollment.**

4410-1
Chemistry I (1 credit)
Grades 10, 11, 12
Prerequisites: Earth Science I, Biology I, or Environmental Science
This course is designed to introduce the student to the basic theory of chemistry. Topics include nomenclature, dimensional analysis, thermodynamics, reactions, stoichiometry, periodic trends, atomic theory, molar concept, gas laws, and basic organic chemistry. Lab work and mathematical manipulation are an integral part of the course.

****4410-2**
Advanced Chemistry I (1 credit)
Grades 10, 11, 12
Prerequisite: Earth Science I, Biology I
Provides a broad and rigorous survey of chemistry topics, including nomenclature, dimensional analysis, thermodynamics, reactions, stoichiometry, periodic trends, atomic theory, molar concept, gas laws, and basic organic chemistry. Strong focus is placed on preparation for future work in AP science and college courses by stressing an analytical mindset and writing on scientific topics. Laboratory experiences and experimental design are featured in this class along with a science fair project.

****4470**
Advanced Placement Chemistry (1 credit)
Grades 11, 12
Prerequisites: Chemistry I and Algebra II

College level course which builds on a student's knowledge of chemistry. Topics include in-depth studies of atomic theory, states of matter, and chemical reactions, electrochemistry, kinetics, thermodynamics and equilibrium. Students will participate in extensive laboratory work, including methods of professional techniques, as well as an introduction to the use of technology and the science laboratory. Participation in tutoring and/or review sessions during non-school time will be expected. **Colleges may award credit as a result of the AP exam score.**

4510
Physics
Grades 11, 12
Prerequisites: Algebra I and Geometry
Physics emphasizes a more complex understanding of experimentation, the analysis of data, and the use of reasoning and logic to evaluate evidence. Conceptual understanding of physical systems is a primary focus. Students build on basic physical science principles. Key areas covered include force and motion, kinetic molecular theory, energy transformations, wave phenomena and the electromagnetic spectrum, light, electricity, magnetic fields, and non-Newtonian physics. The course stresses the practical application of physics in other areas of science and technology.

****4570**
Advanced Placement Physics 1
Grades 10, 11, 12
Prerequisites: Algebra II or Functions, Statistics, and Trigonometry. Completion of general physics or an engineering class and completion of pre-calculus recommended.
Requires a grasp of algebra and basic trigonometry. Explores in depth Newtonian mechanics including the concepts of motion (including circular), forces, torque, work, energy, momentum, angular momentum, power and waves. Presents electric circuits (as a function of conversation of energy). **Colleges may award credit as a result of the AP exam score.**

****4571 Advanced Placement Physics 2**
Grades 11, 12
Prerequisites: Algebra II and AP Physics 1
Requires a firm grasp of algebra and basic trigonometry. Explores thermodynamics, ideal gasses, electrostatics, electric fields, electric circuits, magnetism, waves, optics, and nuclear physics topics. Uses probability models to estimate location of particles of waves or in space. **Colleges may award credit as a result of the AP exam score.**

SOCIAL SCIENCES

2210
World Geography (1 credit)
Grades 9, 10, 11, 12 (WF only as recommended by teacher or case manager)
In this course, students will focus on the study of the world's peoples, places, and environments, with an emphasis on world regions. Using geographic resources, students will employ inquiry, research, and technology skills to ask and answer geographic questions. In particular, students will apply geographic concepts and skills to their daily lives. Students will take the World Geography SOL assessment. Students will earn one high school credit for this course.

****2212**
Advanced Placement Human Geography (1 credit)
Grades 9, 10, 11, 12
This course introduces students to the systematic study patterns and processes that have shaped human understanding, human use, and alteration of the earth's surface. **College credit may be earned as a result of the test score on the required AP Human Geography exam taken in May.**

2215
World History I (1 credit)
Grade 9
Students will be provided with a basic overview of world history from prehistoric times to 1500 C.E. Students will analyze various regions of the world in terms of political, economic, religious, technological, and social global systems.

2375
Advanced World History I (1 credit)
Grade 9
This course provides students with a challenging and rigorous study of world history from prehistoric times to 1500 C.E. This course prepares students who plan to take an AP level course in their sophomore or junior year.

2216
World History II (1 credit)
Grade 10
Students will be provided with a basic overview of world history from 1500 C.E. to the present. Students study the important systems of the world – historical, political, economic, religious, technological, and social – and students will compare and contrast regions of the world in terms of those systems.

****2380**
Advanced Placement World History (Dual Enrollment) (1 credit)
Grade 10
Recommendation: Passed the World History I or World Geography SOL test.
This course allows students to develop a greater understanding of the evolution of global processes and contacts including interactions over time. The course highlights the nature of change in international frameworks and their causes and consequences, as well

as comparisons among major societies. **Students must meet the Virginia Western Community College placement requirements to be eligible for Dual Enrollment.**

****2319**

Advanced Placement United States History (Dual Enrollment) (1 credit)
Grade 11
Recommendation: Passed the World History I or World Geography SOL test and the World History II SOL test.
Students will be provided with an in-depth knowledge of American culture through a chronological survey of major issues, movements, people, and events from the Age of Exploration to the present. Students will read and interpret important documents from U.S. History and examine major trends in the nation's history. **Students must meet the Virginia Western Community College placement requirements to be eligible for Dual Enrollment.**

2360

Virginia and U.S. History (1 credit)
Grade 11
This course covers the historical development of American ideals and institutions from the Age of Exploration to the present. Students will be provided with a basic knowledge of American culture through a chronological survey of major issues, movements, people, and events. Students will read and interpret important documents from U.S. History and examine major trends in the nation's history.

2371, 2372

African American Culture I & II (1 credit each)
Grades 10, 11, 12
This course allows students to broaden their knowledge and understanding of African American culture while tracing the history and culture of African Americans from African roots to modern America. Students will discuss current issues facing African Americans and the state of race relations in the United States.

04908

African American History (1 Credit)
Grades 10, 11, 12
This course will survey African American history from precolonial Africa through the present. Students will be introduced to key concepts in African American history from early beginnings in indigenous Africa through the transatlantic slave trade, the Civil War, Emancipation, Reconstruction, the Civil Rights era and into the present. The course, offered in a variety of learning models, will give students an opportunity to explore social events and processes, individuals and agency, documents, and institutions; and analyze past and present positions for future implications for African Americans. This course does require students to complete a Capstone project. Students will pursue independent research relative to the content on a question or problem of their choice and produce a learning object that reflects a deeper understanding of African American history.

****04112**

Advanced Placement African American Studies (1 credit)
Grades 11, 12
Following the College Board's suggested curriculum designed to parallel college-level African American Studies courses, students in AP African American Studies courses use authentic and varied sources to explore diverse African American experiences. Students study topics that span early African kingdoms to the contemporary challenges and achievements of the African American communities in the United States.

****2399**

Advanced Placement European History (Dual Enrollment) (1 credit)
Grades 10, 11, 12
This course allows students to examine European history from the fifteenth century through the present. Students will study the cultural, social, economic, political, and artistic forces that have shaped and continue to shape Western Europe since the Renaissance. **Students must meet the Virginia Western Community College placement requirements to be eligible for Dual Enrollment.**

2440

Virginia and U.S. Government (1 credit)
Grade 12
This course examines the origin and structure of the American and Virginia political systems. Students will develop an understanding of the U.S. and Virginia constitutions, foreign and domestic policies, and economics.

****2445**

Advanced Placement Government and Politics: U.S. (Dual Enrollment) (1 credit)
Grade 12
Recommendation: Passed the World History I or World Geography SOL test, World History II SOL test and the Virginia and US History SOL test.
This course examines the political culture and history of the United States. College credit may be earned as a result of the test score on the required AP Government exam. The course provides an in-depth study of the development of the American government system with an analysis of the foundation of American democracy and its application within the political system. **Students must meet the Virginia Western Community College placement requirements to be eligible for Dual Enrollment.**

****2802**

Advanced Placement Microeconomics (1/2 credit)
Grades 10, 11, 12
Prerequisite: Successful completion of Algebra II

The purpose of an AP course in Microeconomics is to give students a thorough understanding of the principles of economics that apply to the functions of individual decision makers, both consumers and producers, within the economic system. It places primary emphasis on the nature and functions of product markets, and includes the study of factor markets and of the role of government in promoting greater efficiency and equity in the economy. **Students must also be enrolled in Macroeconomics.**

****2803**

Advanced Placement Macroeconomics (1/2 credit)
Grades 10, 11, 12
Prerequisite: Successful completion of Algebra II
The purpose of an AP course in macroeconomics is to give students a thorough understanding of the principles of economics that apply to an economic system as a whole. Such a course places particular emphasis on the study of national income and price-level determination, and also develops students' familiarity with economic performance measures, the financial sector, stabilization policies, economic growth, and international economics. **Students must also be enrolled in Microeconomics.**

2900

General Psychology (1 credit)
Grades 10, 11, 12
This course focuses on the development of scientific attitudes and skills, including critical thinking, problem solving, and an appreciation for scientific methodology with a multicultural and global perspective that recognizes how diversity is important to understanding psychology. Students will form an appreciation that psychological science and knowledge can be useful in addressing a wide array of issues, from individual to global levels.

****2902**

Advanced Placement Psychology (1 credit)
Grades 11, 12
This course is designed to examine research methods, and to analyze and apply basic psychological data and principles. Students will further develop scientific attitudes and skills, including critical thinking, problem solving, and an appreciation for scientific methodology with a multicultural and global perspective that recognizes how diversity is important to understanding psychology.

9001, 9002, 9003, 9004

African American Male Studies I, II, III, IV (1 credit each)
Grades 9, 10, 11, 12
Students will be provided instruction in public speaking, African American history (including local history of the Roanoke Valley), African American literature, consumer awareness, personal finance, civic and legal issues from the perspective of the Youth and Law curriculum, career exploration and future planning. In addition, students will be provided with opportunities to shadow and be mentored by members of the community, to attend cultural events, to visit college campuses and to participate in community service projects. Students are selected for this course through an application process.

2381

World Religions (1 credit)
Grades 10, 11, 12
In this course, students develop the background knowledge and habits of mind necessary for an appreciation of the basic beliefs and practices of the world's religions. Importance is placed on historical origins as well as current beliefs. The course is designed to promote an inquiring, critical, and systematic approach to the study of religion; provide students with an appreciation of the issues surrounding religious beliefs, controversies, and movements in the world today; enable students to understand how religions affect peoples' lives and develop an awareness of the significance of the adherents of each of the religions studied.

SPECIAL EDUCATION

Grades 9, 10, 11, 12
Placement in a special education program depends upon the results of diagnostic testing, evaluation and eligibility. Courses are scheduled on an individual basis by a special education case manager and a school counselor according to the student's Individualized Education Program (IEP). In addition to classes taught by special education instructors, the student may be scheduled into courses in the general education program. Through the cooperation of the special education instructional staff, support personnel, and the general school staff, students will be helped to achieve goals established on the student's IEP.

0521, 0522, 0523

School-to-Work Adjustment Program (SWAP) I, II, III (1/2 credit)
The SWAP program is designed to give students the opportunity to earn school credit for part or full-time competitive employment. To be eligible for enrollment, the IEP team, including the Special Education Coordinator or IEP Case manager, must find the program appropriate for the student and write academic and/or functional goals to support the decision. This program is a graded course.

AIR FORCE JUNIOR ROTC

In each course, students must participate in at least one uniform day per week. When in uniform, students will comply with personal appearance and grooming standards. During each year of the Air Force Junior ROTC program, students are afforded the opportunity to participate in numerous co-curricular, extracurricular, and curriculum-in-action activities. Some of these activities include local

community service events, patriotic ceremonies, competitive drill teams, drill meets, parades, summer leadership school and local/regional field trips.

R7913
Aerospace Science I (1 credit)
Grades 9, 10, 11, 12
This course acquaints the student with the historical development of flight and the role of the military in history. Students learn basic drill, proper uniform wear, and customs and courtesies. Leadership and time management skills will be introduced. The cadets will also be involved in a wellness program which incorporates physical activities that promote a healthy, active lifestyle.

R7916
Aerospace Science II (1 credit)
Grades 10, 11, 12
Prerequisite: Aerospace Science I
This course acquaints the student with the aerospace environment, the human requirement of flight, and the principles of aircraft flight and air navigation. Communication skills are stressed. Students also hold entry-level leadership positions. Physical activities that promote a healthy, active lifestyle continue to be an integral part of the program. **ASVAB is offered as an approved Industry certification.**

R7918
Aerospace Science III (1 credit)
Grades 11, 12
Prerequisite: Aerospace Science II
This course examines our Earth, the Moon and the planets, the latest advances in space technology, and the continuing challenges of space and manned space flight. Students receive assistance in deciding which path to take after high school. Focus on college admission, vocational schools, job search skills, financial planning, life skills, citizen responsibilities, and federal employment. Students hold mid-level corps leadership positions. Physical activities that promote a healthy, active lifestyle will continue to be an integral part of the program. **ASVAB is offered as an approved Industry certification.**

R7919
Aerospace Science IV (1 credit)
Grade 12
Prerequisite: Aerospace Science III and selection by senior aerospace science instructor (SASI).
Assist the ASI/SASI in the instruction of Aerospace Science I students and management of the cadet corps.
Students hold highest corps leadership positions. Physical activities that promote a healthy, active lifestyle will continue to be an integral part of the program. **ASVAB is offered as an approved Industry certification.**

FINE ARTS

ART: VISUAL AND GRAPHIC

9120
Art I (1 credit)
Grades 9, 10, 11, 12
Includes a general survey of art history from prehistoric to present times. A wide variety of media are explored through hands-on introductory activities in drawing, painting and sculpture. This course will focus on the elements of art and incorporates art history into the curriculum.

9130
Art II (1 credit)
Prerequisite: Art I
Emphasizes student work with a wide variety of media and subject matter to record, visualize, and symbolize such topics as the human figure, landscape, still life, urban environment, and imaginary images. Allows the development of drawing abilities and the understanding of design problems to encourage the use of disciplined selective visual and sensory perception.

9140
Art III (1 credit)
Prerequisite: Art I, and Art II
Provides students with a wide variety of materials including tempera, watercolor, oil, and acrylics. Relates the application of basic drawing, design principles, and composition to the skills and techniques of each medium. Includes subject matter such as still-life, landscapes, figure drawings, non-objective compositions, etc. Introduces printmaking as an art form using various printing techniques and application.

9145
Art IV (1 credit)
Prerequisite: Three years of art classes and Art III teacher recommendation
Provides an advanced study in art for students who have demonstrated interest and ability in visual art. Emphasizes quality work, originality, and continued art explorations. Develops a portfolio suitable for college entry.

9150 (1 credit)
Advanced Placement Studio Art
Grades 11, 12
Prerequisite: Three years of art classes and Art III teacher recommendation
AP Art is designed for students seriously interested in the practical experience of art. AP Studio Art is not based on a written exam; instead, students submit portfolios for evaluation at the end of the school year. The AP Studio Art Program consists of three portfolios – 2-D Designs, 3-D

Design, and Drawing – corresponding to common college foundation courses. **College credit may be awarded as a result of the score on the required AP Studio Art Portfolio.**

9175

Ceramics/Clay (1 credit)
Grades 10, 11, 12
Studies characteristics of clay with emphasis on hand-building methods and experimentation with glazing techniques. Explores a variety of finishing techniques. Exposes students to contemporary ceramics, craftspeople, and their work. Allows students to experiment with wheel throwing as a ceramic technique.

9176

Advanced Ceramics (1 credit)
Grades 11, 12
Develops skills learned in Ceramics, with a concentration on wheel throwing and surface decoration. Emphasizes design principles through production in clay and incorporating mixed media.

DANCE

NOTE: Dance classes can be used for Lifetime Activity credit (PE) or Fine Arts credit. (May not be used at the same time)

9321

Dance I (1 credit)
Grades 9, 10, 11, 12
Prerequisite: None
This course is designed for beginning level dance students. Emphasis is placed on physical and creative skill development. Students will study a variety of dance forms and learn about career opportunities. Provides performance opportunities. In- school and some after-school participation is required to receive credit for this course.

9322

Dance II (1 credit)
Grade: 10, 11, 12
Prerequisite: Dance I or Instructor Permission (Students with outside dance experience may be permitted to enroll with instructor permission)
This course is designed for intermediate level dance students. Students will expand on skills learned in Dance I. Students develop additional performance and production skills while increasing their range of physical skills through disciplined study of dance technique. Students develop communicative, interpretive, and evaluative skills by responding to and analyzing a variety of dance experiences. In-school and some after-school participation is required to receive credit for this course.

9325

Dance III (1 credit)
Grades 11, 12
Prerequisite: Dance I, Dance II, or Instructor Permission (Students with outside dance experience may be permitted to enroll with instructor permission)
This course is designed for the advanced dance student. Students will extend technical and performance skills, apply choreographic concepts, and understand dance as an art form through self-evaluation and reflective-thinking processes. Communicative, interpretive, and evaluative skills are refined as students analyze ways dance changes in response to cultural trends and contemporary media. Performance is required. In-school and some after-school participation is required to receive credit for this course.

9311, 9312, 9315, 9319

Dance Company I, II, III, IV (1 credit each)
Grades 9, 10, 11, 12
Prerequisite: Audition and Instructor Permission (Students with outside dance experience may be permitted to enroll with instructor permission)
This is the main performing ensemble in the dance program. Students will develop independent thinking, personal responsibility, and leadership while continuing to refine dance skills in performance and choreography. Students synthesize technique and composition skills in the creation of movement sequences. Advanced level composition and production skills are applied in the development and documentation of a fully produced work for the dance concert stage. Communicative, analytical, and evaluative skills are employed as students examine and respond to contemporary issues in the dance field, articulate personal aesthetics and defend their artistic choices and perspectives. Students develop personal portfolios to represent their creative work and career preparation.

MUSIC

Honors band, orchestra, and choir application process is open to all students in grades 9-12. Membership is by audition and application only. Honors band, orchestra and choir courses offer students great variety and challenge in musical performance, analysis, theory, and history. Courses that may be taken as Honors will be designated by * beside the course.**

INSTRUMENTAL MUSIC

9232, 9233, 9234, 9240

Concert Band (1 credit each) ***
Grades 9, 10, 11, 12
Prerequisite: Audition and at least one year in a band class at any level
This course is designed for beginner to intermediate level students who play woodwind and brass instruments.

Students will focus on improving musicianship through performance of concert band repertoire, chamber music, and other technical exercises. Seasonal concerts, community performances, VBODA Concert Assessment, and other performances are required to receive credit for this course. Students will be expected to play in class every day and will be assessed on their performance both individually and in groups. In-school and some after-school participation is required to receive credit for this course. Only wind instruments (flute, oboe, bassoon, clarinet, bass clarinet, saxophone, trumpet, French horn, trombone, euphonium/ baritone, and tuba). Percussionists are only allowed at the Director's discretion.

9250-1, 9250-2, 9250-3, 9250-4

Symphonic Band (1 credit each) ***

Grades 9, 10, 11, 12

Prerequisite: Audition or Director Approval (successful completion of band class in the previous school year required)

This course is designed for intermediate to advanced level students who play wind instruments (flute, oboe, bassoon, clarinet, bass clarinet, saxophone, trumpet, French horn, trombone, euphonium/baritone, and tuba). Students will focus on improving musicianship through performance of intermediate concert band repertoire, chamber music, and other technical exercises. Seasonal concerts, community performances, VBODA Concert Assessment, and other performances are required to receive credit for this course. In-school participation and some after-school participation is required to receive credit for this course. Only wind instruments (flute, oboe, bassoon, clarinet, bass clarinet, saxophone, trumpet, French horn, trombone, euphonium/baritone, tuba). Percussionists are only allowed at director's discretion.

9235, 9236, 9237, 9238

Wind Symphony (1 credit each) ***

Grades 9, 10, 11, 12

Prerequisite: Audition and Director Approval (Successful completion of band class in the previous school year required)

This course is designed for advanced level students who play wind instruments (flute, oboe, bassoon, clarinet, bass clarinet, saxophone, trumpet, French horn, trombone, euphonium/baritone, and tuba). Students will focus on improving musicianship through performance of advanced concert band repertoire, chamber music, and other technical exercises. Seasonal concerts, community performances, VBODA Concert Assessment, and other performances are required to receive credit for this course. In-school participation and some after-school participation is required to receive credit for this course. ONLY wind instruments (flute, oboe, bassoon, clarinet, bass clarinet, saxophone, trumpet, French horn, trombone, euphonium/baritone, tuba). Percussionists are only allowed at director's discretion.

9296-1, 9296-2, 9296-3, 9296-4

Percussion Ensemble (1 credit each)

Grades 9, 10, 11, 12

This course is designed for current high school students with no percussion experience OR ninth grade students with percussion experience that have not auditioned successfully for the Advanced Percussion Ensemble. Students will focus on building musicianship through performance of beginning percussion repertoire, chamber music, and other technical exercises. Seasonal concerts, community performances, VBODA Concert Assessment, and other performances are required to receive credit for this course. In-school participation and some after-school participation is required to receive credit for this course.

9252-1, 9252-2, 9252-3, 9252-4***

Advanced Percussion Ensemble (1 credit each)

Grades 9, 10, 11, 12

Prerequisite: Audition and director approval

This course is designed for intermediate and advanced level students who play in the percussion section. Students will focus on improving musicianship through performance of intermediate percussion ensemble repertoire, chamber music, and other technical exercises. Seasonal concerts, community performances, VBODA Concert Assessment, and other performances are required to receive credit for this course. In-school participation and some after-school participation is required to receive credit for this course. This class is designed for **Percussion Students Only**.

9298-1, 9298-2, 9298-3, 9298-4

Jazz Lab Concepts (1 credit) ***

Grades 9, 10, 11, 12

Prerequisite: Audition and director approval

Emphasizes the concepts of jazz performance and the art of improvisation as well as the study of band music from Dixieland to the latest in contemporary jazz. Exposes students to local artists as well as international jazz stars. Provides students with the opportunity to perform throughout the community for various events. In-school participation and some after-school participation is required to receive credit for this course.

Please note this class meets during Zero period at Patrick Henry High School.

9242-1, 9242-2, 9242-3, 9242-4***

String Ensemble I, II, III, IV (1 credit each)

Grades 9, 10, 11, 12

Prerequisite: Audition and director approval (Audition requirements set by the director)

This course is designed for the intermediate level string player. This is a performance-based class. Students will be provided with an opportunity to study, analyze, and perform

various standard works from the Baroque to the present. Students will continue to build and improve technique level and other essential fundamentals. Students will expand knowledge in musical terms, scales, and music theory. In-school participation and some after-school participation is required to receive credit for this course. Performances may include school concerts, district assessment festival, regional orchestra events, and other community events.

9237-1, 9237-2, 9237-3, 9237-4, 9237-5***
9237-1Z, 9237-2Z, 9237-3Z, 9237-4Z, 9237-5Z***
(This section meets in Zero period at Patrick Henry)
Concert Orchestra I, II, III, IV (1 credit each)
Grades 9, 10, 11, 12
Prerequisite: Audition and director approval (Audition requirements set by the director)
This course is designed for the advanced level string player. There may be opportunities for participation in smaller ensemble groups (e.g. Chamber Orchestra and String Quartet). This is a performance-based class. Students will study, analyze, and perform various standard works from the Baroque to the present. Focus is on advanced level technique, intonation, musical terms, theory, major/minor scales (2-3 octaves), and various other essential fundamentals. In-school participation and some after-school participation is required to receive credit for this course. Performances may include school concerts, district assessment festival, regional orchestra events, and other community events.

9214-1
Electronic Music I (1 credit)
Grades 9, 10, 11, 12
Prerequisite: Some music theory skills, computer and keyboarding skills. Covers the basic technology of using computers, special music software, and electronic musical instruments to perform, create, and publish music. Studies the history of electronic music, improvisation, composition and arranging, and performance.

9214-2
Electronic Music II (1 credit)
Grades 10, 11, 12
Prerequisite: Electronic Music I or permission from Instructor
Explores and develops skills learned in Electronic Music I.

9214-3 and 9214-4
Electronic Music III and IV (1 credit)
Grades 11, 12
Prerequisite: Electronic Music I, II or permission from Instructor
Explores and develops skills learned in Electronic Music I and II.

9245-1
Guitar I (1 credit)
Grades 9, 10, 11, 12
Prerequisite: Students are requested to have their instrument (acoustic) for practice.
Student will learn to play the acoustic guitar, read basic notation, chord symbols, strum patterns, and guitar tablature. Students will perform in a variety of settings.

9245-2
Guitar II (1 credit)
Grades 10, 11, 12
Prerequisite: Guitar I or permission from Instructor
Students will continue to build on skills learned in Guitar I. Students will perform in a variety of settings.

9245-3 and 9245-4
Guitar III and Guitar IV (1 credit)
Grades 11, 12
Prerequisite: Guitar I, II, or permission from Instructor
Students will continue to build on skills learned in Guitar I and II. Students will perform in a variety of settings.

9255-1
Piano Lab I (1 credit) *William Fleming High School and Forest Park only*
Maximum of 25 students per class
Grades 9, 10, 11, 12
Students will use the full-size digital piano keyboards in the piano lab. Students will learn to play the piano using leveled piano method books. Students will study music theory as it pertains to the piano. They will develop aural listening skills and piano artistry and technique, as appropriate to their skill level. Students will perform in a variety of settings.

9255-2, 9255-3, 9255-4
Piano Lab II, III, IV (1 credit each) *William Fleming High only*
Maximum of 25 students per class
Grades 9, 10, 11, 12
Prerequisite: Students must successfully complete the previous year in Piano Lab before entering the next level.
Students will use the full-size digital piano keyboards. Students will learn to play the piano using not only leveled piano method books but will be exposed to classical piano literature appropriate to their playing skill. Students will develop sight listening skills and use accepted piano playing technique, as appropriate to their skill level. Students will perform in a variety of settings.

9225
Music Theory (1 credit)
Grades 10, 11,12
Prerequisite: Students will be selected for participation in this course based on their ensemble director/private teacher's recommendation and successful participation in prior music ensemble. Students must be able to read music and have elementary notation skills.
Music Theory introduces students to the basics of musicianship. This course focuses on written and aural

theoretical aspects: pitch and rhythmic notation, scales and harmony, intervals, form and analysis, and composition. The ultimate goal of the course is to develop a student's ability to recognize, understand, and describe the basic materials and processes of music that are heard or presented in a score. In this course, students will become fluent in how vocal and instrumental music is constructed, primarily using the rules from music written in the "Common Practice Period" (c. 1600-1900), but also how those rules have changed and evolved over time. Those students who have an interest in continuing musical study after high-school (prospective college ensemble members, music majors/minors) will learn the necessary fundamentals to begin college-level course study.

****9226**

Advanced Placement Music Theory (1credit)
Grades 10, 11, 12
AP Music Theory develops the student's ability to recognize, understand and describe the basic materials and processes of music heard or presented in a score. The course should instill mastery of the rudiments and terminology of music, including hearing and notating pitches, intervals, scales and keys, chords, meter, and rhythm. The course will emphasize aural and visual identification of procedures based in common practice tonality. **College credit may be awarded as a result of the score on the required AP Music Theory Exam.**

VOCAL MUSIC

9285-1, 9285-2, 9285-3, 9285-4***

Concert Choir (Mixed Choir) (1 credit each)
Grades 9, 10, 11, 12
Beginning level students will participate in a chorus of mixed voices. Emphasis is placed on breathing techniques, posture, diction, intonation, balance, and overall musical aspects of the voice through the study of appropriate choral literature. In- school participation and some after-school participation is required to receive credit for this course.

9287-1, 9287-2, 9287-3, 9287-4***

Men's Chorus (1 credit each)
Grades 9, 10, 11, 12
Prerequisite: Audition and Director Approval required
Students are offered an introductory choral experience for Tenor and Bass voices. Emphasis is placed on the development of correct vocal techniques specifically for Tenor and Bass voices, an introduction to sight-singing, and proficiency in an ensemble performance. Students will study appropriate choral literature written for Tenor 1, Tenor 2, Bass 1, and Bass 2. Selected students may participate in All-District, Honors Choir (seniors only), and All-Virginia Choir. In-school participation and some after-school participation is required to receive credit for this course.

9286-1, 9286-2, 9286-3, 9286-4***

Women's Chorus (1 credit each)
Grades 9, 10, 11, 12
Prerequisite: Audition and Director Approval required
Students are offered advanced choral experiences for Soprano and Alto voices. Emphasis is placed on the development of musicianship and proficiency in ensemble performance. Students will continue development of correct vocal performance techniques and sight-singing through the study of choral literature written for Soprano 1, Soprano 2, and Alto. Selected students may participate in All-District, Honors Choir (seniors only), and All-Virginia Choir. In-school participation and some after-school participation is required to receive credit for this course.

9280-1, 9280-2, 9280-3, 9280-4***

Chamber Choir (Mixed Choir) (1 credit each)
Grades 9, 10, 11, 12
Prerequisite: Audition and Director Approval required
Students taking advanced chorus develop musicianship and specific performance skills through ensemble and solo singing. Students experience a high level of training in breathing techniques, posture, diction, intonation, balance, and overall musical aspects of the voice. Students develop the ability to understand and convey the intent of the composer to connect with the audience. Selected students may participate in All-District, Honors Choir (seniors only), and All-Virginia Choir. Concerts, choral festival/assessments, community performances, and other performances are required functions. In-school participation and some after-school participation is required to receive credit for this course.

9292-1, 9292-2, 9292-3, 9292-4

Stage Music Ensemble (1 credit each) *******
Grades 10, 11, 12
Prerequisite: One year of choir, theatre or director approval through audition
This class reinforces the fundamentals of singing and performing by combining aspects of singing and acting. The group will perform ensemble numbers as well as small groups and solos. Students should be prepared for singing, acting, movement, blocking, light choreography, character development, audition etiquette training, and sight-reading. Music selections to include Musical Theatre, Opera, Oratorio, or anything that may be performed in a stage production. Students in this class are eligible to audition for All-District Choirs and All-State Choirs. In- school participation and some after-school participation is required to receive credit for this course.

THEATER AND DRAMA

1410

Theatre Arts I (1 credit)
Grades 9, 10, 11, 12
This course is a basic introduction to performance skills and a working theatre. This is a performance-based class. Students will be required to memorize, rehearse, and perform dramatic monologues and scenes. The curriculum also includes the backstage technical aspects of theatre. Some after-school performances may be involved with this class. Students will be required to perform in front of a live audience.

1420
Theatre Arts II (1 credit)
Prerequisite: Theatre Arts I and Instructor Permission
Grades 10, 11, 12
Students will continue the examination of various forms of performance from classical to contemporary through the study of dramatic literature, the development of the physical playing space, and the variety of acting styles. Backstage work and contribution to the class productions are also required. Some after-school performances may be involved with this class. Students will be required to perform in front of a live audience.

1423, **1426**
Theatre Arts III, IV (1 credit each)
Grades 11, 12
Prerequisite: Theatre Arts II, III, and Instructor Permission
These students must possess an elevated level of dedication toward theatre. Students will further their study of acting styles and dramatic literature by reading, analyzing, and performing scenes and monologues from classic plays. They will also participate in class productions. Some after-school performances may be involved with this class. Students will be required to perform in front of a live audience.

1430
Theatre Production (1 credit each)
Grades 9, 10, 11, 12
Prerequisite: Auditions for acting roles and appointment to the technical crew
Provides students with the opportunity to perform regional theatre, festivals, and community theatre projects.
This is an after-school class. Some after-school performances may be involved with this class. Students will be required to perform in front of a live audience.

1446
Film Studies (1 credit)
Prerequisite: Students with less than a "B" average in English 10 must have teacher recommendation.
Grades 11, 12
Develops appreciation of the elements and concepts that make up film as a literary and visual art form, a communication tool, political voice, and entertainment medium. Investigates film as an industry and explores movies as part of culture. Students will write critical analysis of scripts, screen plays, reviews and films.

1435-1, 1435-2, 1435-3
Technical Theatre (1 credit each course)
Prerequisite: Entertainment and Design (CTE class) or Permission of the Instructor
Grades 10, 11 and 12
Students apply and expand their knowledge of theatre design, production, and management. This class will further study concepts developed in Entertainment and Design I including aspects of scene design, lighting, sound, costumes, properties, and stage make-up. In-school and after school participation are required to receive credit for this course.

CAREER AND TECHNICAL EDUCATION

The Roanoke Technical Education Center (ROTEC) and Charles W. Day Technical Education Center (DAYTEC) are the Centers for Career and Technical Education (CTE) that offers courses to prepare students with knowledge and skills for employment and for further education. Students from PH, WF, NCTLA and FPA may attend classes at ROTEC and DAYTEC with transportation provided. Programs have working arrangements with employers in the Roanoke Valley such as Roanoke Fire/EMS, Virginia Western Community College, and Carilion Clinic. Students can enter the work force directly upon graduation or continue with postsecondary education at a college or technical school. Students in designated ROTEC and DAYTEC classes can earn dual enrollment college credits while in high school. Internships, in cooperation with local businesses, are available in certain programs for students who qualify.

"Hands-on" learning projects that incorporate Virginia's Workforce Readiness Skills are included in all classes. All students will have contact with employers throughout the Roanoke Valley and will be able to participate in contests and leadership activities related to their course of study. Students will be strongly encouraged to participate in CTE student co-curricular organizations (DECA, FBLA, HOSA, FCCLA, Skills USA, TSA, and FFA). There are minimal fees that apply to joining any student organization.

ROTEC and DAYTEC courses that are offered as a double block class will be awarded 2 credits. Single block classes will earn 1 credit. Course contact hour requirements vary from program to program.

Students are encouraged to explore programs in grade 9 and/or 10, and then select a CTE major program area of study for grades 11 and 12, so they can earn the Career and Technical Education diploma seal and/or an industry certification at graduation. Successfully

completing two years in a program area will meet the graduation requirements for the sequential elective. Students earning a standard diploma **MUST** pass a state approved industry certification or high quality work-based learning experience to graduate. All CTE courses offer these end of year certifications to students at no charge including course R6120 Economics and Personal Finance, a course all students are required to take and pass. Additional Virginia State approved Industry Certifications could be added throughout the year.

ROTEC and DAYTEC are committed to the Virginia Department of Education initiative for the Path to Industry Certification: High School Industry Credentialing program. **Due to the academic rigor and Industry Certification requirements, it is strongly recommended that students enrolling in these classes have a "C" average.** Students must also adhere to strict behavioral guidelines due to safety regulations and requirements in many of the classes. Students that do not meet these requirements may see the ROTEC or DAYTEC Principal or School Counselor for possible consideration. Students who earn a state approved credential by passing a certification or licensure examination may earn up to two student-selected verified credits to meet graduation requirements. In addition to providing the opportunity to earn student-selected verified credits, this initiative provides the following benefits:

- Added value to a transcript for higher education purposes or obtaining an entry-level position in the technical job market.
- Evidence that the student has completed advanced educational preparation and verification of CTE business and industry competencies and workplace readiness skills (WRS).
- Increased job opportunities for advancement in a chosen career path.
- Enhanced self-esteem for students through achieving national occupational standards recognized by business and industry.

ARCHITECTURE and CONSTRUCTION CAREER CLUSTER

R8601
Carpentry I (1 Credit) **ROTEC PH and DAYTEC WF**
Grades 10, 11, 12
Carpentry I is foundational for achieving high-level construction industry skills that can result in an exciting and lucrative career. With an emphasis on safety, students are taught to use hand and power tools, cut stock, apply construction mathematics, interpret blueprints, and understand basic rigging. Students will become proficient in identifying types of residential construction components to frame walls, floors, ceilings, roofs, doors, and windows. All students will obtain the required Construction Industry OSHA 10 safety credential. **NOCTI, NCCER Core and Workplace Readiness are offered as approved Industry Certifications.**

R8602
Carpentry II (2 Credits)
Converting to Building Trades ROTEC PH and DAYTEC WF
Prerequisite: R8601 with "C" or higher
Grades 11, 12
Carpentry II prepares students for 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 Construction Industry OSHA 10 safety credential earned in Carpentry I. Students will become proficient in assembling and installing various types of residential construction components according to industry standards, including forming foundations, framing floors, walls, ceiling, roofs, trusses, roofing materials, stairs, and exterior doors and windows. **NOCTI, NCCER Carpentry I and Workplace Readiness are offered as approved Industry Certifications.**

R8603
Carpentry III (2 Credits) **Converting to Building Trades ROTEC PH and DAYTEC WF**
Prerequisite: R8602 with "C" or higher
Grade 12
Carpentry III is an advanced course that allows students to gain in-depth knowledge and hands on experience in construction skills. Students explore specialized areas in carpentry, such as building decks and porches, alternative framing, interior finishes, drywall installation and finishing, as well as energy efficiency and green technology. Exploration of licensure requirements and entrepreneurial opportunities are emphasized. **NOCTI, NCCER and Workplace Readiness are offered as approved Industry Certifications.**

R8503
HVAC - Heating, Ventilation, Air Conditioning, & Refrigeration I (1 credit) DAYTEC WF (PH students are welcome to enroll)
Grades 10, 11
In this introductory course, students are taught to professionally install, repair, and maintain the operating conditions of heating, ventilation, air-conditioning, and refrigeration (HVACR) systems. Students work with piping and tubing, student the principles of heat and electricity, install duct systems, and comply with U.S. Environmental Protection Agency (EPA) regulations. Successful completion of the two – course sequence may prepare students for a career as an HVACR technician.

R8504
HVAC - Heating, Ventilation, Air Conditioning, & Refrigeration (1 credit) DAYTEC WF (PH students are welcome to enroll)
Prerequisite: R8503

Grades 11, 12
In this continuing course students are taught to professionally install, repair, and maintain the operating conditions of heating and cooling systems. Students also explore emerging technologies, Environmental Protection Agency (EPA) regulations, energy conservation techniques, and systems with exempt and non-exempt refrigerants. Completion of this sequence will prepare students for employment in a variety of heating, ventilation, air-conditioning, and refrigeration (HVACR) occupations**.**

AGRICULTURE, FOOD AND NATURAL RESOURCES

R8036
Landscaping I (1 credit) DAYTEC WF (PH students are welcome to enroll)
Grades 10,11
In this course, students are prepared for entry-level employment, postsecondary opportunities, and advancement in the landscape design, construction, and maintenance industries. High-quality work-based learning will provide experiential learning opportunities related to students' career goals and/or interests, integrated with instruction, and performed in partnership with local businesses and organizations.

R8039
Landscaping II (1 credit) DAYTEC WF (PH students are welcome to enroll)
Prerequisite: R8036
Grades 11,12
In this course, students are prepared for entry-level employment in the landscaping industry through hands-on experiences, to include landscape design, installation, and maintenance, incorporating technology, plant, and soil science, and utilizing landscaping tools, equipment, and machinery. High-quality work-based learning will provide experiential learning opportunities related to students' career goals and/or interests, integrated with instruction, and performed in partnership with local businesses and organizations.

AUTOMOTIVE TECHNOLOGY CAREER CLUSTER

R8506
Automotive Technology I (2 credits) **ROTEC PH and DAYTEC WF**
Grades 10, 11, 12
In this course, students explore, handle, and perform basic functions in engine repair, automatic transmission and transaxle, manual drive train and axles, suspension and steering systems, and brakes. Students who successfully complete the Automotive Technology program may be eligible to take the Automotive Service Excellence (ASE) Student Certification examination. The ASE Student Certification is the first step in building a career as a service professional in the automotive industry. Automotive Technology I and II are closely aligned with the 2022 ASE Education Foundation automobile program standards for Maintenance and Light Repair (MLR). **ASE and Workplace Readiness are offered as approved Industry Certifications.**

R8507
Automotive Technology II (2 credits) **ROTEC PH and DAYTEC WF**
Prerequisite: R8506
Grades 11, 12
In this course, students build upon their basic knowledge of automotive technology, exploring more advanced tasks in engine repair, automatic transmission and transaxle, manual drive train and axles, suspension and steering systems, and brakes. They also learn about electrical, electronic, and HVAC systems in automobiles. Upon successful completion of the course, students may be eligible to take the Automotive Service Excellence (ASE) Student Certification examination. Automotive Technology I and II are closely aligned with the 2022 ASE Education Foundation automobile program standards for Maintenance and Light Repair (MLR). **ASE and Workplace Readiness are offered as approved Industry Certifications Students must meet the Virginia Western Community College placement requirements to be eligible for Dual Enrollment.**

R8508
Automotive Technology III (2 credits) **ROTEC PH and DAYTEC WF**
Prerequisite: R8507 (with a "C" or higher)
Grade 12
This course prepares students to perform automotive diagnosis and repairs in the following areas: engine repair, cooling systems, transmission and transaxle, manual drive trains and axles, suspension and steering, wheel and tire, brakes, electrical/electronic systems, HVAC, and engine performance. Students are provided with more advanced instruction in all systems as they prepare for the Automotive Service Excellence (ASE) certification examinations. The Automotive Technology program provides the fundamental skills necessary to succeed in an ever-changing and challenging industry as an automotive technician. This course is closely aligned with the ASE Education Foundation (formerly NATEF)'s 2022 standard for Maintenance and Light Repair (MLR). **ASE and Workplace Readiness are offered as approved Industry Certifications Students must meet the Virginia Western Community College placement requirements to be eligible for Dual Enrollment.**

BUSINESS EDUCATION and INFORMATION TECHNOLOGY CAREER CLUSTER

R6120
Economics and Personal Finance (1 credit) **PH and DAYTEC WF**
Grades 10, 11, 12
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. They also learn the importance of investing in themselves in order to gain the knowledge and skills valued in the marketplace. Development of financial literacy skills and an understanding of economic principles will provide the basis for responsible citizenship, more effective participation in the workforce, and career success. The course incorporates all economics and financial literacy objectives included in the Code of Virginia §22.1-200-03B. **This course is required for graduation and students are required to take the W!SE Financial Literacy and/or Workplace Readiness Certification exam to meet the latest graduation requirements.**

***R6122**

AP Business with Personal Finance (1 credit) **PH and DAYTEC WF**
Grades 11 and 12

AP Business with Personal Finance is an introductory, college-level business and personal finance course. Students explore the business disciplines of entrepreneurship, marketing, finance, accounting, and management through rea-world business application, case studies, and project-based learning. In addition, students learn and apply all the National Standards for Personal Financial Education created by the Council for Economic Education and the Jump$tart Coalition for Personal Financial Literacy. **This course is required for graduation and students are required to take the W!SE Financial Literacy and/or Workplace Readiness Certification exam to meet the latest graduation requirements. Students must meet the Virginia Western Community College placement requirements to be eligible for Dual Enrollment.**

R6611

Digital Applications (1 Credit) **ROTEC PH and DAYTEC WF**
Grades 9, 10, 11, 12

This course is designed for secondary school students to develop real-life, outcome-driven approach skills for digital citizenship, basic computer operations, keyboarding, application software (word processing, spreadsheets, multimedia applications, databases), and career exploration. This course promotes skills that can be applied across the curriculum and offers preparation relevant to 21st century skills and postsecondary education. Students who successfully complete this course may be eligible for a rigorous and relevant industry certification examination. Student skills may be enhanced by participation in work-based learning activities and/or the Future Business Leaders of America (FBLA). **Microsoft Office Certifications and Workplace Readiness are offered as approved Industry Certifications. Students must meet the Virginia Western Community College placement requirements to be eligible for Dual Enrollment.**

R6612

Computer Information Systems (1 Credit) **ROTEC PH and WF**
Prerequisite: R6611
Grades 10, 11, 12

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, emerging technologies, and career opportunities related to the information technology field. **Microsoft Office Academy and Workplace Readiness are offered as approved Industry Certifications. Students must meet the Virginia Western Community College placement requirements to be eligible for Dual Enrollment.**

R6115

Principles of Business and Marketing (1 Credit)
ROTEC PH and DAYTEC WF
Grades 9, 10, 11, 12

Students discover the roles of business and marketing in the free enterprise system and the global economy. Students examine basic financial concepts of banking, insurance, credit, taxation, and investments to provide a strong background for making sound decisions as consumers, wage earners, and citizens. The real-world effects of technology, effective communication, and interpersonal skills are evident throughout the course. This course also supports career development skills and explores career options. **Workplace Readiness is offered as an approved Industry Certification.**

R6640

Coding and Game Design I – Programming (1 Credit)
ROTEC PH and DAYTEC WF
Prerequisite: 3130
Grades 9 (with completion of Algebra I with a "C" or better), 10, 11, 12

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. In addition, students employ hypertext markup language (HTML) or JavaScript to create web pages. Students develop their employability skills through a variety of activities. **Students should have a strong math background (C average and above) and have successfully completed Algebra I and Digital Applications to enroll in this course. Programming and Workplace Readiness are offered as Industry Certifications.**

R6641

Coding and Game Design – Advanced Programming (1 Credit) **ROTEC PH and DAYTEC WF**
Prerequisite: R6640
Grades 10, 11, 12

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. Students continue to develop their employability skills as they research pathways for continuing education and careers in the information technology industry and engage in various career-building activities. **Programming and Workplace Readiness are offered as Industry Certifications.**

R6302
Cybersecurity Fundamentals (1 Credit) **ROTEC PH and DAYTEC WF**
Prerequisite: R6611 or R6640 and 3130
Grades 10, 11, 12
Description should state that cybersecurity is the protection of information and data —which includes information systems (e.g., networks, hardware, software), the human element, and physical elements—from risks associated with threats, attacks, hazards, or physical damage. **Students should have a strong math background (C average and above) and have successfully completed Algebra I and Digital Applications to enroll in this course. Workplace Readiness as well as numerous Microsoft Industry certifications will be offered.**

R6304
Cybersecurity Software Operations (1 Credit) **ROTEC PH and DAYTEC WF**
Prerequisite: R6302
Grades 11, 12
The Cybersecurity Software Operations course focuses on aspects of computer support and network administration with an emphasis on project-driven learning and cybersecurity. Students learn networking concepts, create peer-to-peer network systems and client server networks, install and configure network cards and operating systems, and create and implement security plans. **Workplace Readiness as well as numerous Microsoft Industry certifications will be offered.**

R6630
Design, Multimedia and Web Technologies (1 Credit)
ROTEC PH and DAYTEC WF
Grades 9, 10, 11, 12
Students develop proficiency in designing and creating graphic design 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, certifications earned, and a variety of print, multimedia, and website projects produced in the course. **Microsoft IT Specialist, Microsoft Office Certifications and Workplace Readiness are offered as approved Industry Certifications. Students must meet the Virginia Western placement requirements to be eligible for Dual Enrollment.**

R9093
Entrepreneurship (1 credit) DAYTEC WF (First year pilot)
Grades 10,11,12
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 entrepreneurial venture, using design thinking and business model development. Students will learn about financial statements, marketing principles, sales and customer service, and basic economic principles for successful operation. Contextual instruction and student participation in co-curricular career and technical student organization (CTSO) activities will develop leadership, interpersonal, career skills. High-quality work-based learning (HQWBL) will provide experiential learning opportunities related to students' career goals and/or interests, integrated with instruction, and partnership with local businesses and organizations. **Workplace Readiness is offered as an approved industry certification.**

R9094
Advanced Entrepreneurship (1 credit) DAYTEC WF
Prerequisite R9093
Grades 11,12
The 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 the development of a business plan and small business management. Students will establish, market, and maintain a business. Contextual instruction and student participation in co-curricular career and technical student organization (CTSO) activities will develop leadership, interpersonal, and career skills. High-quality work-based learning (HQWBL) will provide experiential learning opportunities related to students' career goals and/or interests, integrated with instruction, and performed in partnership with local businesses and organizations. **Workplace Readiness is offered as an approved industry certification.**

EDUCATION

All students wishing to take Virginia Teachers for Tomorrow will be required to complete an application and attend an interview with a ROTEC and DAYTEC faculty member as well as demonstrate satisfactory progress to include academics, attendance, behavior, and workplace readiness skills.

R9061
Introduction to Virginia Teachers for Tomorrow (Dual Enrollment) (1 Credit) **ROTEC PH and DAYTEC WF**
Grades 9, 10
This exploratory course fosters student interest, understanding, and appreciation of the teaching profession and allows students an introduction to careers in education. Students are taught to develop self-awareness, collaborate and communicate with peers, build positive learning environments, and discover

learning differences of others. The curriculum is designed to help students set attainable goals in the Education and Training Career Cluster. This course introduces students to the high school Virginia Teachers for Tomorrow (VTfT) program. Additional educational leadership opportunities are offered through the student organization, Educators Rising.
Students must meet the Virginia Western Community College placement requirements to be eligible for Dual Enrollment. Early Childhood Education, Leadership Essentials, and Workplace Readiness are offered as approved Industry Certifications.

R9062
Virginia Teachers for Tomorrow I (1 Credit)
ROTEC PH and DAYTEC WF
Grades 10, 11, 12
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. Additional educational leadership opportunities are offered through the student organization, Educators Rising, Leadership Essentials, Early Childhood Education, and Education Fundamentals.
ParaPro and Workplace Readiness are offered as approved Industry Certifications.

R9072
Virginia Teachers for Tomorrow II (1 Credit)
ROTEC PH and DAYTEC WF
Prerequisite: R9062 (with "C" or higher)
Grades 11, 12
Students continue to explore careers in the Education and Training Career 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. **Students must meet the Virginia Western placement requirements to be eligible for Dual Enrollment. ParaPro, Early Childhood Education, Education Fundamentals, Leadership Essentials, Workplace Readiness, and Praxis Core are offered as approved Industry Certifications.**

8282
Career, Community, and Family Connections (1 Credit)
ROTEC PH and DAYTEC WF
Prerequisite: Instructor Permission
Grade 12
Career, Community, and Family Connections provides tools to meet and balance the multiple demands of career, family, and personal life. The course teaches problem solving, conflict management, goal setting, stress management, resource management, and interpersonal skills needed to build strong relationships in the family, the workplace, and the community. Contextual instruction and student participation in co-curricular career and technical student organization (CTSO) activities will develop leadership, interpersonal, and career skills. High-quality work-based learning (HQWBL) will provide experiential learning opportunities related to students' career goals and/or interests, integrated with instruction, and performed in partnership with local businesses and organizations.

LAW, PUBLIC SAFETY, CORRECTIONS AND SECURITY

R8702
Criminal Justice I (1 credit) DAYTEC WF (PH students are welcome to enroll)
Grades 10,11, 12
In this course, students are introduced to law, public safety, corrections, and security practices. Students examine contemporary issues in the criminal justice system and explore crime scene investigation, court procedures, policing, and juvenile justice. This course provides a foundation for careers as lawyers, as forensics specialist, and as law enforcement and corrections officers. **Workplace Readiness is offered as an approved industry certification.**

R8703
Criminal Justice II (2 credits) DAYTEC WF (PH students are welcome to enroll)
Prerequisite: R8702
Grades 11,12
In this course students apply knowledge learned in Criminal Justice I through practical scenarios involving crime scene investigation, criminal investigation, and crisis intervention. Students explore trends in correctional standards and in identifying and preventing terror threats. This course prepares students for careers as lawyers, forensics specialists, law enforcement, and corrections officers. **Workplace Readiness is offered as an approved industry certification.**

ARTS, AUDIO/VISUAL TECHNOLOGY and COMMUNICATIONS

R8607
Commercial Photography I (1 Credit) **PH and WF**
Grades 10, 11, 12
The ability to apply principles of visual literacy to produce visual content gives students an advantage in today's global, multimedia society. Students will be taught industry-relevant technical skills and have the opportunity to work with a variety of technology, including digital cameras, design software, and editing tools to stage, shoot, process, print, and present professional-grade commercial images. **Workplace Readiness is offered as an approved Industry Certification.**

R8608

Commercial Photography II (1 credit) **PH and WF**
Prerequisite: R8607
Grades 11, 12
Students are taught industry-relevant technical skills and have the opportunity to work with a variety of technology, including digital cameras, lighting, design software, and editing tools to stage, shoot, process, print, and present professional-grade images while developing a portfolio for a career as a commercial photographer. Students will develop an understanding of photography's influence in society and strategize how they may perform in the professional industry, using their technical and creative knowledge. **Broad Field Family & Consumer Sciences and Workplace Readiness is offered as an approved Industry Certification.**

R8489
Entertainment Design and Technology (1 Credit)
PH and WF
Grades 10, 11, 12
Students will learn and apply skills in various areas related to the creative process of live production. They will have the opportunity to explore scenic design and construction, lighting design and technology, and live sound reinforcement. Students will learn techniques used by industry professionals through hands-on experiences and investigate job opportunities and careers in the dynamic and growing industry of live entertainment. **Workplace Readiness is offered as an approved Industry Certification.**

R8688
Television and Media Production (1 Credit)
ROTEC PH (WF students are welcome to enroll)
Grades 9, 10, 11, 12
In this course, students will engage in hands-on digital media production while using industry standard equipment and software. They will learn how to work as media producers and explore careers in the dynamic industry of digital media production. **NOCTI and Workplace Readiness are offered as approved Industry certifications.**

R8689
Television and Media Production II (2 Credits)
ROTEC PH (WF students are welcome to enroll)
Prerequisite: R8688
Grades 10, 11, 12
This course builds upon knowledge and skills from Television and Media Production I. Students will generate fiction and non-fictional media content. Students will enhance their digital media production skills by entering the studio and control room and become proficient with industry standard equipment and software. They put their knowledge of digital media production into action with the use of sophisticated tools and equipment as they begin to develop their personal portfolios. **NOCTI, Adobe Certified Professional, and Workplace Readiness are offered as approved Industry certifications.**

R8690
Television and Media Production III (2 Credits)
ROTEC PH (WF students are welcome to enroll)
Prerequisite: R8689 (with "C" or higher)
Grades 11, 12
This course builds upon knowledge and skills from Television and Media Production I and II. Students will demonstrate mastery of media production knowledge and skills. They will create original productions, assemble a professional digital portfolio, and investigate the dynamic media production industry. Students will research postsecondary opportunities and formulate strategies for both college and career success. **NOCTI, Adobe Certified Professional, and Workplace Readiness are offered as approved Industry certifications.**

HEALTH and MEDICAL SCIENCES CAREER CLUSTER

All students wishing to take CNA or EMT will be required to complete an application, attend an interview with an HMS faculty member, demonstrate satisfactory progress in Introduction to Health Careers or Medical Terminology to include academics, attendance, behavior, and workplace readiness skills.

R8302
Introduction to Health and Medical Sciences (1 Credit)
ROTEC PH and DAYTEC WF
Grades 10, 11, 12
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. **Workplace Readiness are offered as approved Industry certifications.**

R8383
Medical Terminology (1 Credit)
ROTEC PH and DAYTEC WF
Grades 10, 11, 12
Medical Terminology is designed to help students learn common medical terms essential for patient care. Topics are presented in logical order, beginning with each body system's 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. **Workplace Readiness is offered as approved Industry certifications. Students must meet the Virginia Western Community College placement requirements to be eligible for Dual Enrollment.**

R8341**
Nurse Aide (1 credit)
R8331**
Health Assisting (1 credit)
Grade 12
Prerequisite: 8302 Introduction to Health Careers
These courses will be taught together as a double block class. Each course will be listed on the transcript. Students will earn 2 credits, one per course.

Class/Laboratory/Clinical attendance is mandatory, and the minimum number of hours must be completed, satisfactorily, for the student to meet the requirements to sit for the VA State Certified Nurse Aide examination.

Nurse Aide is a comprehensive occupational training course that focuses on human body systems and common diseases. Students are prepared for advanced clinical care of patients in medical-surgical, rehabilitative, and community health settings. Students receive skills training in patient care, safety, and infection control, and hands-on clinical experiences in a healthcare setting that include patient-nurse aide communication and professionalism, measuring and recording vital signs, cardiopulmonary resuscitation, and proper documentation. High-quality work-based learning in a healthcare facility is a required component of the course, and students must maintain the American Heart Association's Cardiopulmonary Resuscitation (CPR) and Emergency Cardiovascular Care (ECC) training during this course. This course requires students to meet the Virginia Board of Nursing required clock hours to be eligible to take the National Nurse Aide Assessment Program (NNAAP) exam.
Contextual instruction and student participation in co-curricular career and technical student organization (CTSO) activities will develop leadership, interpersonal, and career skills. High-quality work-based learning (HQWBL) will provide experiential learning opportunities related to students' career goals and/or interests, integrated with instruction, and performed in partnership with local businesses and organizations.

R8331 Health Assisting
ROTEC PH and DAYTEC WF
Grade 12
Course hours 140
Credits 1

Nurse Aide and 8331 Health Assisting will be taught together as a double block class. Each course will be listed on the transcript ****

In the Health Assistant course, students develop basic skills common to several assisting careers. They study body structure and function, principles of health, microbes and disease, and an overview of the national health and patient care system. Supervised clinical work experiences begin as part of the course in hospitals, nursing homes, or public health agencies. **Mandatory course fees will apply.**

Some healthcare facilities (clinical sites) that accept federal funding (e.g., Medicare, Medicaid) may require criminal background checks, drug screens, and COVID vaccination for students participating in a clinical experience. An updated immunization record will be required prior to the student participating in the clinical experience.

abbreviations for each topic. **National Career Readiness and Workplace Readiness are offered as approved Industry certifications. Students must meet the Virginia Western Community College placement requirements to be eligible for Dual Enrollment.**

R8355 & R8356
Nurse Aide I and II (Dual Enrollment) (4 credits)
ROTEC PH and DAYTEC WF
Prerequisite: R8383 with "C" or higher
Grade 12
Nurse Aide I, offered as an occupational preparation course beginning at the 11th-grade level, is regulated under the Virginia Board of Nursing. It emphasizes the study of nursing occupations as related to the healthcare system. Students study growth and development across the lifespan, simple body structure and function, and medical terminology. They are introduced to concepts of infection prevention and disease processes. Students receive entry-level skill training in patient nurse aide relationships; measuring and recording of vital signs; cardiopulmonary resuscitation; and general patient care. Work-based learning may be offered as part of this course. The

Nurse Aide I course introduces students to careers in nursing, health professions, and STEM-H professions. Students must maintain American Heart Association's Cardiopulmonary Resuscitation (CPR) & Emergency Cardiovascular Care (ECC) training during this course. **Recommended prerequisite(s): Introduction to Health and Medical Sciences 8302** Some healthcare facilities that accept federal funding (e.g., Medicare, Medicaid) may require criminal background checks, drug screens, and COVID vaccination for students participating in a clinical experience. An updated immunization record will be required prior to the student participating in the clinical experience.

Nurse Aide II is an occupational preparation course emphasizing body systems and diseases as related to advanced clinical care of the acute medical-surgical patient, the chronically ill, and the elderly. Students

receive skills training and hands-on clinical experiences in a healthcare setting. Work-based learning in a healthcare facility is part of the course. Students must maintain American Heart Association's Cardiopulmonary Resuscitation (CPR) & Emergency Cardiovascular Care (ECC) training during this course. This course requires students to meet the Virginia Board of Nursing required clock hours to be eligible to take the National Nurse Aide Assessment Program (NNAAP) exam. Additionally, this course includes the approved opiate competencies for health and medical sciences education. **Course fees will apply for uniforms and other items. Students will complete all competencies to become a certified nurse aide and will sit for the Certified Nurse Aid exam at the end of Level II. This program is only offered to students that are at least 16 years old, have maintained a C average, and have successfully completed the CNA application. CNA certification is offered through the Virginia Board of Nursing. Students must meet the Virginia Western Community College placement requirements to be eligible for Dual Enrollment.**

R8333 &R8334
Emergency Responder I & Emergency Responder II (4 Credits) **PH and WF**
Classes held at REMS
Prerequisite: R8302 and R8383 strongly encouraged
Grade 12
Emergency Responder I tasks for this course represent the National and Virginia Emergency Medical Services (EMS) Educational Standards. Students explore and apply the fundamentals of EMS, anatomy, physiology, and medical terminology while demonstrating skills in assessing and managing patient care, including assessing the scene and understanding shock, resuscitation, and trauma. Successful completion of this course and instructor endorsement qualifies students to enroll in EMT II to complete the program sequence. Students must complete a minimum of 85 percent of the didactic and lab aspects of the course, per 12VAC5-31-1501 in the Code of Virginia. Successful completion of all course requirements and instructor endorsement may lead to eligibility to take the Virginia State Psychomotor Exam and the National Registry of Emergency Medical Technicians (NREMT) cognitive exam. Students must meet the requirements of the Functional Position Description for the Basic Life Support Provider (refer to EMS.TR.14B and 12VAC5-31-1501 in the Code of Virginia).

In Emergency Responder II students build on their knowledge and skills for providing basic life support by focusing on the areas of EMS operations, medical emergencies, and management of special patient populations. Supervised field experience that includes at least 10 patient contacts outside of school hours is required. Successful completion of this second course in the sequence will earn the student CTE completer status. Successful completion of all course requirements and instructor endorsement may lead to eligibility to take the National Registry of Emergency Medical Technicians (NREMT) cognitive exam. Students must meet the requirements of the Functional Position Description for the Basic Life Support Provider (refer to EMS.TR.14B and 12VAC5-31-1501 in the Code of Virginia). Students must complete a minimum of 85 percent of the didactic and lab aspects of the course, per 12VAC5-31-1501 in the Code of Virginia. **NOTE: Students must be at least 16 years old prior to the first day of EMT instruction. All students will need to undergo a criminal background check that includes fingerprinting and drug screening. Students will be eligible to sit for the Virginia State EMT Exam, and upon passing, will be able to sit for the National Emergency Medical Responder exam. Students must meet the Virginia Western Community College placement requirements to be eligible for Dual Enrollment.**

R8316
Sports Medicine/Athletic Training I (1 credit)
ROTEC PH and DAYTEC WF
Grades 10, 11, 12
The course introduces students to topics such as human anatomy and physiology, nutrition, biomechanics, medical terminology, injuries and illnesses, and legal and ethical issues in sports medicine. Students also examine prospective careers in the sports medicine field. Upon successful completion of this course, students are eligible to take Sports Medicine II and pursue certification as a personal trainer. **Workplace Readiness is offered as an approved Industry Certification.**

R8317
Sports Medicine/Athletic Training II (2 Credits)
ROTEC PH and DAYTEC WF
Prerequisite: R8316
Grades 11, 12
In this course, students earn a certification in First Aid/CPR/AED. Upon successful completion of this course, students will be eligible to take the National Academy of Sports Medicine-Certified Personal Trainer (NASM-CPT) exam. This course builds upon basic knowledge acquired in Sports Medicine I on topics such as exercise physiology, biomechanics, exercise program design, and injury prevention, assessment, treatment, and management. Students prepare for a career in sports medicine, including completing an internship. **Workplace Readiness is offered as an approved Industry Certification.**

HOSPITALITY AND TOURISM CAREER CLUSTER

R8275
Culinary Arts I (2 Credits)
ROTEC PH and DAYTEC WF
Grades 10, 11, 12
Culinary Arts I provides students with a foundational understanding of the food service industry and opportunities to build technical skills in food preparation and service. Students examine basic rules of kitchen safety

and sanitation, of purchasing and receiving, and of fundamental nutrition. The curriculum incorporates math and science in culinary applications. **ServSafe and Workplace Readiness are offered as approved Industry certifications.**

R8276
Culinary Arts II (2 Credits)
ROTEC PH and DAYTEC WF
Prerequisite: R8275
Grades 11, 12
Culinary Arts II students continue to acquire a comprehensive knowledge of the food service industry while refining their technical skills. Students apply kitchen safety and sanitation, nutritional principles, and advanced food-preparation techniques. Students complete work-based learning in venues such as the a la carte kitchen, the dining room, and catered functions. **ServSafe and Workplace Readiness are offered as approved Industry certifications. Students must meet the Virginia Western Community College placement requirements to be eligible for Dual Enrollment.**

R8279
Culinary Arts Specialization III (2 Credits)
ROTEC PH and DAYTEC WF
Prerequisite: R8276 (with Instructor's Permission)
Grades 12
The Culinary Arts Specialization course provides students with skills and knowledge to pursue careers in the food service industry. In a hands-on environment, students apply nutritional principles, plan menus, use business and mathematics skills, select and maintain food service equipment, and adhere to safety and sanitation standards. Students will study the following four areas:
- Baking and Pastry Food-Preparation Techniques
- Catering/Banquet Food-Preparation Techniques
- Restaurant Operation Techniques
- Quantity Food-Preparation Techniques

The curriculum continues to place a strong emphasis on science and mathematics knowledge and skills, critical thinking, practical problem-solving, and entrepreneurial opportunities within the field of culinary arts. **ServSafe and Workplace Readiness are offered as approved Industry certifications. Students must meet the Virginia Western Community College placement requirements to be eligible for Dual Enrollment.**

HUMAN SERVICES CAREER CLUSTER

R8527
Cosmetology I (2 Credits)
ROTEC PH and DAYTEC WF
Grades 10, 11, 12
In this introductory course, students study hair, skin, and natural nail care. Students are grounded in theory as they prepare to practice procedures in a clinical lab setting and classroom, using mannequins 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 hair coloring and chemical texture services and develop skills in manicure and pedicure procedures. **Workplace Readiness, NOCTI Cosmetology, and Skills USA Customer Service are offered as approved Industry certifications.**

R8528
Cosmetology II (2 Credits)
ROTEC PH and DAYTEC WF
Prerequisite: R8527 (with a "C" or higher)
Grades 11, 12
In this continuing course, students build on their theoretical foundation of general sciences and practices in cosmetology to increase proficiency in hair cutting and styling on live models, with attention to professionalism, client consultation, safety, and infection control. Students are trained in safe chemical processes related to permanent waves, relaxers, lightening, and coloring hair. In addition, students learn to care for skin, hands, and feet, developing experience in providing facials, manicures, pedicures, and nail enhancements. Students will be introduced to a business management unit with a focus on managing the salon. **Students enrolling in Level II must have successfully completed Level I competencies and have permission from the course instructor. Workplace Readiness, NOCTI Cosmetology, and Skills USA Customer Service are offered as approved Industry certifications.**

R8529
Cosmetology III (2 Credits)
ROTEC PH and DAYTEC WF
Prerequisite: R8528 (with a "C" or higher)
Grades 12
In this advanced course, students build on their theoretical foundation of general sciences and practices in cosmetology to increase proficiency in hair cutting and styling on live models, with attention to professionalism, client consultation, safety, and infection control. Students are trained in safe chemical processes related to chemical texture services and advanced hair coloring techniques. They also develop artistic skills with wigs and hair additions. In addition, students learn to care for skin, hands, and feet, developing experience in providing facials, manicures, pedicures, and nail enhancements. 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. **Students enrolling in Level III must have successfully completed Level I and Level II competencies and have permission from the course instructor. Cosmetology**

students that have successfully completed a minimum of 840 hours of instruction and completed all three years with a B average will be eligible to sit for the Virginia State Board of Professional Services in Cosmetology Licensing Exam. Workplace Readiness, NOCTI Cosmetology, and Skills USA Customer Service are also offered as approved Industry certifications.

R8740

Master Barber I (2credits)

DAYTEC WF (PH students are welcome to enroll)

Grades 10,11

In this introductory course students will demonstrate knowledge and skills in a clinical lab setting using mannequins and live models for manipulative practice. The program emphasizes personal safety, professionalism, scalp and hair care, hair cutting, styling, lightening, and coloring, shaving, and barbershop management.

R8741

Master Barber II (2 credits)

DAYTEC WF (PH students are welcome to enroll)

Prerequisite: R8740 (with a "C" or higher)

Grade 11, 12

In this continuing course, students build on the knowledge and skills from Master Barbering I. Students will apply their knowledge skills in a clinical lab setting, using mannequins and live models for manipulative practice. The program emphasizes skills in the areas of safety, professionalism, hair cutting, styling, shaving, barbershop management, and chemical service procedures. Workplace Readiness is offered as an approved industry certification.

R8742

Master Barber III (2 credits)

DAYTEC WF (PH students are welcome to enroll)

Prerequisite: R8741 (with a "C" or higher)

Grade 12

In this advanced course, students build on their theoretical foundation of general sciences and practices in barbering to increase proficiency in hair cutting and styling on live models, with attention to professionalism, client consultation, safety, and infection control. Students are trained in safe chemical processes related to chemical texture services and advanced hair coloring techniques. They also develop artistic skills with wigs and hair additions. An advanced management unit focuses on creating a barbershop business plant. Completion of this course prepares the student for the Virginia State Licensing Exam. **Students enrolling in Level III must have successfully completed Level I and Level II competencies and have permission from the course instructor. Master Barber students that have successfully completed a minimum of 840 hours of instruction and completed all three years with a B average will be eligible to sit for the Board of Barbers and Cosmetology licensing examination.**

STEM (Science, Technology, Engineering, and Mathematics) CAREER CLUSTER

R8450

Engineering Explorations I (1 Credit)

ROTEC PH and DAYTEC WF

Grades 9, 10, 11, 12

Must have passed 8th Grade Math with a "C" or higher

In Engineering Explorations I, students examine technology and engineering fundamentals in relation to solving real-world problems. Students investigate engineering history, including major engineering achievements, and they examine the principle engineering specialty fields and their related careers. Students practice engineering fundamentals, using mathematical and scientific concepts, and they apply the engineering design process through participation in hands- on engineering projects. Students communicate project-related information through team-based presentations, proposals, and technical reports. **Workplace Readiness Skills for the Commonwealth is offered as an approved Industry Certification. Students must meet the Virginia Western Community College placement requirements to be eligible for Dual Enrollment.**

R8451

Engineering Analysis and Applications II (1 Credit)

ROTEC PH and DAYTEC WF

Prerequisite: R8450, Algebra I with "C" or higher

Grades 10, 11, 12

Engineering Analysis and Applications II is the second of a possible three-course sequence that will allow students to apply the engineering design process to areas of the designed world, explore ethics in a technological world, and examine engineering systems. Students will participate in STEM-based, hands-on projects as they communicate information through team-based presentations, proposals, and technical reports. **NOCTI Pre-Engineering is offered as an approved Industry Certification. Students must meet the Virginia Western Community College placement requirements to be eligible for Dual Enrollment.**

R8452

Engineering Concepts and Processes III (1 Credit)

ROTEC PH and DAYTEC WF

Prerequisite: R8451

Grades 11, 12

Engineering Concepts and Processes III will enable students to solve real-world problems. This course focuses on building an engineering team, working with

case studies, managing projects, delivering formal proposals and presentations, and examining product and process trends. In addition, students continue to apply their engineering skills to determine what postsecondary education engineering pathway they want to follow. Students will participate in STEM-based, hands-on projects as they communicate information through team-based presentations, proposals, and technical reports. Students enrolling in Level III must have successfully completed Level I and Level II competencies and have permission from the course instructor. **Autodesk Certified User for Fusion is offered as an approved Industry Certification. Students must meet the Virginia Western Community College placement requirements to be eligible for Dual Enrollment.**

R8539
Precision Machining Technology I (2 Credits)
ROTEC PH (WF students are welcome to enroll)
Grades 10, 11, 12
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. Students will have the opportunity to sit for two industry recognized NIMS credentials. This class is taught through a partnership with Virginia Western Community College and is taught at Patrick Henry High School's ROTEC building. **Workplace Readiness is offered as an approved industry certification.**

R8540
Precision Machining Technology II (2 Credits)
ROTEC PH (WF students are welcome to enroll)
Prerequisite: R8539
Grades 11, 12
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. **Workplace Readiness and NOCTI are offered an approved Industry Certification.**

R8672
Welding I (1 Credit)
ROTEC PH and DAYTEC WF
Grades 10, 11, 12
Welding is required by a wide variety of industries—anywhere fusible materials and high heat are needed to manufacture, repair, or alter tools and products. Students in Welding I are taught to use manual welding, cutting, and electrical arc welding processes to fabricate and join metal parts according to diagrams, blueprints, and specifications. Students will also learn all safety related practices and techniques, including earning the OSHA 10 card. **Workplace Readiness is offered as an approved Industry Certification.**

R8673
Welding II (2 Credits)
ROTEC PH and DAYTEC WF
Prerequisite: R8672
Grades 11, 12
This course teaches advanced welding students how to fine-tune their craft and to perform welds in various positions, using multiple welding processes. Welding is required by a wide variety of industries—anywhere fusible materials and high heat are needed to manufacture, repair, or alter products. Professional welders are in high-demand and can earn accordingly. **Workplace Readiness is offered as an approved Industry Certification.**

R8674
Welding III (2 Credits)
ROTEC PH and DAYTEC WF
Prerequisite: R8673 (with a "C" or higher)
Grades 12
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. Students enrolling in Level III must have successfully completed Level I and Level II competencies and have permission from the course instructor. **NCCER CORE and AWS are offered as approved Industry certifications.**

MARKETING CAREER CLUSTER

R8120
Marketing (1 Credit)
ROTEC PH and DAYTEC WF
Grades 9, 10, 11, 12
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. Computer/technology applications and DECA activities enhance the course. DECA, the co-

curricular student organization, offers opportunities in leadership, community, and competitive events. **NRF Retail Industry Fundamentals, NRF Customer Service and Sales, and Workplace Readiness are offered as approved Industry certifications.**

R8140
Fashion Marketing (1 Credit)
DAYTEC WF only
Grades 10, 11, 12
This course leads students into the exciting and ever-changing world of fashion. Students gain knowledge of marketing as it relates to the fashion industry. From brick-and-mortar retail establishments to online retail and social media marketing, students will explore aspects such as trends, technology, the buying process, visual merchandising, the nature and history of fashion and fashion designers, and the global impact of the fashion industry on the economy. Academic skills related to the content are part of this course. **NRF Retail Industry Fundamentals, NRF Customer Service and Sales, and Workplace Readiness are offered as approved Industry certifications.**

R8175
Sports and Entertainment Marketing (1 Credit)
ROTEC PH and DAYTEC WF
Grades 10, 11, 12
This introductory course helps 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 customer service skills, branding, product development, pricing and distribution strategies, business structures, sales processes, social media, sponsorships and endorsements, as well as promotion plans needed for sports and entertainment events. The course also supports career development skills and explores career options. Academic skills (mathematics, science, English, and history/social science) related to the content are a part of this course. **NRF Retail Industry Fundamentals, NRF Customer Service and Sales, and Workplace Readiness are offered as approved Industry certifications.**

SPECIAL AND ELECTIVE PROGRAMS

R9071-1
Career Strategies (1 Credit)
Grades 9, 10, 11, 12
In this course, students explore career choices through an in-depth study of career clusters and pathways through a variety of investigative activities. Students analyze career assessment results, compare various educational options, and develop or revise a plan related to their academic and career-related goals. Contextual instruction and student participation in co-curricular career and technical student organization (CTSO) activities will develop leadership, interpersonal, and career skills. High-quality work-based learning (HQWBL) will provide experiential learning opportunities related to students' career goals and/or interests, integrated with instruction, and performed in partnership with local businesses and organizations. **Workplace Readiness Skills for the Commonwealth Examination is an approved Industry Certification.**

HIGH-QUALITY WORK-BASED LEARNING EXPERIENCES

A **High-quality Work-based Learning** experience is a school-coordinated experience within the workforce that includes sustained engagement with industry professionals in high-demand fields in which students apply coursework learning to a real-world setting while at the same time building critical thinking, collaboration, communication, creative thinking, and citizenship skills (Virginia's 5 Cs). Students practice their technical skills and durable skills on a sustained basis, and these experiences accelerate learning toward the goal of earning a national certificate of completion, an industry recognized credential, and/or attain postsecondary credit; and receive feedback and guidance through mentoring and supervision from industry professionals.

Virginia's career and technical education (CTE) programs include the following components:

- **Classroom instruction** – the essential component for students to master the academic and technical competencies, attitudes, and work ethic necessary for career success and lifelong learning
- **Career and technical student organizations (CTSOs)** – organizations that provide experiences that reinforce and strengthen classroom learning and prepare students for individual responsibility, teamwork, and leadership in their chosen career pathways
- **WBL experiences** – opportunities for students to apply and refine knowledge, attitudes, and skills through professionally coordinated and supervised work experience directly related to career goals

Six WBL experiences have been identified as meeting the new definition for a High-quality Work-based Learning experience. These WBL experiences are aligned with CTE completer goals, postsecondary impact, and stakeholder feedback in their potential to provide students with 3E Readiness Framework outcomes and meet regional workforce needs. These experiences include clinical experiences, entrepreneurship, internship, registered apprenticeship, school-based enterprise, and select immersion supervised agricultural experiences. Each of these experience categories include all the above components of the revised definition of High-quality Work-based Learning.

Work-based learning opportunities with Roanoke City Public Schools are available to all students and are designed to align with the student's career goals, interests, and / or curriculum.

RCPS ANNUAL PUBLIC NOTICE CAREER AND TECHNICAL EDUCATION

Roanoke City Public School Division's Department of Career and Technical Education offers a variety of career and technical programs to all students at the middle and high school levels. The program areas include the following:

- Business and Information Technology
- Career Connections
- Family and Consumer Sciences and Education
- Health and Medical Sciences
- Marketing
- Military Science
- Technology Education
- Trade and Industrial Education

Roanoke City Public Schools does not discriminate on the basis of race, color, national origin, sex, disability, or age in its programs and activities and provides equal access to the Boy Scouts and other designated youth groups.[1] The following persons have been designated to handle inquiries regarding the non-discrimination policies.

Kathleen Duncan, Program Director
Roanoke Technical Education Center (ROTEC)
2200 Grandin Road, SW, Roanoke, VA 24015
540-853-2803
kduncan@rcps.info

Dr. Hayley Poland, Assistant Superintendent of
Student Success and Support Services
201 Campbell Avenue, Roanoke, VA 24011
540-853-1393
hpoland@rcps.info

DISTANCE LEARNING DUAL ENROLLMENT OFFERINGS THROUGH VWCC

Certain courses that may be used to satisfy the "Elective" requirement for the Associates of Science in General Studies at Virginia Western Community College may be taken in a distance learning environment. Recommended courses are listed below. Please note that some courses may not be taught during a particular semester.

ART 101/102 - History/Appreciation of Art I/II: Presents history and interpretation of architecture, sculpture, and painting. Begins with prehistoric art and follows the development of western civilization to present.

BIO 101 – General Biology I: Focuses on biological processes with a chemical foundation, including macromolecules, 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 the process of science, interdisciplinary approach, and relevance of biology to society.

ECO 201 - Principles of Macroeconomics: Introduces macroeconomics including the study of Keynesian, classical, monetarist principles and theories, the study of national economic growth, inflation, recession, unemployment, financial markets, money and banking, the role of government spending and taxation, along with international trade and investments.

ECO 202 - Principles of Microeconomics: Introduces the basic concepts of microeconomics. Explores the free market concepts with coverage of economic models and graphs, scarcity and choices, supply and demand, elasticity, marginal benefits and costs, profits, and production and distribution.

GEO 210 - Introduction to Cultural Geography: 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.

HIS 111/112 - History of World Civilization I/II: Surveys Asian, African, Latin American, and European civilizations from the ancient period to the present. Lecture

MUS 121/122 - Music Appreciation I/II: Increases the variety and depth of the student's interest, knowledge, involvement in music and related cultural activities. Acquaints the student with traditional and twentieth-century 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.

PHI 101 - Introduction to Philosophy I: 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.

PHI 220 - Ethics: Provides a systematic study of representative ethical systems.

PSY 200 - Principles of Psychology: Surveys the basic concepts of psychology. Covers the scientific study of

behavior, behavioral research methods and analysis, and theoretical interpretations. Includes topics that cover physiological mechanisms, sensation/perception, motivation, learning, personality, psychopathology, therapy, and social psychology.

PSY 215 - **Abnormal Psychology**: Explores historical views and current perspectives of abnormal behavior. Emphasizes major diagnostic categories and criteria, individual and social factors of maladaptive behavior, and types of therapy. Includes methods of clinical assessment and research strategies.

PSY 230 - **Developmental Psychology**: Studies the development of the individual from conception to death. Follows a life-span perspective on the development of the person's physical, cognitive, and psychosocial growth.

PSY 235 - **Child Psychology**: Studies development of the child from conception to adolescence. Investigates physical, intellectual, social and emotional factors involved in the child's growth.

PSY 236 - **Adolescent Psychology**: Studies development of the adolescent. Investigates physical, intellectual, social, and emotional factors of the individual from late childhood to early adulthood.

REL 200 - **Survey of the Old Testament:** Surveys books of the Old Testament, with emphasis on prophetic historical books. Examines the historical and geographical setting and place of the Israelites in the ancient Middle East as background to the writings.

REL 230 - **Religions of the World:** Introduces the religions of the world with attention to origin, history, and doctrine.

SOC 200 - **Principles of Sociology**: Introduces fundamentals of social life. Presents significant research and theory in areas such as culture, social structure, socialization, deviance, social stratification, and social institutions.

The following are required courses for the Associates of Science degree and are only offered through the distance learning environment. They are not considered electives.

HLT 110 - **Concepts in Personal and Community Health:** Studies the concepts related to the maintenance of health, safety, and the prevention of illness at the personal and community level.

SDV 100 - **College Success Skills:** 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.