



LCS High School

# PROGRAM OF STUDIES

2020-21

Every Child, By Name and By Need, to Graduation.

A TRADITION OF EXCELLENCE FOR ALL



LYNCHBURG CITY SCHOOLS

*School Board Approved: December 3, 2019*

Dear Lynchburg City Schools Students and Parents:

Our mission in Lynchburg City Schools (LCS) is Every Child by Name and by Need, to Graduation. An essential component of our commitment to helping students reach future goals is by offering a wide array of courses and programs that students can choose from to help them gain full access to their future post-secondary endeavors.

The High School Program of Studies handbook contains academic information that will help in planning a course of study. This handbook provides information regarding the Profile of a Graduate graduation requirements for our rising ninth and tenth graders as well as the graduation requirements for our rising juniors and seniors. Any new course offerings or changes to this document will be communicated and updated in the online version found at <https://www.lcsedu.net/departments/curriculum/program-of-studies>.

The main updates made to this year's handbook include adding Chemistry I and II for the XLR8 STEM Academy and Advanced Studio Art. Semester courses in Art were combined into yearlong courses (Art I, II, and III). Several course names were modified to match the state course names with no change of content. Other language was modified for clarity and consistency.

Please take the time to review the information presented in this handbook. The information ranges from specific course selection options and the different academic levels, academic and post-secondary career planning, specialized LCS programs such as the Early College Program, Central Virginia Governor's School (CVGS), National Collegiate Athletic Association (NCAA) eligibility requirements, Virginia Standards of Learning (SOL) information, graduation requirements, promotion and retention guidelines, and grade point average calculation criteria. The handbook also includes various policies and procedures. Please also be aware that additional procedures and practices may be determined at the individual high school.

All of this information will help as the student develops a comprehensive academic and career plan. Development of a plan is best accomplished with the collaboration of students, parents, teachers, principals, and counselors. Please be in contact with your child's school counselor in order to receive support in creating an individualized plan for your child.

Through these course offerings and our partnership with families, each student will be on the path to achieve future hopes and dreams.

Sincerely,

Crystal M. Edwards, Ed.D.  
Superintendent

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## LYNCHBURG CITY SCHOOL BOARD

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## HIGH SCHOOLS OF LYNCHBURG CITY SCHOOLS

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Principal

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Principal

**Fort Hill Community School**  
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Ms. Cathy Viar,  
Program Lead

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# I. GENERAL INFORMATION

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## Grading Scale

All courses receive a grade on a quarterly basis. For most classes, credits are earned on a yearly basis, with some as a semester basis. The following grading scale is used in grade levels 9-12 for all students. However, for Grade Point Average (GPA) calculation purposes, the ten-point scale for the grade (not considering plus and minus) is used.

A+ 99-100	B+ 88-89	C+ 78-79	D+ 68-69	F 0-59
A 93-98	B 83-87	C 73-77	D 63-67	
A- 90-92	B- 80-82	C- 70-72	D- 60-62	

**Differences between Grade Level, Advanced, Advanced Placement, and Dual-Enrollment Courses** - Courses are offered at different levels of difficulty beyond the grade level content in order to provide students opportunities for challenging their learning and growing at a more rapid pace. The following provide general differences between the course types. In some cases, additional information is provided in the specific course descriptions:

**Grade Level or Regular Course** – Course content is at the level of rigor of the Standards of Learning or the defined curriculum (for courses that are not included in the Virginia Standards of Learning). More individualized support is often provided.

**Advanced Course** – Course content includes the rigor of SOLs, or other standards while also requiring additional content and deeper application of the content. Assignments may include additional work that may also require more self-direction by the student.

**Advanced Placement Course** – Course content is rapidly paced with additional depth that can require student research and analysis on independent assignments. Lessons are often more complex, abstract, and open-ended than lessons in other courses. The course content aligns with the prescribed content by the College Board, which develops and oversees Advanced Placement curriculum.

**Dual-Enrollment Course** – Dual-enrollment courses align with college course curriculum for Central Virginia Community College.

## Grade Point Average (GPA) Calculations and Class Rank

The Grade Point Average (GPA) calculation is a way to quantify the overall academic achievement of a student in a single number. The GPA calculation is used for ranking graduating students and determining if the student achieves Summa Cum Laude honors. The GPA is often requested on applications for awards, recognitions, for certain memberships or positions, and on college applications. This value is determined by the grades a student earns and by the level of difficulty of the courses taken.

In the Lynchburg City Schools, there are three levels of courses, and each allocates a different number of quality points for a given grade. For most classes, an “A” is worth 4 points, a “B” is worth 3 points, a “C” is worth 2 points, a “D” is worth 1 point, and an “F” is worth zero points. If a student takes an advanced level course, an additional 0.5 points is added to any grade earned above an “F”. If a student takes an Advanced Placement (AP) course and AP exam (or identified Dual Enrollment courses or CVGS courses), an additional full point is added to any grade earned above an “F”. For GPA purposes, the + and – of a grade letter do not factor in.

## Quality Points Per Full Year Credit

Advanced Placement, CVGS, and Dual Enrollment Courses in Core Content Areas	Advanced Courses and Specified Dual Enrollment Courses	All Other Courses
A – 5	A – 4.5	A – 4
B – 4	B – 3.5	B – 3
C – 3	C – 2.5	C – 2
D – 2	D – 1.5	D – 1
F – 0	F – 0	F – 0

The GPA for a year is calculated by averaging the quality points for courses taken that year and dividing that by the number of courses taken that year. The cumulative GPA is calculated by averaging the quality points for high school courses taken for that year and all prior years (including high school level courses that a student may have taken in middle school and in approved summer courses) and dividing that by the total number of those courses.

Students are ranked based on their overall earned GPA. Students are considered for the distinction of Summa Cum Laude, based on their cumulative GPA. Summa Cum Laude is considered the highest level of academic performance and this distinction will be noted on the academic transcript. The thresholds for Summa Cum Laude are noted below for the end of each grade level:

- 9th grade – 4.3
- 10th grade – 4.3
- 11th grade – 4.4
- 12th grade – 4.5 or higher

## Advanced Placement (AP) Courses Offered Through LCS

As mentioned previously, due to the rigor and work load, all of these AP courses are weighted at 5.0 quality points for an “A” (with completion of the AP exam). All students completing Advanced Placement (AP) courses must take the associated AP exams in May. **If a student is unable to participate fully in the AP exam for a course, that course will be recognized on the student’s transcript as an advanced level I course (weighted at 4.5 rather than 5.0 quality points) and the student must sit for the corresponding course final exam (unless an exam exemption applies).** In the case of extreme extenuating circumstances, appeals to this practice may be submitted to the Director of Curriculum and Instruction. Any AP course must be taken through an instructor at the high school unless approved by the principal in writing.

**The College Board sets AP testing dates one year in advance. Any AP student not testing on those pre-determined dates will be charged a late/unused test fee of up to \$45 unless he/she cannot test due to extreme circumstances beyond his/her control. There is a \$40 fee for taking each AP exam. Reduced fees are available due to family financial needs.**

- Advanced Placement Language/Composition
- Advanced Placement Literature
- Advanced Placement American History
- Advanced Placement World History
- Advanced Placement European History
- Advanced Placement Micro and Macro Economics
- Advanced Placement Calculus AB
- Advanced Placement Calculus BC
- Advanced Placement Statistics
- Advanced Placement Latin (Vergil)
- Advanced Placement Spanish Language V
- Advanced Placement French Language V
- Advanced Placement German Language V
- Advanced Placement American Government
- Advanced Placement Comparative Government
- Advanced Placement Human Geography
- Advanced Placement Chemistry
- Advanced Placement Physics I & II
- Advanced Placement Biology
- Advanced Placement Art History
- Advanced Placement Portfolio Art
- Advanced Placement Music Theory
- Advanced Placement Psychology
- Advanced Placement Computer Science
- Advanced Placement Environmental Science
- Advanced Placement Seminar
- Advanced Placement Research
- Other courses as noted in the current Virtual Virginia On-Line Program brochure

## Dual Enrollment Courses (Overview)

The Dual Enrollment (DE) program with Central Virginia Community College (CVCC) provides highly motivated students the opportunity to experience college-level work while in high school and receive both high school and college credit. Students are encouraged to consider this opportunity while also being aware that the demands of these courses are at the college level.

Dual enrollment courses in the core content areas are weighted at 5.0 quality points. Many Governor’s School courses are Dual Enrollment and count as 5.0 weighted courses. Dual enrollment courses in non-core content and career and technical fields are weighted at 4.5 quality points. The College Success Skills course is weighted at 4.0 quality points.

Students enrolled in these courses may earn college credit from CVCC and/or University of Lynchburg by fulfilling course requirements. Regardless of the course grade, the course will appear on the student’s permanent record at CVCC or University of Lynchburg. **If a student receives a D or F, it does have the potential to affect college financial aid eligibility and/or guaranteed admissions agreements with four-year colleges and universities.** Students enrolled in DE courses need to abide by the policies and procedures of CVCC and University of Lynchburg as well as LCS. **Students must qualify for enrollment for CVCC courses by taking, and passing the Virginia Placement Test (VPT) prior to enrollment. Additional application and eligibility information is available. Please see your counselor for more information.**

The costs for tuition and the required textbooks for dual enrollment courses taught at the high school, Central Virginia Governor’s School, and the Governor’s STEM Academy will remain the responsibility of the school division. However, there is a \$75 fee for a course withdrawal if the CVCC drop date has passed. This payment is due to the school division within two weeks of dropping the class. Checks should be made payable to LCS and sent to the curriculum and instruction department. Please be aware that timelines for withdrawing from a course are different for DE courses. See Section III for more information on dual enrollment options.

The Early College Program is an opportunity for students to earn a high school diploma and an Associate’s Degree at the same time. Eligible students are selected by a committee at CVCC. The cost of the Early College Program books is covered by LCS but the tuition is the responsibility of each family. There are some opportunities for financial assistance to families with financial hardship. Counselors have the financial hardship forms.

Any student seeking to take courses on the CVCC campus on their own and not a part of any LCS approved program must seek prior approval and all costs for books and tuition are the responsibility of the family.

## Advanced Courses Offered Through LCS

The following courses are at an advanced level and are weighted at 4.5 quality points for an "A."

- Advanced World Literature & Composition I
- Advanced World Literature & Composition II
- Advanced American & World Literature & Composition
- Advanced English Literature & Composition
- Advanced Composition (Dual Enrollment)\*
- Advanced Algebra in the 8th grade
- Advanced Earth Science in the 8th grade
- Advanced Algebra II
- Advanced Geometry with Trigonometry
- Advanced Math Analysis
- Advanced Pre-Calculus/Applied Calculus (Dual Enrollment)\*
- Advanced Chemistry
- Advanced Biology
- Advanced Physics
- Advanced College Biology (Dual Enrollment)\*
- Advanced World History & Geography I (to 1500 AD)
- Advanced World History & Geography II (1500 AD to Present)
- Advanced World Geography
- Advanced American History
- Advanced U.S. Government
- Advanced French IV
- Advanced Spanish IV
- Advanced German IV
- Advanced Latin Literature
- Advanced Studio Art
- Advanced Portfolio Art
- Computer Systems Technology II/PC Repair I (Dual Enrollment)
- Robotic Work/Cell Technology (Dual Enrollment)
- Culinary Arts (Dual Enrollment)
- Teachers for Tomorrow I (Dual Enrollment)
- Drafting II (Dual Enrollment)

## Online Courses

### Virtual Virginia Courses - <http://www.virtualvirginia.org>

Lynchburg City Schools students have the opportunity to take courses through Virtual Virginia, a program of the Virginia Department of Education. The Virtual Virginia program offers online Advanced Placement (AP®), world language, core academic, and elective courses to students. **Students may participate in these online learning courses if they meet all prerequisite and eligibility criteria, including prior approval by the high school counselor and principal.**

Students who are most successful in online courses are those who can work independently with minimal supervision, have good time management skills, and possess a strong desire to learn. A successful online student can stay on task and maintain a regular schedule of logging on and keeping up with the readings, course assignments, homework, and other expectations. Interested students should contact their counselor for more information.

If students are enrolled in AP Virtual Virginia courses, then students must take the associated exams in the spring. Virtual Virginia courses are teacher directed and not self-paced. These virtual AP courses are graded and weighted at a 5.0 for an A (just as other AP courses are), and they are equivalent in rigor and work load to on-site AP courses.

### Criteria for Participation

1. Typically, it is mostly juniors or seniors that choose to be scheduled into Virtual Virginia courses. Students below the junior grade level may enroll in a Virtual Virginia course, including AP courses, with written permission from the school counselor and principal, in consultation with the Director of Curriculum and Instruction. Permission for students below the junior grade level to take these courses usually only applies to students who have been vertically accelerated in specific content areas as a gifted service option or for students who have transferred in and have completed other pre-requisite courses offered.
2. Only students who have completed any and all prerequisites listed for the course in the Lynchburg City Schools High School Program of Studies will be scheduled into a Virtual Virginia course.
3. Students will be scheduled into Virtual Virginia courses (particularly AP courses) for which a section of that same course is not being offered in the high school that year or if there are unavoidable scheduling conflicts. Exceptions can be made by the principal for students with extenuating circumstances.
4. Students will be scheduled into only one Virtual Virginia course during a period.
5. Students will be scheduled into Virtual AP courses during the seven defined periods during the regular school day.
6. Students will not be scheduled into any Virtual AP courses if it would cause them to then have more than seven courses in a given year.
7. Students who enroll in Virtual Virginia courses and wish to withdraw after 21 calendar days may only do so according to the Virtual Virginia guidelines. Students may request to enroll in a Virtual Virginia course no later than July 15th.

The counselor at each school will provide the parents/guardians of students being scheduled into a virtual course with all the information noted in this section. In addition, both the student and the parent/guardian will be required to sign a form indicating that they understand the rigor of the courses, the nature of the instruction, the need for the student to be self-motivated and self-monitoring, and the specifics of the "drop/withdrawal" period. Please note that a "D," indicating distance learning, will be at the end of each of the Virtual Virginia course numbers. In some cases this will be the only difference between the on-site course number and the Virtual Virginia course number.

If you have any questions about non-weighted or advanced placement courses available through Virtual Virginia, please visit the Virtual Virginia website: <http://www.virtualvirginia.org>. For questions regarding eligibility requirements, please contact your counselor.

## **Edgenuity and Other Online Courses Through LCS**

Lynchburg City Schools also offers courses through outside vendors, such as Edgenuity. Typically, there are courses taken to make up a credit or in a course for which enrollment is too low to be offered in LCS. Enrollment in such a course is only available with written permission of the principal.

## **Online Courses Outside of LCS**

Any student wishing to take an online course outside of LCS for credit must gain prior written permission from the principal. Failure to obtain prior permission may result in the course not transferring into LCS. Courses should only be those found within this LCS Program of Studies. Any associated costs would be the responsibility of the student/family.

## **Summer Courses (Online)**

Courses taken during the summer do not count toward the maximum course load during the fall and spring semesters. Any course taken during the summer that is online must be completed by the summer deadline as prescribed by the school division. The following online courses are planned to be offered through LCS for summer 2020. The counseling department can provide additional information on enrolling. Each course is available for a fee of \$225.

- Online Personal Finance & Economics (10-12th)
- Health/PE 9 Online

## **Other Courses**

### **Independent Study Courses**

Independent study courses provide an opportunity for conscientious and mature students to schedule a course which they otherwise would not be able to take. These courses are scheduled individually, and they require the participation of a certified instructor and the prior written approval of the principal. The student must complete all work and tests assigned. **All independent study courses are graded pass/fail.** The student will receive credit for the course, and the course will appear on the student's transcript, but the course will be graded Pass/Fail and will not count in the cumulative GPA.

### **Courses Offered Outside LCS**

Any student wishing to take a course outside of LCS for credit must gain prior written permission from the principal unless it is offered through an approved program with LCS to which the student has already been admitted (e.g. Governor's School, Early College, and STEM Academy). Failure to obtain prior permission may result in the course not transferring into LCS. Courses should only be those found within this LCS Program of Studies. **Any associated cost would be the responsibility of the student/family.**

### **Withdrawal from a Course**

All requests for a student to be withdrawn from a course shall be made in writing, signed by a parent/guardian, and turned in to the counselor by the end of the 10th school day of the course. Any course from which a student is withdrawn within that time period will not be recorded on the student's report card or transcript. In rare cases, extenuating circumstances may justify a withdrawal from a course after the 10th day. In such a case, the student's transcript will reflect the course and a grade of withdrawal passing (WP) or withdrawal failing (WF) for the course. These designations (WP and WF) are not considered in Grade Point Average calculations. A parent/guardian must file a written request for such consideration with the building principal, and that request must clearly indicate the extenuating circumstances to justify a withdrawal. If the request is to change the level of a course rather than withdraw from a course, that request must be made no later than five days after the first quarter report card has been distributed. In some cases there may not be an alternative level to the same course. For additional procedures, please refer to Lynchburg City School Board Policies and Administrative Regulations 6-58.

### **Course Load**

Students in grades 9-11 must carry the equivalent of seven credit-bearing courses. All students in grade twelve (senior students) must carry the equivalent of four credit-bearing courses (athletes must carry five courses). Unless prior written permission by the principal is provided, senior students must also carry other approved courses or repeat courses in the other three periods. When scheduling courses that involve travel between different schools, students should be aware of the travel time and the fact that it may reduce the number of courses that could be taken. Students in Grades 9-11 should not carry more than seven credit-bearing courses during the school year. A senior desiring to carry more or less than seven credit-bearing courses must receive written permission to do so from the school's principal.

## Promotion

According to Lynchburg City School Board Policies and Administrative Regulations *Policy 7-25 Promotion, Retention, Acceleration* high school credit requirements for promotion are as follows. These credits indicated the cumulative amount that must be earned as that point in order to be promoted to the next grade level.

- 9th to 10th Grade (4 credits)
- 10th to 11th Grade (9 credits)
- 11th to 12th Grade (15 credits)

## Verified Credit

A verified credit means the student has passed the state required Standards of Learning (SOL) test in addition to the course. Students shall not be required to take an end-of-course SOL test in an academic subject after they have earned the number of verified credits required for that academic content area for graduation, unless such test is necessary in order for the school to meet federal accountability requirements. Verified credits may be earned in the following courses:

English	Math	Science	Social Studies
Reading	Algebra I	Biology	World History I
Writing	Algebra II	Chemistry	World History II
	Geometry	Earth Science	VA & US History
			World Geography

## Locally Awarded Verified Credit Option

A verified credit is received when a student passes a high school credit course and the associated Standards of Learning (SOL) end-of-course state test. A locally awarded verified credit is an option available for some students who pass a class but do not pass the associated SOL end-of-course test and do not have enough verified credits to graduate. Locally awarded verified credits apply only to the standard diploma for students who entered 9th grade for the first time prior to 2018-19. For students who entered 9th grade for the first time in 2018-19 or after, one locally awarded verified credit in any subject can be awarded and can count toward any diploma.

To be eligible to earn a local verified credit, a student must:

- pass the high school course but not pass the associated state SOL end-of-course test,
- score at least 375 on any administration of the SOL test having taken the test at least twice, and
- demonstrate achievement in the academic content through a local appeal process.

The appeal process in Lynchburg includes the following:

- A school-based panel will review grades of students eligible for a local verified credit. A local verified credit will be awarded if a student has achieved a final grade of "C" or better for the course.
- Students eligible for a local verified credit who receive a "D" in the course will receive a local verified credit if they receive a grade of "C" or higher on the exam.
- Students not meeting one of the above criteria may review course content and complete a cumulative assessment. Once they receive a passing score on the assessment, they are eligible for a locally verified credit.
- The school-based panel has final authority in determining whether to (a) award the verified credit, (b) deny the verified credit, or (c) suggest participation in a remedial program followed by retesting. Any appeals regarding locally awarded verified credits should be directed to the director of curriculum and instruction.

**NOTE:** Students with disabilities who qualify for credit accommodations may be awarded local verified credits in any subject area if they meet the criteria above.

## Applied Studies Diploma

The Applied Studies Diploma is a diploma option available to students identified as having a disability who complete the requirements of their [individualized education programs \(IEPs\)](#) and meet certain requirements prescribed by the Board of Education pursuant to regulations, but do not meet the requirements for any named diploma.

## Certificate of Program Completion

Students who have completed a prescribed course of study as defined by the local school board shall be awarded certificates by local school boards if the students do not qualify for diplomas. This is NOT a high school diploma.

## Standard Diploma Course Requirements for Students Entering Ninth Grade for the First Time in 2018-19 and Beyond (8 VAC 20-131-51)

Subject Area	Standard Credits	Verified Credits	Specifications
English	4	2	<b>All students must take the SOL Reading and Writing (or equivalent) tests in high school.</b>
Mathematics	3	1	<p>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. Per the Standards of Quality, a computer science course credit earned by students may be considered a mathematics course credit.</p> <p><b>All students must take a SOL math test in high school.</b></p>
Laboratory Science	3	1	<p>Courses completed to satisfy this requirement shall include course selections from at least two different science disciplines: earth sciences, biology, chemistry, or physics. Per the Standards of Quality, a computer science course credit earned by students may be considered a science course credit.</p> <p>Students who complete a career and technical education program sequence and pass an examination or occupational competency assessment in a career and technical education field that confers certification or an occupational competency credential from a recognized industry, or trade or professional association, or acquires a professional license in a career and technical education field from the Commonwealth of Virginia may substitute the certification, competency credential, or license for either a laboratory science or history and social science verified credit when the certification, license, or credential confers more than one verified credit. The examination or occupational competency assessment must be approved by the board as an additional test to verify student achievement.</p> <p><b>All students must take the SOL Biology test in high school.</b></p>
History & Social Sciences	3	1	<p>Courses completed to satisfy this requirement shall include Virginia and U.S. history, Virginia and U.S. Government, and one course in either world history or geography or both. The board shall approve courses to satisfy this requirement.</p> <p>Students who complete a career and technical education program sequence and pass an examination or occupational competency assessment in a career and technical education field that confers certification or an occupational competency credential from a recognized industry, or trade or professional association, or acquires a professional license in a career and technical education field from the Commonwealth of Virginia may substitute the certification, competency credential, or license for either a laboratory science or history and social science verified credit when the certification, license, or credential confers more than one verified credit. The examination or occupational competency assessment must be approved by the board as an additional test to verify student achievement.</p> <p><b>All students must take a SOL history test in high school.</b></p>
Health & Physical Ed.	2	0	N/A
World Language, Fine Arts or Career Tech	2	0	Per the Standards of Quality, credits earned for this requirement shall include one credit in fine or performing arts or career and technical education. Per the Standards of Quality, a computer science course credit earned by students may be considered a career and technical course credit.
Economics & Personal Finance	1	0	N/A
Electives	4	0	Courses to satisfy this requirement shall include at least two sequential electives as required by the Standards of Quality.
<b>Total</b>	<b>22</b>	<b>5</b>	N/A



#### Additional Requirements for Graduation

- **Advanced Placement, Honors, Dual Enrollment, or Career and Technical Education Credential** - In accordance with the Standards of Quality, students shall either (i) complete an Advanced Placement, honors, or dual enrollment course, or (ii) earn a career and technical education credential approved by the board, except when a career and technical education credential in a particular subject area is not readily available or appropriate or does not adequately measure student competency, in which case the student shall receive satisfactory competency-based instruction in the subject area to satisfy the standard diploma requirements. The career and technical education credential, when required, could include the successful completion of an industry certification, a state licensure examination, a national occupational competency assessment, or the Virginia workplace readiness assessment.
- **Virtual Course** - Students shall successfully complete one virtual course, which may be a non-credit-bearing course or a required or elective credit-bearing course that is offered online. The LCS Economics and Personal finance course has an online component that fulfills this requirement.
- **Training in emergency first aid, cardiopulmonary resuscitation (CPR), and the use of automated external defibrillators (AED)** - Students shall be trained in emergency first aid, CPR, and the use of AED, including hands-on practice of the skills necessary to perform cardiopulmonary resuscitation. Students with an IEP or 504 Plan that documents that they cannot successfully complete this training shall be granted a waiver from this graduation requirement, as provided in 8VAC20-131-420 B.
- **Demonstration of the five Cs** - Students shall acquire and demonstrate foundational skills in critical thinking, creative thinking, collaboration, communication, and citizenship in accordance with the Profile of a Virginia Graduate approved by the board.
- If taken, the Algebra, Functions, and Data Analysis course must be taken before Algebra II.
- **See your counselor for specifics on Substitute Tests, Locally Awarded Verified Credits and Credit Accommodations in lieu of passing SOL scores.**

## Advanced Studies Diploma Course Requirements for Students Entering Ninth Grade for the First Time in 2018-19 and Beyond (8 VAC 20-131-51)

Subject Area	Standard Credits	Verified Credits	Specifications
English	4	2	All students must take the SOL Reading and Writing (or equivalent) test in high school.
Mathematics	4	1	Courses completed to satisfy this requirement shall include at least three different course selections from among: Algebra I, Geometry, Algebra II, or other mathematics courses above the level of Algebra II. The board shall approve courses to satisfy this requirement. Per the Standards of Quality, a computer science course credit earned by students may be considered a mathematics course credit.  All students must take a SOL math test in high school.
Laboratory Science	4	1	Courses completed to satisfy this requirement shall include course selections from at least three different science disciplines from among: earth sciences, biology, chemistry, or physics. Per the Standards of Quality, a computer science course credit earned by students may be considered a science course credit.  All students must take the SOL Biology test in high school.
History & Social Sciences	4	1	Courses completed to satisfy this requirement shall include Virginia and U.S. history, Virginia and U.S. Government, and two courses in either world history or geography or both. The board shall approve additional courses to satisfy this requirement.  All students must take a SOL history test in high school.
World Language	3	0	Courses completed to satisfy this requirement shall include three years of one language or two years of two languages.
Health & Physical Ed	2	0	N/A
Fine Arts or Career Tech	1	0	Per the Standards of Quality, a computer science course credit earned by students may be considered a career and technical credit.
Economics & Personal Finance	1	0	N/A
Electives	3	0	Courses to satisfy this requirement shall include at least two sequential electives as required by the Standards of Quality.
<b>Total Credits</b>	<b>26</b>	<b>5</b>	N/A

### Additional Requirements for Graduation

- **Advanced Placement, Honors, Dual Enrollment, or Career and Technical Education Credential** - In accordance with the Standards of Quality, students shall either (i) complete an Advanced Placement, honors, or dual enrollment course or (ii) earn a career and technical education credential approved by the board, except when a career and technical education credential in a particular subject area is not readily available or appropriate or does not adequately measure student competency, in which case the student shall receive satisfactory competency-based instruction in the subject area to satisfy the 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.
- **Virtual Course** - Students shall successfully complete one virtual course, which may be a non-credit-bearing course or a required or elective credit-bearing course that is offered online. The LCS Economics and Personal finance course has an online component that fulfills this requirement.
- **Training in emergency first aid, cardiopulmonary resuscitation (CPR), and the use of automated external defibrillators (AED)** - Students shall be trained in emergency first aid, CPR, and the use of AED, including hands-on practice of the skills necessary to perform cardiopulmonary resuscitation. Students with an IEP or 504 Plan that documents that they cannot successfully complete this training shall be granted a waiver from this graduation requirement, as provided in [8VAC20-131-420 B](#).
- **Demonstration of the five Cs** - Students shall acquire and demonstrate foundational skills in critical thinking, creative thinking, collaboration, communication, and citizenship in accordance with the Profile of a Virginia Graduate approved by the board.
- If taken, the Algebra, Functions, and Data Analysis course must be taken before Algebra II.
- See your counselor for specifics on Substitute Tests, Locally Awarded Verified Credits and Credit Accommodations in lieu of passing SOL scores.

## Standard Diploma Course Requirements (8 VAC 20-131-51) for Students Entering Ninth Grade for the First Time in 2011-2012 through 2017-2018

Discipline Area	Standard Credits	Verified Credits	Specifications
English	4	2	Students must pass the SOL Reading and Writing test (or an approved substitute test).
Mathematics	3	1	<p>Courses completed to satisfy this requirement shall include at least two different course selections from among: Algebra I; Geometry; Algebra, Functions, and Data Analysis; Algebra II, or other mathematics courses above the level of Algebra II. The board shall approve courses to satisfy this requirement. Per the Standards of Quality, a computer science course credit earned by students may be considered a mathematics course credit.</p> <p><b>Students must pass a SOL math test.</b></p>
Laboratory Science	3	1	<p>Courses completed to satisfy this requirement shall include course selections from at least two different science disciplines: earth sciences, biology, chemistry, or physics. Per the Standards of Quality, a computer science course credit earned by students may be considered a science course credit.</p> <p>Students who complete a career and technical education program sequence and pass an examination or occupational competency assessment in a career and technical education field that confers certification or an occupational competency credential from a recognized industry, or trade or professional association, or acquire a professional license in a career and technical education field from the Commonwealth of Virginia may substitute the certification, competency credential, or license for (i) the student-selected verified credit and (ii) either a science or history and social science verified credit when the certification, license, or credential confers more than one verified credit. The examination or occupational competency assessment must be approved by the board as an additional test to verify student achievement.</p> <p><b>Students must pass a SOL science test. An additional passed science test can fulfill the "student selected" test requirement.</b></p>
History & Social Sciences	3	1	<p>Courses completed to satisfy this requirement shall include U.S. and Virginia History, U.S. and Virginia Government, and one course in either world history or geography or both. The board shall approve courses to satisfy this requirement.</p> <p>Students who complete a career and technical education program sequence and pass an examination or occupational competency assessment in a career and technical education field that confers certification or an occupational competency credential from a recognized industry, or trade or professional association, or acquire a professional license in a career and technical education field from the Commonwealth of Virginia may substitute the certification, competency credential, or license for (i) the student-selected verified credit and (ii) either a science or history and social science verified credit when the certification, license, or credential confers more than one verified credit. The examination or occupational competency assessment must be approved by the board as an additional test to verify student achievement.</p> <p><b>Students must pass a SOL history test. An additional passed history test can fulfill the "student selected" test requirement.</b></p>
Health & Physical Ed	2	0	N/A
World Language, Fine Arts or Career Tech	2	0	Pursuant to § 22.1-253.13:4 of the Code of Virginia, credits earned for this requirement shall include one credit in fine or performing arts or career and technical education. Per the Standards of Quality, a computer science course credit earned by students may be considered a career and technical education course credit.
Economics & Personal Finance	1	0	N/A
Electives	4	0	Courses to satisfy this requirement shall include at least two sequential electives as required by the Standards of Quality.

Student Selected Test	0	1	A student may utilize additional tests for earning verified credit in computer science, technology, career and technical education, economics or other areas as prescribed by the board in <a href="#">8VAC20-131-110</a> .
Career Tech Credential	0	0	Students shall earn a career and technical education credential approved by the Board of Education, except when a career and technical education credential in a particular subject area is not readily available or appropriate or does not adequately measure student competency, in which case the student shall receive satisfactory competency-based instruction in the subject area to satisfy the standard diploma requirements. The career and technical education credential, when required, could include the successful completion of an industry certification, a state licensure examination, a national occupational competency assessment, or the Virginia workplace readiness assessment.
Total	22	6	N/A

#### Additional Requirements for Graduation

- **For students entering the ninth-grade class for the first time in 2013-2014 and beyond:** Students shall successfully complete one virtual course, which may be a noncredit-bearing course or a required or elective credit-bearing course that is offered online. The LCS Economics and Personal finance course has an online component that fulfills this requirement.
- **For students entering the ninth-grade class for the first time in 2016-2017 and beyond:** Students shall be trained in emergency first aid, cardiopulmonary resuscitation, and the use of automated external defibrillators, including hands-on practice of the skills necessary to perform cardiopulmonary resuscitation. Students with an Individualized Education Program (IEP) or 504 Plan that documents that they cannot successfully complete this training shall be granted a waiver from this graduation requirement, as provided in 8VAC20-131-420 B.
- If taken, the Algebra, Functions, and Data Analysis course must be taken before Algebra II.
- See your counselor for specifics on Substitute Tests, Locally Awarded Verified Credits and Credit Accommodations in lieu of passing SOL scores.



## Advanced Studies Diploma Course Requirements (8 VAC 20-131-51) for Students Entering the Ninth Grade for the First Time in 2011-2012 through 2017-2018

Discipline Area	Standard Credits	Verified Credits	Specifications
English	4	2	Students must pass the SOL Reading and Writing tests (or an approved substitute test).
Mathematics	4	2	<p>Courses completed to satisfy this requirement shall include at least three different course selections from among: Algebra I, Geometry, Algebra II, or other mathematics courses above the level of Algebra II. The board shall approve courses to satisfy this requirement. Per the Standards of Quality, a computer science course credit earned by students may be considered a mathematics course credit.</p> <p><b>Students must pass two SOL math tests.</b></p>
Laboratory Science	4	2	<p>Courses completed to satisfy this requirement shall include course selections from at least three different science disciplines from among: earth sciences, biology, chemistry, or physics or completion of the sequence of science courses required for the International Baccalaureate Diploma. The board shall approve additional courses to satisfy this requirement. Per the Standards of Quality, a computer science course credit earned by students may be considered a science course credit.</p> <p><b>Students must pass two SOL science tests. An additional passed science test can fulfill the "student selected" test requirement.</b></p>
History & Social Sciences	4	2	<p>Courses completed to satisfy this requirement shall include U.S. and Virginia History, U.S. and Virginia Government, and two courses in either world history or geography or both. The board shall approve additional courses to satisfy this requirement.</p> <p><b>Students must pass a SOL history test. An additional passed history test can fulfill the "student selected" test requirement.</b></p>
World Language	3	0	Courses completed to satisfy this requirement shall include three years of one language or two years of two languages.
Health & Physical Ed	2	0	N/A
Fine Arts or Career Tech	1	0	Per the Standards of Quality, a computer science course credit earned by students may be considered a career and technical education course credit.
Economics & Personal Finance	1	0	N/A
Electives	3	0	N/A
Student Selected Test	0	1	A student may utilize additional tests for earning verified credit in computer science, technology, career or technical education, economics or other areas as prescribed by the board in <a href="#">8VAC20-131-110</a> .
<b>Total</b>	<b>26</b>	<b>9</b>	N/A

### Additional Requirements for Graduation

- **Training in emergency first aid, cardiopulmonary resuscitation (CPR), and the use of automated external defibrillators (AED)** - Beginning with first-time ninth-grade students in the 2016-2017 school year, students shall be trained in emergency first aid, cardiopulmonary resuscitation, and the use of automated external defibrillators, including hands-on practice of the skills necessary to perform cardiopulmonary resuscitation. Students with an IEP or 504 Plan that documents that they cannot successfully complete this training shall be granted a waiver from this graduation requirement, as provided in [8VAC20-131-420](#).
- **Virtual Learning** - Students shall successfully complete one virtual course, which may be a noncredit-bearing course, or may be a course required to earn this diploma that is offered online. The LCS Economics and Personal finance course has an online component that fulfills this requirement.
- If taken, the Algebra, Functions, and Data Analysis course must be taken before Algebra II.
- See your counselor for specifics on Substitute Tests, Locally Awarded Verified Credits and Credit Accommodations in lieu of passing SOL scores.



## **Awards for Exemplary Performance**

### **Diploma Seals**

#### **Governor's Seal**

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

#### **Board of Education Seal**

The Board of Education Seal is awarded to students who complete the requirements for a Standard Diploma or Advanced Studies Diploma with an average grade of "A" beginning with the ninth-grade class of 2006-2007 and beyond.

#### **Board of Education's Career & Technical Education Seal**

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

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

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

#### **Board of Education's Advanced Mathematics & Technology Seal**

The Board of Education's Advanced Mathematics & Technology Seal is awarded to students who earn either a Standard or Advanced Studies Diploma and satisfy all of the mathematics requirements for the Advanced Studies Diploma (four units of credit including Algebra II; two verified units of credit) with a "B" average or better; and either

- pass an examination in a career and technical education field that confers certification from a recognized industry, or trade or professional association
- OR acquire a professional license in a career and technical education field from the Commonwealth of Virginia
- OR pass an examination approved by the board that confers college-level credit in a technology or computer science area.

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

### **Board of Education's Excellence in Civics Education Seal**

The Board of Education's Excellence in Civics Education Seal is awarded to students who meet each of the following four criteria:

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

### **Board of Education's Seal of Biliteracy**

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

- Pass all required End-of-Course Assessments in English reading and writing at the proficient or higher level
- Demonstrate proficiency at the intermediate-mid level or higher in one or more languages other than English as demonstrated through an assessment from a list approved by the Superintendent of Public Instruction. American Sign Language qualifies as a language other than English.

### **Board of Education's Seal for Excellence in Science and the Environment**

The Board of Education's Seal for Excellence in Science and the Environment is awarded to students who enter the ninth grade for the first time in the 2018-2019 year and thereafter, and meet each of the following criteria:

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

### **Advanced Studies Diploma with Lynchburg Honors Seal (All Students)**

Students who wish to earn the Advanced Studies Diploma with Lynchburg Honors Seal must meet all the course and verified credit requirements for the Advanced Studies Diploma. In addition, they must meet the following additional criteria:

1. English must include a minimum of six semesters in courses designed for students with above average skills in reading and writing. Four of these semester courses must be taken during the junior and senior years.
2. The four math credits must include Algebra I and three credits above the level of Algebra I. The minimum must include progress through trigonometry/functions.
3. Science credits must include choices from Earth Science, Earth Science II: Astronomy, Biology I, Biology II: Anatomy and Physiology, Biology II: Ecology, Chemistry, Physics, AP Chemistry, AP Physics, AP Biology, AP Environmental, and Dual Enrollment Biology.
4. Social studies credits must include choices from Advanced World History and Geography I (to 1500 AD), Advanced World History and Geography II (1500 AD to Present) or AP World History, Advanced World Geography, AP Human Geography, Advanced American History, AP American History, Advanced U.S. Government or AP Government, AP European History, and AP Microeconomics and Macroeconomics, AP Psychology.

Students must take and pass at least two advanced placement or dual enrollment courses (or one of each) in different content areas during the senior year. These courses may be in English, Math, Science, or Social Studies.

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## II. COURSE OFFERINGS

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The following pages contain the school division's graduation requirements and a listing of all courses in the high school curriculum. This listing contains course titles, course numbers, grade(s) in which students may select a particular course, whether it is a year or semester course, course credit value, prerequisites, and a brief description of each course. **Except for several career-technical courses and courses for which there is not sufficient enrollment, most courses are available in both schools.** All students who have successfully completed high school courses in middle school receive credit toward graduation as well as credit toward satisfying particular subject area requirements. The courses most typically falling into this category in Lynchburg City Schools are advanced Algebra I, advanced earth science, and the world languages. These courses, as well as any other traditional high school courses that may be taken for credit in middle school, are included in a student's high school Grade Point Average (GPA). For any questions about prerequisites for a course, please see an assigned school counselor. **Additional procedures and practices may be determined at the individual high school.** Certain courses may not be offered every semester or every year.

### Academic Support

*(These courses can be taken repeatedly for elective credit)*

- 7211A/7211B SOL Review – English
- 7212A/7212B SOL Review – Writing
- 7221A/7221B SOL Review – Math
- 7231A/7231B SOL Review – Science
- 7241A/7241B SOL Review – Soc. Stud.
- 1930A/1930B ELL Support
- 1192Y Accelerating – Reading I
- 1130Y Accelerating – Reading II
- 7222Y Math Lab
- 7660Y Foundational Study Skills
- 7620Y Study Skills for Success in Advanced Classes

### Architecture & Construction

- 6760Y Drafting III
- 8431Y Construction Technology
- 8240Y Building Trades I
- 8250Y Building Trades II

### Art

- 5510Y Art I
- 5520Y Art II: Drawing and Painting
- 5530Y Art III: Three Dimensional
- 5560Y Photography
- 5570Y Digital Photography & Printmaking
- 5580A/5580B Commercial Art
- 5517Y Advanced Studio Art
- 5527Y Advanced Portfolio Art
- 5519Y AP Portfolio Art
- 5529Y AP Art History

### Arts, A/V Technology & Communications

- 8561Y Advertising Design
- 7450Y Video & Media Technology

### Business, Management, Admin & Finance

- 6160Y Accounting I
- 6170Y Accounting II
- 6140A Business Management
- 6150B Business Law
- 3740Y Digital Applications
- 6340Y Computer Information Systems
- 6260A 6260B Design, Multimedia & Web Technologies
- 6640Y Programming

### Computer Science

- 3730Y Foundations of Computer Science
- 3760Y AP Computer Science Principles
- 3729Y AP Computer Science

### Drama

- 5610Y Intro to Theatre
- 5611Y Musical Theatre Dance
- 5620Y Acting I
- 5630Y Acting II
- 5622A Playwriting
- 5623B Directing
- 5640Y App Tech Theatre I
- 5641A/5641B Tech Theatre I Design
- 5642B Tech Theatre I Production
- 5650Y App Tech Theatre II
- 5651Y Tech Theatre II

### Economics

- 6151Y Personal Finance & Economics
- 4439A/4449B AP Microeconomics & AP Macroeconomics
- E6151YS Personal Finance & Economics (summer online)

### Education & Training

- 6550Y Teachers for Tomorrow I
- 9072Y Teachers for Tomorrow II

### English/Speech

- 1190Y World Lit & Comp I
- 1297Y Adv. World Lit & Comp
- 1100Y World Lit & Comp II
- 1207Y Adv. World Lit & Comp II
- 1110Y American Lit & Comp
- 1217Y Adv. American & World Lit & Comp
- 1319Y AP Language & Composition
- 1120Y English Literature & Composition
- 1227Y Advanced English Literature & Composition
- 1328A/1328B Adv. College Comp (DE)
- 1329Y AP Lit & Comp
- 1310Y Creative Writing
- 1730Y Exploring Language & Culture through Hip Hop
- 1732Y Exploring Language & Culture through Hip Hop II
- 1429Y AP Seminar
- 1439Y AP Research
- 5850A/5850B Public Speaking I
- 5860A/5860B Public Speaking II



- 8460Y Precision Machine Tech II/Intro to Machine Tools Marketing Sales & Service
- 6942Y Sports, Entertainment, & Rec
- 6951Y Marketing I
- 6960Y Marketing II

### Mathematics

- 2090Y Algebra I, Part 1
- 2100Y Algebra I, Part 2
- 2290Y Algebra I
- 2387Y Advanced Algebra I (Grade 8)
- 2110Y Algebra, Functions & Data Analysis
- 2200Y Algebra II
- 2397Y Advanced Algebra II
- 2290AP/2397BP Algebra I/Advanced Algebra II (PETAL)
- 2210Y Geometry
- 2307Y Advanced Geometry w/Trig
- 2220Y Trig/Functions
- 2317Y Advanced Math Analysis
- 2328AC/2338BC Adv College Pre-Calc./Applied Calc (DE)
- 2429Y Advanced Placement (AP) Statistics
- 2329Y Advanced Placement (AP) Calculus (AB)
- 2339Y Advanced Placement (AP) Calculus (BC)

### Music

- 5340Y Concert Band I
- 5350Y Symphonic Band I
- 5370Y Wind Ensemble
- 5380Y Percussion Techniques
- 5460Y Chorus I
- 5470Y Chorus II - Concert Choir
- 5480Y Chorus III
- 5410Y Orchestra I
- 5420Y Orchestra II
- 5430Y Beginning Midi & Computer Applications in Music
- 5439Y Advanced Placement (AP) Music Theory

### Newspaper & Yearbook

- 7410Y Newspaper
- 7420Y Yearbook

### Physical Education

- 5991Y PE 9 and Health & Family Living 9
- 5901Y PE 10 and Driver Education
- 5140A/5140B Physical Ed Drill
- 5190A/5190B Physical Ed 9
- 5191A/5191B Physical Ed 10
- 5151A/5151B Weight Training I
- 5152A/5152B Weight Training II
- 5161Y Fitness for Life
- 5931YS Foundations of Personal Fitness and Wellness (online)

### Reserve Officer Training Corps (ROTC)

- 5710A/5710B MCJROTC Leadership Ed I
- 5720A/5720B MCJROTC Leadership Ed II
- 5730A/5730B MCJROTC Leadership Ed III
- 5740A/5740B MCJROTC Leadership Ed IV
- 5750A/5750B AFJROTC Leadership Ed I
- 5760A/5760B AFJROTC Leadership Ed II
- 5770A/5770B AFJROTC Leadership Ed III
- 5780A/5780B AFJROTC Leadership Ed IV

### Health

- 5250A/5250 B Health & Family Living
- 5240A/5240B Driver's Ed & Personal Health & Social Development

### Health Sciences

- 8337Y Emergency Medical Telecommunications
- 6810Y Dental Careers I
- 6820Y Dental Careers II
- 8360Y Nurse Aide I
- 8362Y Nurse Aide II
- 5260Y Athletic Training I
- 5261Y Athletic Training II

### Hospitality & Tourism

- 6440Y Intro to Hospitality, Tourism & Recreation
- 6444Y Intro to Culinary Arts
- 6441Y Culinary Arts I
- 6442Y Culinary Arts II
- 6443Y Culinary Arts Specialization

### Human Services

- 8340Y Cosmetology I
- 8350Y Cosmetology II

### Information Technology

- 8540Y Computer Systems Tech I
- 8550Y Computer Systems Tech II
- 8553Y Cyber Security
- 7140Y Information Tech Assistant I
- 7150Y Information Tech Assistant II

### Law, Public Safety, Corrections & Security

- 8702Y Criminal Justice I
- 8703Y Criminal Justice II

### Leadership

- 7770Y Leadership Training

### Manufacturing

- 8450Y Precision Machine Tech I

## Science

- 3387Y Advanced Earth Science (Grade 8)
- 3230Y Environmental Science
- 3200Y Biology I
- 3397Y Advanced Biology I
- 3210Y Biology II Anatomy & Phys.
- 3211Y Biology II Ecology
- 3292Y Earth Science II: Astronomy
- 3290Y Earth Science
- 3220Y Chemistry
- 3307Y Advanced Chemistry
- 3328AC/3328BC Advanced College Biology (DE)
- 3317Y Advanced Physics
- 3449Y Advanced Placement (AP) Biology
- 3459Y Advanced Placement (AP) Chemistry
- 3469Y Advanced Placement (AP) Physics I
- 3479Y Advanced Placement (AP) Physics II
- 3429Y Advanced Placement (AP) Environmental Science

## Science, Technology, Engineering & Math

- 6740Y Drafting I
- 6750Y Drafting II
- 6760Y Drafting III
- 8427Y Technology of Robotic Design
- 8491Y Engineering Studies
- 8492Y Engineering Exploration
- 6640A Technology Foundations
- 6650B Technology Transfer

## Social Studies

- 4690Y World Geography
- 4367Y Advanced World Geography
- 4290Y World History & Geography I
- 4397Y Advanced World History & Geography I
- 4200Y World History & Geography II
- 4307Y Advanced World History & Geography II
- 4469Y Advanced Placement (AP) World History
- 4210Y American History
- 4317Y Advanced American History
- 4419Y Advanced Placement (AP) American History
- 4220Y U.S. Government
- 4327Y Advanced U.S. Government
- 4429A/4429B AP American Government Politics & Comparative Government Politics

## Comparative Government Politics

- 4740Y African-American Studies
- 4459Y Advanced Placement (AP) Human Geography
- 4470Y Psychology
- 4479Y Advanced Placement (AP) Psychology

## Special Programs

- Central VA Governor's School- Courses on Pages 57-58
- Governor's STEM Academy- Courses on Pages 54-56
- Special Education- Courses on Page 51

## Student Intern Programs

- 7130Y Elementary/Middle Student Intern
- 7131Y General Student Intern
- 7110A/7110B Teacher/Office Intern

## Transportation, Distribution & Logistics

- 8131Y Automotive Technology I
- 8142Y Automotive Technology II
- 8153Y Automotive Technology III

## World Languages

- 1590Y French I
- 1500Y French II
- 1510Y French III
- 1527Y Advanced French IV
- 1529Y AP French V
- 1690Y German I
- 1600Y German II
- 1610Y German III
- 1627Y Advanced. German IV
- 1629Y AP German V
- 1790Y Latin I
- 1700Y Latin II
- 1710Y Latin III
- 1737Y Advanced Latin Literature
- 1729Y AP Latin (Vergil)
- 1890Y Spanish I
- 1800Y Spanish II
- 1810Y Spanish III
- 1827Y Advanced Spanish IV
- 1829Y AP Spanish



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## ECONOMICS

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### PERSONAL FINANCE & ECONOMICS

Course: 6151Y

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#### Grades 9-12. Full Credit Year Course. Prerequisite: None.

Students explore many facets of financial decision-making involved in daily life. Skills in money management, record keeping, and banking are enhanced through the study of basic concepts of economics, insurance, credit, and other related topics. In this course, students are required to complete a program entitled "EVERFI" to satisfy the successful completion of an online course for graduation. Students must also take the W!SE Financial Literacy exam as the end-of-course exam.

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### PERSONAL FINANCE & ECONOMICS

Course: E6151YS

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#### Rising Grades 10-12. Full credit is offered as a summer online course. Prerequisite: None.

Students explore many facets of financial decision-making involved in daily life. Skills in money management, record keeping, and banking are enhanced through the study of related topics. This course satisfies the requirement to complete an online course. Students are required to take the W!SE Financial literacy exam on site to meet requirements for this course. **The fee for this course is \$225.**

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### ADVANCED PLACEMENT (AP) MICROECONOMICS & MACROECONOMICS

Course: 4439A/4449B

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#### Grades 11-12. Full Credit Year Course.

The first semester of this course (microeconomics) aims to provide 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. The second semester (macroeconomics) explores the principles of economics that apply to an economic system as a whole. Particular emphasis will be placed on the study of national income and price-level determination, economic performance measures, the financial sector, stabilization policies, economic growth, and international economics.

All students are required to take both AP Microeconomics and AP Macroeconomics examinations in May.

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## ENGLISH

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*The Regulations for Establishing Standards for Accrediting Public Schools in Virginia specifies that students must earn 4 standard units of credit in English in order to earn any type of high school diploma. Students should earn 1 credit in English per year in grades 9-12. Any requests to enroll in any number of English courses for new credit other than one per year must be approved by the principal. Students are required to take a SOL test in writing (Grade 10) and reading (Grade 11).*

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### WORLD LITERATURE & COMPOSITION I

Course: 1190Y

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#### Grade 9. Full Credit Year Course.

These classes emphasize reading comprehension, vocabulary, study skills, oral communication, and composition skills, including grammar, usage, and mechanics, through the study of world literature. Students will read widely and think, speak, and write about what they have read. Emphasis is on enabling students to develop strategies for future academic success.

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### ADVANCED WORLD LITERATURE & COMPOSITION I

Course: 1297Y

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#### Grade 9. Full Credit Year Course.

Designed for students in the advanced diploma program, these classes emphasize reading, thinking, oral communication, and composition skills, including grammar, usage, and mechanics, through the study of world literature. Students must read and write extensively and participate in in-depth literature study. Vocabulary development, study and test-taking skills, and organization skills necessary to meet the demands of the advanced program are integral parts of these classes.

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### WORLD LITERATURE & COMPOSITION II

Course: 1100Y

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#### Grade 10. Full Credit Year Course.

With world literature as the vehicle, these classes will follow an integrated approach to language arts, combining reading, grammar, and vocabulary study with an emphasis on writing. Experiences in the classes will reflect the needs of literate adults in the community and stress the processes for writing, speaking, and reading effectively and correctly. **Near the end of the school year, students will take the End-of-Course Standards of Learning (SOL) Writing test. A passing score or equivalent will verify this English credit to meet graduation requirements.**

**Grade 10. Full Credit Year Course.**

First semester emphasizes writing instruction through a thematic approach to expository and creative composition genres. Through the study of models and extensive opportunities to write, students improve their writing styles and ability to write different types of compositions. Literature study is used as inspiration for many writing activities. During second semester while continuing to improve writing skills, students engage in an in-depth study of literary works organized in thematic units. Vocabulary development, grammar, usage, and mechanics are stressed in both semesters. **Near the end of the school year, students will take the End-of-Course Standards of Learning (SOL) Writing test. A passing score or equivalent will verify this English credit to meet graduation requirements.**

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**AMERICAN LITERATURE & COMPOSITION****Grade 11. Full Credit Year Course.**

These classes combine a study of the development of American literature with instruction in communication skills. Vocabulary study, oral reporting, and frequent writing assignments are based on representative selections from each literary period. Near the end of the school year, students will take the End-of-Course Standards of Learning (SOL) Reading test. A passing score or equivalent will verify this English credit to meet graduation requirements.

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**ADVANCED AMERICAN & WORLD LITERATURE & COMPOSITION****Grade 11. Full Credit Year Course.**

During the first semester students analyze pieces of literature considered landmarks of American literature while in the second semester the emphasis shifts to landmarks in world literature (e.g. Arthur Miller's *The Crucible*, F. Scott Fitzgerald's *The Great Gatsby*, Mark Twain's *Huckleberry Finn*, and excerpts from Native American, African American authors as well as modern authors and poets). In both semesters students do independent research, read and write extensively, and make oral reports on what they have read and researched. **Near the end of the school year, students will take the End-of-Course Standards of Learning (SOL) Reading test. A passing score or equivalent will verify this English credit to meet graduation requirements.**



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**ADVANCED PLACEMENT (AP) LANGUAGE & COMPOSITION****Course: 1319Y**

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**Grade 11. Full Credit Year Course.**

These classes prepare students to take the College Entrance Examination Board Advanced Placement Language and Composition Test. Emphases of the classes are rhetoric and the structure of language as they relate to effective composition. Students will also cover the 11th grade Virginia Standards of Learning in preparation for the required End-of-Course Standards of Learning tests in reading administered near the end of the school year. **Near the end of the school year, students will take the End-of-Course Standards of Learning (SOL) Reading test. A passing score or equivalent will verify this English credit to meet graduation requirements.** Students enrolling should be competent in composition and able to work independently on a variety of writing assignments and projects. **All students are required to take the AP examination in May.**

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**ENGLISH LITERATURE & COMPOSITION****Course: 1120Y**

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**Grade 12. Full Credit Year Course.**

These classes combine a study of English literature, culture, and language development with instruction in communication skills. Instruction in writing a variety of multi-paragraph themes is provided along with the usual activities involving vocabulary study, sentence structure, paragraph development, oral reporting, and research.

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**ADVANCED ENGLISH LITERATURE & COMPOSITION****Course: 1227Y**

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**Grade 12. Full Credit Year Course.**

These classes are an in-depth study of major authors in all literary periods of English literature. Instruction in formal organizational patterns in writing and advanced research skills is integral. Students must do independent research, parallel reading, and oral reporting as well as frequent writing assignments and a research paper. The emphasis during second semester is on error-free writing.

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**ADVANCED COLLEGE COMPOSITION****Course: 1328A, Dual Enrollment English 1328B**

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**Grades 11-12. One-half Credit Per Semester.**

These classes offer students the opportunity to earn six hours of college credit through the dual enrollment program with Central Virginia Community College. A comprehensive survey of major authors in English literature, these classes emphasize the development of writing skills and writing as process, including instruction in formal organizational patterns and style. Students work toward error-free writing and receive instruction in advanced research skills. If taken in grade 11 as a part of the Early College Program, **near the end of the school year, students will take the End-of-Course Standards of Learning (SOL) Reading test. A passing score or equivalent will verify this English credit to meet graduation requirements.** Students should achieve a C or better 1st semester to be placed in the 2nd semester course. Students who have passed the course will receive six semester hours of credit from CVCC for English 111 and 112. Students should work to earn a grade of C or better to ensure these college credits will transfer or count toward a degree. **Students must qualify for enrollment for this course by taking and passing the Virginia Placement Test (VPT).**

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**ADVANCED PLACEMENT (AP) LITERATURE & COMPOSITION****Course: 1329Y**

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**Grade 12. Full Credit Year Course.**

These classes prepare students to take the College Entrance Examination Board Advanced Placement Literature and Composition Test. Emphases are the analytic reading of fiction and poetry and the writing of critical essays. Students enrolling should be competent in composition, experienced in literary interpretation, and able to think abstractly. Students must also be able to work independently on a variety of reading and writing projects. **All students are required to take the advanced placement examination in May.**

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**ADVANCED PLACEMENT (AP) SEMINAR****Course: 1429Y**

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**Grades 10-12. Full Credit Year Course.**

AP Seminar is a foundational course that engages students in cross-curricular conversations that explore the complexities of academic and real-world topics and issues by analyzing divergent perspectives. Using an inquiry framework, students practice reading and analyzing articles, research studies, and foundational, literary, and philosophical texts; listening to and viewing speeches, broadcasts, and personal accounts; and experiencing artistic works and performances. Students learn to synthesize information from multiple sources, develop their own perspectives in research-based written essays, and design and deliver oral and visual presentations, both individually and as part of a team. Ultimately, the course aims to equip students with the power to analyze and evaluate information with accuracy and precision in order to craft and communicate evidence based arguments. There are no prerequisites for the AP Seminar course. The course culminates in an individual research-based essay of approximately 2,000 words and a presentation, performance, or exhibition with an oral defense; where the student answers 3-4 questions from a panel of trained evaluators and an end-of-course exam (3 hours). **This course is the first course in the AP Capstone program. All students must take the AP Seminar examination in May.**

**Grades 11-12. Full Credit Year Course. Prerequisite: AP Seminar.**

The second course in the AP Capstone program, AP Seminar is prerequisite for AP Research. If you earn scores of 3 or higher in both AP Seminar and AP Research as well as on four additional AP Exams of your choosing, you will receive the AP Capstone Diploma. This signifies outstanding academic achievement and attainment of core academic and research skills. Alternatively, if you earn scores of 3 or higher on the AP Seminar and AP Research Exams only, you will receive the AP Seminar and Research Certificate signifying your attainment of college-level academic and research skills. AP Research allows students to deeply explore an academic topic, problem, or issue of individual interest. Through this exploration, students design, plan, and conduct a yearlong mentored, research-based investigation to address a research question. In the AP Research course, students further their skills acquired in the AP Seminar course by understanding research methods; employing ethical research practices; and accessing, analyzing, and synthesizing information as they address a research question. The course culminates in an academic thesis paper of approximately 5,000 words and a presentation, performance, or exhibition with an oral defense. **This course is the final course in the AP Capstone program. All students must take the AP Research examination in May.**

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## ENGLISH ELECTIVES

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**CREATIVE WRITING****Course: 1310Y**

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**Grades 9-12. Full Credit Year Course.**

This elective course will expose students to many aspects of the writing process, including generating ideas, writing and revising drafts, and editing. Students will write extensively and participate in helpful critiques of their own work and that of their peers. This course will be designed to allow teachers to work individually with students during conferences. Through frequent writing exercises, students will study voice, imagery, characterization, dialogue, and narration. Students will work in free verse poetry, prose poetry, fiction, and creative nonfiction. **Sequential option:** Playwriting

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**EXPLORING LANGUAGE AND CULTURE THROUGH HIP HOP****Course: 1730Y**

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**Grades 10-12. Full Credit Year Course.**

This elective course will expose students to all five pillars of Hip Hop, with an emphasis on Knowledge. The phrase "Hip Hop" loosely translates to "intelligent movement", and in its early culture, the movement of Hip Hop was founded upon five pillars: MCing (oral), DJing (aural), Graffiti (visual), B-Boying (physical), and Knowledge (Mental). Students will study literary figures that inspired the makers of Hip Hop such as Ralph Ellison, Richard Wright, Chinua Achebe, Toni Morrison, Maya Angelou, Langston Hughes, Nikki Giovanni, and many others. In addition, students will be immersed in the other pillars through a hands-on experience in music production as they create their own instrumental tracks and lyrics, starting from scratch. They will also have the chance to work with local artists who are professionals in the music, dance, and fashion industries to further expand their knowledge.

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**EXPLORING LANGUAGE AND CULTURE THROUGH HIP HOP II****Course: 1732Y**

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**Grades 11-12. Full Credit Year Course.**

Exploring Hip Hop II expands upon performance, songwriting, and music production skills learned in Exploring Hip Hop I. Students will learn to work on a Digital Audio Workstation (FL Studio) and use recording tools such as microphones, MIDI keyboards, drum machines and acoustic instruments to learn the skills necessary to create music and work in the Music Industry. This course also covers the basics of digital DJing. In addition, students will learn about live performance and should be prepared to perform in class as a singer, rapper, DJ or instrumentalist. In order to take Exploring Hip Hop 2, students must have already taken Exploring Hip Hop 1 and must demonstrate high interest in subject matter, the ability to work independently, and basic knowledge of songwriting and music production. This course requires prior approval from the instructor.

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## SPEECH

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**PUBLIC SPEAKING I****Course: 5850A, 5850B**

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**Grades 9-12. 1st or 2nd Semester. One-half Credit Course.**

Content in this elective course allows students to include instruction and practice in clarity of oral expression, logical reasoning, and proper organization of material. The student will learn to prepare speeches to inform, convince, persuade, demonstrate and entertain.

**Grades 9-12. 1st or 2nd Semester. One-half Credit Course. Prerequisite: Public Speaking I.**

In Public Speaking II, this elective course will allow students to refine oral interpretation skills, expand persuasive speaking skills, perform impromptu speeches, deliver special occasion speeches, and develop expertise in at least one major speech category.

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**WORLD LANGUAGES**

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*The secondary schools offer a sequential program in French, Spanish, German, and Latin. First-year study for high school credit is available to 8th grade students in French, Spanish, and Latin at all three middle schools. Paul Laurence Dunbar Middle School for Innovation also offers German to 8th graders. Each language in the world languages offerings is designed for any student who has demonstrated a reasonable proficiency in his or her native language and wishes to develop facility in another language. To obtain full benefit of the language program, students are encouraged to begin study in the 8th or 9th grade. College-bound students are advised to investigate the specific world language requirements of colleges in which they have interest. All students should work closely with their counselors in planning their world language programs.*

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**FRENCH I****Course: 1590Y**

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**Grades 8-12. Full Credit Year Course. Prerequisite: None.**

Communicating in French is the highlight of these beginning semesters of language study. Students become involved immediately in using the language to simulate daily life situations. Activities include speaking, listening, and writing, reading, and learning about French culture. Correlated audio-visuals serve as stimuli to involve students in conversations of interest to teenagers.

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**FRENCH II****Course: 1500Y**

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**Grades 9-12. Full Credit Year Course. Prerequisite: Successful completion of French I.**

Emphasis on the four basic skills of speaking, listening, reading, and writing is continued during second year study. Oral discussions in French based on themes of contemporary interest provide the basis for student involvement. Study of the geography and culture of French speaking countries is an integral part of the language study. Students' use of concepts and vocabulary is cumulative.

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**FRENCH III****Course: 1510Y**

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**Grades 10-12. Full Credit Year Course. Prerequisite: Successful completion of French I and II.**

This course builds on the vocabulary and grammar bases acquired in levels I and II. Audio-lingual experiences continue to help students develop both aural and oral competency as they listen to more extensive passages and participate in more complex speaking exercises. The focus on reading and writing also increases at this level as students read excerpts from current literature and read and write about the culture of francophone countries.

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**ADVANCED FRENCH IV****Course: 1527Y**

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**Grade 11 or 12. Full Credit Year Course. Prerequisite: Successful completion of French III.**

This course focuses on the use of all concepts and vocabulary from previous study in addition to new vocabulary and idioms. Culture-based readings from current events, contemporary and classic excerpts of literature periodicals and selections from literature are the basis for refining composition and reading skills and provide the topics for conversation and oral presentations. Experience in listening to extended passages develops students' comprehension skills and provides practice in using higher level thinking skills.

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**ADVANCED PLACEMENT (AP) FRENCH V****Course: 1529Y**

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**Grade 12. Full Credit Year Course. Prerequisite: Successful completion of French IV.**

This Advanced Placement Language course is equivalent in content and skills developed to the third year college level. Students engage in intensive drills of extemporaneous speaking, grammar review, analyses of reading material and listening to many types of selections to develop a high level of listening comprehension. **All students are required to take AP French examination in May.**

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**GERMAN I****Course: 1690Y**

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**Grades 9-12, Grade 8, Paul Laurence Dunbar Middle School for Innovation Only. Full Credit Year Course. Prerequisite: None.**

In this introductory course, students become involved with the German language through conversations and readings relating to school, family, leisure-time activities, travel, parties, and German speaking countries. Authentic audio-visual aids reinforce aural-oral skills while lending authentic cultural insights.

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**GERMAN II****Course: 1600Y**

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**Grades 9-12. Full Credit Year Course. Prerequisite: Successful completion of German I.**

German II students continue to broaden their language skills through conversations and reading/writing activities. Topics first semester include vacations, school, home, shopping and sports. During second semester, students discuss health, food, reading materials, money, special occasions, and students' talents.

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**GERMAN III****Course: 1610Y**

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**Grades 10-12. Full Credit Year Course. Prerequisite: Successful completion of German II.**

The refinement of oral and written communication skills through conversational practice and the authentic readings relating to each course topic constitute the major portion of third-year study. The topics in the course consists of strengths and weaknesses, media, environment, stereotypes, wishes, art, travel, history, volunteering, and plans for the future. During discussions, students learn about levels of language and the appropriateness of each in various situations.

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**ADVANCED GERMAN IV****Course: 1627Y**

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**Grades 11 & 12. Full Credit Year Course. Prerequisite: Successful completion of German III.**

At this level of language study, students are expected to have achieved competence in the German language, which is now used in instruction, conversation, reading, and discussion. Students continue to discuss authentic readings related to course topics as well as everyday topics of conversation. In addition, frequent writing assignments enhance skills in grammar and serve to increase vocabulary.

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**ADVANCED PLACEMENT (AP) GERMAN V****Course: 1629Y**

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**Grade 12. Full Credit Year Course. Prerequisite: Successful completion of German IV.**

This Advanced Placement Language course is equivalent in content and skills developed to the third year college level. Students engage in intensive drills of extemporaneous speaking, grammar review, analyses of reading material and listening to many types of selections to develop a high level of listening comprehension. **All students are required to take the advanced placement examination in May.**

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**LATIN I****Course: 1790Y**

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**Grades 8-12. Full Credit Year Course. Prerequisite: None.**

The first-year Latin course provides the foundation for understanding Latin and the basis for learning any world language. Students enlarge their vocabulary, refine grammar in English, and learn about the origins of many of our traditions and institutions while reading the history, myths, and legends of the ancient Romans.

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**LATIN II****Course: 1700Y**

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**Grades 9-12. Full Credit Year Course. Prerequisite: Successful completion of Latin I.**

Latin II begins with a thorough grammar review based on readings from Roman history and continues to develop the vocabulary and reading comprehension necessary to read Latin. During the second semester, readings from Julius Caesar and other celebrated authors help students learn more about their own traditions and develop reading skills and concepts applicable to Latin or any other language.

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**LATIN III****Course: 1710Y**

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**Grades 10-12. Full Credit Year Course. Prerequisite: Successful completion of Latin II.**

Latin III is a general introduction to the politics and government of Rome. During first semester, students study the political, environmental, and economic problems of Rome in the 1st century BC through readings from Eutropius and Cicero, among others. In second semester, students read selections from Ovid, Seneca, Catullus, Tacitus, Pliny, and other writers as they explore Latin literature from the 1st century AD through the Middle Ages.

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**ADVANCED LATIN LITERATURE****Course: 1737Y**

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**Grades 11 or 12. Full Credit Year Course. Prerequisite: Successful completion of Latin III.**

Students will read and study a variety of prose and poetry selections from a wide range of Latin authors excluding Vergil. Caesar, Catullus, Ovid, Cicero, and Horace will be the subjects of study along with other writers of their eras. Advanced Latin Literature with its inclusion of both prose and poetry and its breadth of authors offers the student a broader preparation for college study and a deeper understanding of classical literature than Advanced Placement Latin Vergil alone.

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**ADVANCED PLACEMENT (AP) LATIN VERGIL****Course: 1729Y**

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**Grades 11 or 12. Full Credit Year Course. Prerequisite: Successful completion of Advanced Latin Literature.**

Students will read selected books and individual passages from Vergil's Aeneid and review Caesar's De Bello Gallico to learn about the epic tradition, Roman military history, the legend of the founding of Rome, and the basic precepts of literature. In addition, students will study parallel themes in Classical and English literature. All students are required to take the advanced placement examination in May.

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**SPANISH I****Course: 1890Y**

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**Grades 8-12. Full Credit Year Course. Prerequisite: None.**

This introductory course is an initiation into language as a means of active communication for which a reasonable proficiency in understanding, speaking, reading, and writing Spanish is the overall goal. Activities include frequent conversational activities, projects, and dramatizations involve students actively in the language. Correlated audio-visuals serve as stimuli to involve students in conversations of interest to teenagers.

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**SPANISH II****Course: 1800Y**

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**Grades 9-12. Full Credit Year Course. Prerequisite: Successful completion of Spanish I.**

All fundamental structures of the beginning course are reinforced during second-year study with an increased emphasis on the development of oral skills in active conversation. However, this course expands to encompass more comprehensive materials and structures so that by the end of the two-year sequence, students should be able to use effectively the four linguistic tools. Students continue to broaden their language skills through conversations and reading/writing activities.

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**SPANISH III****Course: 1810Y**

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**Grades 10-12. Full Credit Year Course. Prerequisite: Successful completion of Spanish II.**

At this level, the Spanish language is used in the classroom for conversational and instructional purposes. Emphasis is placed on increasing the scope of vocabulary, verb tenses, and grammatical structures relating to thematic units. During second semester topics of spontaneous interest and comparative cultures are increasingly emphasized.

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**ADVANCED SPANISH IV****Course: 1827Y**

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**Grades 11 or 12. Full Credit Year Course. Prerequisite: Successful completion of Spanish III.**

At this level of language study, students are expected to have achieved competence in the Spanish language, which is now used in instruction, conversation, reading, and discussion. Students discuss authentic readings from periodicals and excerpts of literature related to course topics as well as everyday topics of conversation. Continued listening assignments serve to enhance students' ability to understand audios on a variety of topics and spoken in various dialects.

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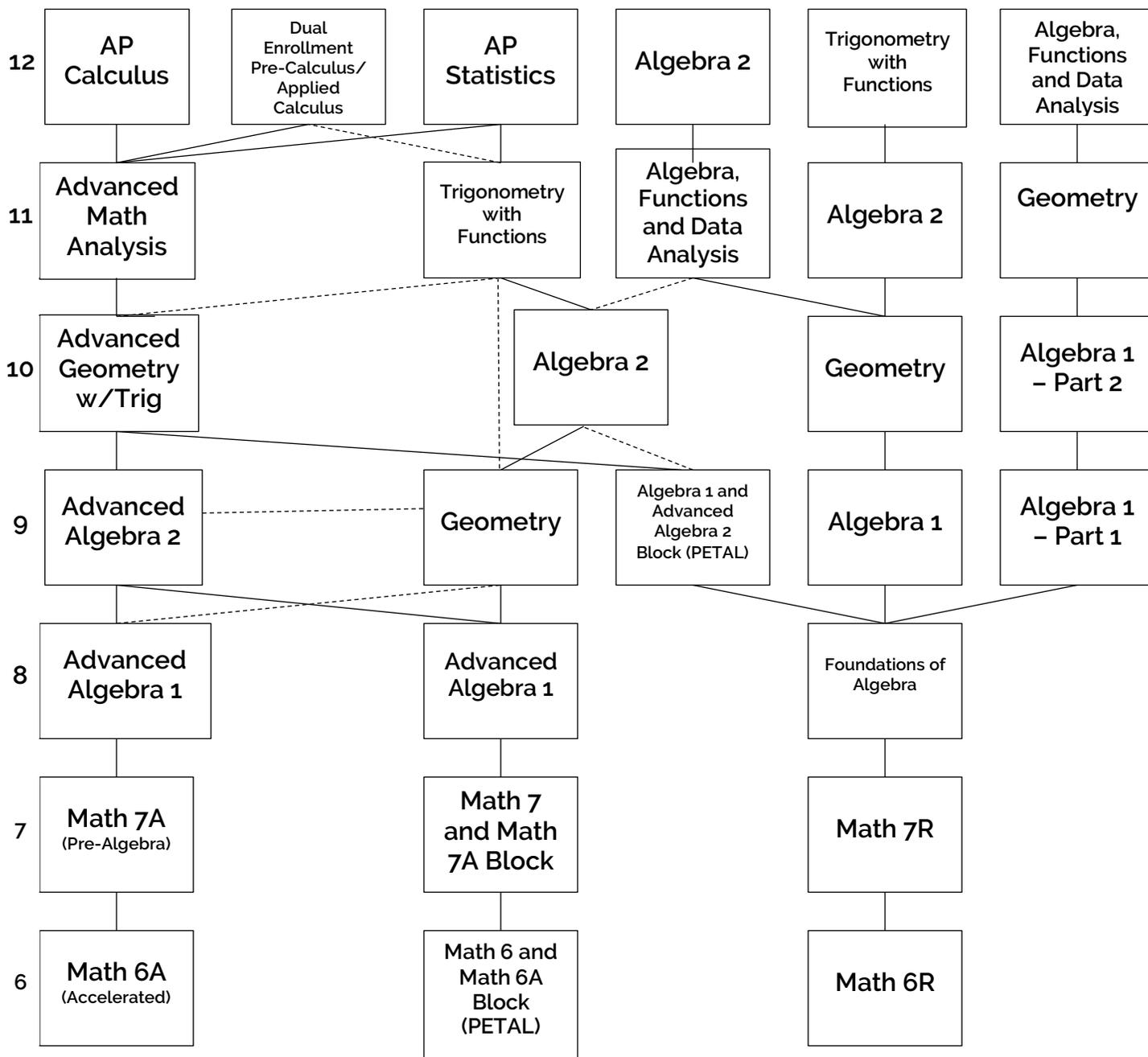
**ADVANCED PLACEMENT (AP) SPANISH V****Course: 1829Y**

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**Grade 12. Full Credit Year Course. Prerequisite: Successful completion of Spanish IV.**

This Advanced Placement Language course is equivalent (in content and skills developed) to the third year college level. Students engage in intensive drills of extemporaneous speaking, grammar review, analyses of reading material and listening to many types of selections to develop a high level of listening comprehension. **All students must take the AP Spanish examination in May.**

## Mathematics Instructional Sequence Options



Classes at the Central Virginia Governor's School (CVGS), Early College Program (ECP), and STEM Academy are available for students who meet the eligibility requirements and have been selected for the program. Please refer to the section on the Program of Studies for more information.

Note: Dotted lines indicate possible, yet infrequently chosen, options.

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## MATHEMATICS

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The Regulations for Establishing Standards for Accrediting Public Schools in Virginia specifies that students must earn three standard units of credit in Mathematics for a Standard Diploma and four standard units of credit for an Advanced Studies Diploma. In order to earn a Standard Diploma, students must complete at least two different courses from among Algebra I; Geometry; Algebra, Functions, and Data Analysis (AFDA); Algebra II; or other courses above the level of Algebra II. If taken, AFDA must be completed before Algebra II to meet the math courses approved by the board to satisfy this requirement. In order to earn an Advanced Studies Diploma, students must complete at least four different courses from among Algebra I, Geometry, Algebra II, or other courses above the level of Algebra II. If taken, Algebra, Functions, and Data Analysis (AFDA) must be completed before Algebra II to meet this requirement. A computer science course credit earned by students may be considered a math course credit. Students' requests to enroll in more than one math course for new credit must receive approval from the principal. **SOL tests are available for Algebra I, Algebra II, and Geometry. Students should work with their counselor to determine which test(s) are needed to verify credits for graduation. The federal Every Student Succeeds Act (ESSA) requires all students to take a SOL math test while in high school.**

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### ALGEBRA I, PART I

Course: 2090Y

**Grade 9, Full Elective Credit Year Course. Algebra I, Part I is the prerequisite to Algebra I, Part II. Algebra I, Part I and Algebra I, Part II must be completed to receive full credit.**

Algebra I, Part I is the first course of a two-course algebra sequence covering the Algebra I curriculum. In this two-part course, students have additional time to develop algebraic skills needed for higher mathematics. Students will be involved in learning activities that help make connections among algebra, arithmetic, geometry, statistics, and probability. This course includes instruction in properties and basic operations of natural numbers, their algebraic and graphical representation, and linear equations. Hands-on activities, graphing calculators, and computer technology will be used extensively.

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### ALGEBRA I, PART II

Course: 2100Y

**Grade 10, Full Credit Year Course. Prerequisite: Algebra I, Part I. Algebra I, Part II is the second course of a two-course algebra sequence covering the Algebra I curriculum.**

In this two-part course, students have additional time to develop algebraic skills needed for higher mathematics. Students will be involved in learning activities that help make connections among algebra, arithmetic, geometry, statistics, and probability. Number patterns, functions, applying equations, inequalities and systems of linear equations and inequalities, probability, statistics and interpreting data will be covered. Hands-on activities, graphing calculators, and computer technology will be used extensively. Algebra I, Part I is the prerequisite to Algebra I, Part II. Algebra I, Part I and Algebra I, Part II must be completed to receive full credit. **Near the end of the school year, students will take the Standards of Learning (SOL) Algebra I test.**

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### ALGEBRA I

Course: 2290Y

**Grades 9-10, Full Credit Year Course. Prerequisite: Pre-Algebra and teacher recommendation or Foundations of Algebra.**

This one year algebra program includes instruction in properties and basic operations of rational numbers, their algebraic and graphical representation, linear equations, inequalities and systems of linear equations and inequalities. The course also includes the study of polynomials, radical equations, quadratic equations with real solutions, and the concept of functions. **Near the end of the school year, students will take the Standards of Learning (SOL) Algebra I test.**

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### ADVANCED ALGEBRA I

Course: 2387Y

**Grade 8, Full Credit Year Course. Prerequisite: Pre-Algebra and teacher recommendation.**

This advanced one year algebra program is only available in the 8th grade. It includes instruction in greater depth than the traditional algebra course. Students will attach meaning to the abstract concepts of algebra by using tables and graphs to interpret equations and inequalities and to analyze functions. Matrices will be used to organize and manipulate data. Computers, spreadsheets, and graphing calculators or computer graphing simulators will be used to solve problems. **Near the end of the school year, students will take the Standards of Learning (SOL) Algebra I test.**

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### ALGEBRA, FUNCTIONS & DATA ANALYSIS

Course: 2110Y

**Grades 10-12, Full Credit Year Course. Prerequisite: Algebra I or Algebra I, Part II.**

Students in this one year course will study functions and their behaviors, systems of inequalities, probability, data analysis and statistics, and simple experimental design. More specifically, the behavior of common function families and the connections between data tables and graphs will be used to interpret data, draw conclusions, and make predictions. In addition, students will learn to calculate basic probabilities in a real-world context and to analyze data in a normal distribution. Topics in the course will be presented with data generated from practical applications. During second semester students will design a simple survey or experiment and then collect, analyze, and present their data and conclusions.

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**ALGEBRA II****Course: 2200Y**

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**Grades 9-12. Full Credit Year Course. Prerequisite: Algebra I or Algebra I, Part II and teacher recommendation.**

This course includes the study of real numbers, equations including rational and radical expressions, relations and systems and how they are used in mathematical modeling. The second semester of Algebra 2 will include the study of complex numbers, polynomials and rational functions, an introduction to statistics and probability, as well as connections with geometry, physics, chemistry, business, and consumer problems. **Near the end of the school year, students will take the Standards of Learning (SOL) Algebra II test if needed for graduation.**

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**ALGEBRA I/ADVANCED****ALGEBRA II PETAL****Courses: 2290AP & 2397BP**

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**Grade 9. Full Credit Year Course. Prerequisite: Teacher recommendation and Foundations of Algebra or Pre-Algebra.**

This is a two-year math program taught in one year during a two-period block. Algebra I is taught first semester. Instruction includes the properties and basic operations of natural numbers, their algebraic and graphical representation, and linear equations. Also included is the study of inequalities and systems of linear equations and inequalities. **Near the end of first semester, students will take the Standards of Learning (SOL) Algebra I test.**

Advanced Algebra II is taught during the second semester. This course includes the study of equations, inequalities, relations, functions, systems of equations, polynomials, irrational numbers, complex numbers, and conic sections. The course also includes the study of higher degree polynomial functions, rational functions, exponential and logarithmic functions, statistics and probability. **Near the end of the school year, students will take the Standards of Learning (SOL) Algebra II test if needed for graduation.**

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**ADVANCED ALGEBRA II****Course: 2397Y**

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**Grade 9-12. Full Credit Year Course. Prerequisite: Advanced Algebra I.**

This course includes the study of equations, inequalities, relations, functions, systems of equations, polynomials, irrational numbers, complex numbers, and conic sections. This course also includes the study of higher degree polynomials, rational and exponential functions, and statistics and probability. **Near the end of the school year, students will take the Standards of Learning (SOL) Algebra II test.**

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**GEOMETRY****Course: 2210Y**

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**Grades 9-12. Full Credit Year Course. Prerequisite: Algebra I.**

This plane geometry course includes the study of perpendicular and parallel lines, angles and their relationships, congruent triangles and parallelograms and other polygonal regions. Also included are similar figures, the Pythagorean Theorem, circles, their tangents and secants, and three-dimensional geometry and transformational geometry. **Near the end of the school year, students will take the Standards of Learning (SOL) Geometry test if needed for graduation.**

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**ADVANCED GEOMETRY WITH TRIG****Course: 2307Y**

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**Grade 10. Full Credit Year Course. Prerequisite: Advanced Algebra II.**

This course includes the study of polynomial regions and their areas with special emphasis on right triangles. It also includes the concepts of similarity, volume, coordinate and transformational geometry and construction of plane figures. The course also includes the study of the basic trigonometric functions, the inverse trigonometric functions, trigonometric identities, analytic trigonometry, solving triangles, analytic geometry, and the trigonometry of complex numbers. Graphing calculators will supplement the classroom portion of the course. **Near the end of the school year, students will take the Standards of Learning (SOL) Geometry test if needed for graduation.**

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**TRIGONOMETRY/FUNCTIONS****Course: 2220Y**

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**Grades 11-12. Full Credit Year Course. Prerequisite: Algebra II and Geometry.**

This course includes the study of trigonometric functions, their inverses and their graphs, solving triangles, trigonometric identities, trigonometric equations, and mathematical modeling using trigonometric functions with applications. Also included is the study of matrices, sequences and series, probability and statistics, as well as an introduction to pre-calculus.

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**ADVANCED MATH ANALYSIS****Course: 2317Y**

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**Grades 11-12. Full Credit Year Course. Prerequisite: Advanced Geometry Trigonometry.**

This course includes the study of relations, functions, equations, inequalities, polynomial and rational functions, and a review and extension of trigonometry. Also included are vectors and parametric equations, polar coordinates and complex numbers, conic sections, exponential and logarithmic functions, sequences and series, probability and statistics. Optional topics include iteration, fractals and discrete mathematics graph theory. Graphing calculator techniques are stressed.

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**Grades 11-12, Dual Enrollment Math Course. One-half Credit Per Semester. Pre-requisite: Trigonometry/Functions or Math Analysis.**

The first semester (MTH 161 – Pre-calculus I) presents a study of college algebra, matrices, and algebraic, exponential, and logarithmic functions. Students should achieve a C or better in order to be placed in the second semester course. The second semester (MTH 261 – Applied Calculus I) presents limits, continuity, differentiation of algebraic and transcendental functions with applications, and an introduction to integration. Students who have completed and passed the course will receive 6 semester hours of credit from CVCC for Math 161 and 261. **Students must qualify for enrollment for this course by taking the Virginia Placement Test (VPT) through CVCC. Students must place into English 111 with a qualifying score and pass units 1-9 on the math VPT.**

**ADVANCED PLACEMENT (AP) STATISTICS**

Course: 2429Y

**Grade 12. Full Credit Year Course. Prerequisite: Trigonometry/ Functions or Math Analysis.**

Advanced Placement Statistics includes exploratory analysis of data using graphical and numerical techniques to study patterns and departures from patterns. Students will plan a study that will include identifying important variables related to the conjecture and ways to measure the variables. Students will also anticipate patterns using probability and simulation and work with concepts of statistical inference such as: confidence intervals, tests of significance, and special case of normally distributed data. **All students are required to take the AP Statistics examination in May.**

**ADVANCED PLACEMENT (AP) CALCULUS AB**

Course: 2329Y

**Grade 12. Full Credit Year Course. Prerequisite: Math Analysis.**

This rigorous treatment of calculus will include the study of limits, continuity, derivatives, applications of the derivative and integrals. The course will emphasize integration techniques and the calculus of transcendental functions. Extensive graphing calculator techniques will be taught. . Other calculus topics, including more integration techniques, arc length and surface area as well as the calculus of parametric equations, will be taught after the Advanced Placement exam. Note: With sufficient student and faculty interest, AP Calculus BC can be offered (2339Y). **All students are required to take the AP Calculus AB examination in May.**

**ADVANCED PLACEMENT (AP) CALCULUS BC**

Course: 2339Y

**Grade 12. Full Credit Year Course. Prerequisite: Math Analysis.**

This is a double-period course. During the first semester students learn the AP Calculus AB content and that content is expanded upon and extended during the second semester. Counts as two courses for purposes of GPA calculation. **All students are required to take the AP Calculus BC examination in May.**

*\*The Board of Education's Guidelines on Credit Accommodations allow students with disabilities who are eligible for credit accommodations in mathematics to use each part of Algebra I, Parts I and II to earn a standard credit towards the three mathematics credits required for the Standard Diploma only. Two-part courses may also be combined with full-year courses in other Board-approved mathematics courses to meet the requirements for students with disabilities.*

**SCIENCE**

*The Regulations for Establishing Standards for Accrediting Public Schools in Virginia specifies that students must earn 3 standard units of credit in Science for a Standard Diploma and 4 standard units of credit for an Advanced Studies Diploma. In order to earn a Standard Diploma, students must complete at least two different courses from at least two different science disciplines: earth sciences, biology, chemistry, or physics. Additionally, students must earn one Verified Credit. Students who complete a career and technical education sequence and pass an examination or occupational competency assessment in a career and technical education field that confers certification or an occupational competency credential from a recognized industry, or trade or professional association, or acquires a professional license in a career and technical education field from the State may substitute the certification, competency credential, or license for (1) the student-selected verified credit, and (2) either a science or history and social science verified credit when the certification, license, or credential confers more than one verified credit. In order to earn an Advanced Studies Diploma, students must complete at least four different courses from among three different disciplines: earth sciences, biology, chemistry, or physics. A computer science course credit earned by students may be considered a science course credit. **SOL tests are available for Biology, Chemistry, and Earth Science. Students should work with their counselor to determine which test(s) are needed to verify credits for graduation. The federal Every Student Succeeds Act (ESSA) requires all high school students to take the Biology SOL test.***

**ADVANCED EARTH SCIENCE**

Course: 3387Y

**Grade 8. Full Credit Year Course. Prerequisite: None.**

This advanced earth science course is available only in the 8th grade. Additional topics and supplemental activities supporting the earth science SOL are included in the course. **Near the end of the school year, students will take the Earth Science Standards of Learning test.**

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**ENVIRONMENTAL SCIENCE****Course: 3230Y**

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**Grade 9-12. Full Credit Year Course. Prerequisite: None.**

The Environmental Science course is designed to continue the student investigations integrate the study of many components of our environment, including the human impact on our planet. These outcomes focus on scientific inquiry, the physical world, the living environment, resource conservation, humans' impact on the environment, and legal and civic responsibility. Instruction will focus on student data collection and analysis through laboratory experiences and field work including meaningful watershed educational experiences. Students enrolled in this course may not take Biology II Ecology as a science credit in the future.

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**BIOLOGY I****Course: 3200Y**

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**Grades 9-12. Full Credit Year Course. Prerequisite: None.- It is preferable that students have completed Environmental Science or Earth Science.**

This course includes the study of scientific processes and problem solving, ecology, biochemistry, and cytology (structure, function and reproduction of cells). Also included are human endocrinology, reproduction, genetics, evolution, behavior and taxonomy (classification). **Near the end of the school year, students will take the Standards of Learning (SOL) Biology test.**

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**ADVANCED BIOLOGY I****Course: 3397Y**

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**Grades 9 & 10. Full Credit Year Course. Prerequisite: It is preferred that students have completed Earth Science or Environmental Science.**

The course content closely parallels that described in Biology I. A more quantitative approach may be utilized in dealing with specific problem areas, with additional emphasis placed on the underlying chemical principles for the biological sciences. Students will have an opportunity to conduct original research. **Near the end of the school year, students will take the Standards of Learning (SOL) Biology test.**

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**EARTH SCIENCE****Course: 3290Y**

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**Grades 10-12. Full Credit Year Course. Prerequisite: None.- It is preferred that students have completed Biology I.**

This laboratory science course teaches foundation skills needed for the study and understanding of all sciences. Topics include maps and landforms, meteorology, geology, oceanography, environmental studies, and astronomy. Also included is the study of the Earth's composition, weathering, deposition, earthquakes, volcanoes, plate tectonics, and geologic time. **Near the end of the school year, students will take the Standards of Learning (SOL) Earth Science test if needed for graduation.**

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**BIOLOGY II ANATOMY AND PHYSIOLOGY****Course: 3210Y**

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**Grades 10-12. Full Credit Year Course. Prerequisite: Biology I.**

This year-long course follows Biology I and is a study of human anatomy and physiology.

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**BIOLOGY II ECOLOGY****Course: 3211Y**

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**Grades 10-12. Full Credit Year Course. Prerequisite: Biology I.**

This year-long course follows Biology I and is a study of the environment and man's impact on it. Students who have taken the Environmental Science course may NOT take this class for a science credit.

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**CHEMISTRY****Course: 3220Y**

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**Grades 10-12. Full Credit Year Course. Prerequisite: Biology, Algebra I and Algebra II completed, currently taking Algebra II, or with principal permission.**

This course provides an introduction to basic chemical principles and their application. Topics include atomic structure, the periodic table, bonding, chemical equations and reactions, stoichiometry, states of matter, and thermochemistry. A solid knowledge of algebra is necessary for the calculations in this class. **Near the end of the school year, students will take the Standards of Learning (SOL) Chemistry test if needed for graduation.**

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**ADVANCED CHEMISTRY****Course: 3307Y**

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**Grades 10-12. Full Credit Year Course. Prerequisite: Biology, Algebra I and Algebra II completed, currently taking Algebra II, or with principal permission.**

The course content is closely aligned with that of Chemistry. However, a more rigorous quantitative approach requires students to investigate, analyze, and summarize chemical reactions, molecular behaviors, and uses of substances. Hands-on experiments with high level math and thinking skills are included. Students will have an opportunity to conduct original research. Near the end of the school year, students will take the Chemistry Standards of Learning test. However, a more in-depth and rigorous conceptual and quantitative approach requires students to investigate, analyze, and summarize the various topics covered. High level math and thinking skills are essential for success. Hands-on lab work is a critical component

designed to connect the abstract to real world experiences. Near the end of the school year, students will take the Standards of Learning (SOL) Chemistry test if needed for graduation.

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**ADVANCED PLACEMENT (AP) CHEMISTRY****Course: 3459Y**

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**Grades 11-12. Full Credit Year Course. Prerequisite: Biology; Chemistry.**

This course is the equivalent of a first-year college general chemistry course. Topics include the structure of matter, kinetic theory of gases, chemical equilibria, chemical kinetics and the basic concepts of thermodynamics. The summer before provides a brief overview of chemical foundations, kinds of particles, and stoichiometry. Topics throughout the year include detailed studies of types of reactions and solution stoichiometry, the three phases of matter, thermochemistry, atomic structure and periodicity, bonding, properties of solutions, chemical kinetics, chemical equilibrium, acids and bases, solubility, spontaneity, entropy, free energy, and electrochemistry. Students will spend considerable time in individual study and in laboratory work. **All students are required to take the AP Chemistry examination in May.**

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**ASTRONOMY EARTH SCIENCE II****Course: 3292Y**

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**Grades 11 or 12. Full Credit Year Course. Prerequisite: Algebra I and Earth Science or Environmental Science Corequisite: Geometry or higher level mathematics course.**

This course introduces students to the composition and structure of the universe. Astronomy is the scientific study of the contents of the entire universe. This course provides the student with a study of the universe and the conditions, properties, and motions of bodies in space. The content includes, but is not limited to, historical astronomy, astronomical instruments, the celestial sphere, the solar system, the earth as a system in space, the earth/moon system, the sun as a star, and stars.

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**ADVANCED PHYSICS****Course: 3317**

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**Grades 11 or 12. Full Credit Year Course. Prerequisite: Algebra I and Geometry Corequisite.**

Advanced Physics is an algebra-based, introductory physics course. This course deals with mechanics, motion, and waves with emphasis on problem solving. Also included is the study of light, electricity, magnetism, the atom and nuclear forces. Students build on basic physical science principles by exploring in-depth the nature and characteristics of energy and its dynamic interaction with matter. Key areas covered by the standards include force and motion, energy transformations, wave phenomena and the electromagnetic spectrum, electricity, fields, and non-Newtonian physics. The standards stress the practical application of physics in other areas of science, technology, engineering, and mathematics. The effects of physics on our world are investigated through the study of critical, contemporary global topics.

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**ADVANCED PLACEMENT (AP) PHYSICS I****Course: 3469Y**

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**Grades 11 or 12. Full Credit Year Course. Prerequisite: Geometry and be concurrently taking Algebra II or an equivalent course.**

AP Physics I is an algebra-based, introductory college-level physics course. Students cultivate their understanding of Physics through inquiry-based investigations as they explore topics such as Newtonian mechanics (including rotational motion); work, energy, and power; mechanical waves and sound; and introductory, simple circuits. Students should have completed Geometry and may be concurrently taking Algebra II, or equivalent course. This course requires that 25% of the instructional time will be spent in hands-on laboratory work, with an emphasis on inquiry based investigations that provide students with opportunities to apply the science practices. **All students are required to take the AP Physics I examination in May.**

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**ADVANCED PLACEMENT (AP) PHYSICS II****Course: 3479Y**

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**Grade 12. Full Credit Year Course. Prerequisite: AP Physics I and have taken or be concurrently taking Math Analysis or an equivalent course.**

The AP Physics II course is an algebra-based, introductory college-level physics course. Students cultivate their understanding of Physics through inquiry-based investigations as they explore topics such as fluid statics and dynamics; thermodynamics with kinetic theory; PV diagrams and probability; electrostatics; electrical circuits with capacitors; magnetic fields; electromagnetism; physical and geometric optics; and quantum, atomic, and nuclear physics. Students should have taken or be concurrently taking Math Analysis or Pre-Calculus. This course requires that 25% of the instructional time will be spent in hands-on laboratory work, with an emphasis on inquiry-based investigations that provide students with opportunities to apply the science practices. **All students are required to take the AP Physics II examination in May.**

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**ADVANCED COLLEGE BIOLOGY****Courses: 3328AC Biology 101 & 3328BC Biology 102**

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**Grade 12. Dual Enrollment. One-half Credit Per Semester. Prerequisites: Biology, Chemistry; Geometry.**

This is a double-period course. This college level course deals with the fundamental characteristics of living matter from the molecular level to the ecological community with emphasis on general biological principles. Topics addressed include the organization and biochemical functions of cells, genetics, animal and plant physiology, continuity of life and ecological relationships. Appropriate applications of technology will allow for in-depth exploration of selected topics and opportunities for independent student research. Students should achieve a C or better in order to be placed in the second semester course. Students who have completed and passed the course will receive 8 semester hours of credit from CVCC for Biology

101 and 102. Students must qualify for enrollment for this course by taking the Virginia Placement Test (VPT) through CVCC. Students must place into English 111 & pass units 1-3 on math VPT. Max. number of students per class 23.

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## ADVANCED PLACEMENT (AP) BIOLOGY

Course: 3449Y

**Grades 11 or 12. Full Credit Year Course. Prerequisites: Advanced Biology, Advanced Chemistry; Geometry.**

This course includes the study of the structure and biochemical functions of cells and cellular components, animal and plant physiology, principles of genetics, and the interdependence of organisms in ecosystems. Students will spend considerable time in individual study and in laboratory work. All students are required to take the Advanced Placement Biology examination in May.

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## ADVANCED PLACEMENT (AP) ENVIRONMENTAL SCIENCE

Course: 3429Y

**Grades 10-12. Full Credit Year Course.**

Prerequisite: Algebra I, Biology, Chemistry (corequisite) The AP Environmental Science course is designed to be the equivalent of a one-semester, introductory college course in environmental science, through which students engage with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world. The course requires that students identify and analyze natural and human-made environmental problems, evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving or preventing them. Environmental Science is interdisciplinary, embracing topics from geology, biology, environmental studies, environmental science, chemistry and geography. All students are required to take the AP Environmental Science examination in May.

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## COMPUTER SCIENCE

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### FOUNDATIONS OF COMPUTER SCIENCE

Course: 3730Y

**Grades 10-12. Full Credit Year Course. Prerequisite: Algebra I, Algebra I A & B, or Teacher Recommendation.**

This year-long course has an emphasis on computer programming within the context of broader concepts of computer science. The standards build on concepts developed in prior grade levels. The standards provide a transition from block-based programming to a text-based programming language and familiarize the student with developing and executing computer programs. Teachers select programming languages and environments, problems, challenges, and activities that are appropriate for their students to successfully meet the objectives of the standards. Programmable computing tools will be used to facilitate design, analysis, and implementation of computer programs. Students will also explore computing systems, network and internet protocols, cybersecurity, data analysis, and programming. This course may be used to fulfill a math, science, or CTE requirement.

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### ADVANCED PLACEMENT (AP) COMPUTER SCIENCE PRINCIPLES

Course: 3760Y

**Grades 10-12, E. C. Glass. Full Credit Year Course. Prerequisite: Algebra I and Foundations of Computer Science, Computer Programming, or Teacher Recommendation.**

AP Computer Science Principles is designed to introduce students to the central ideas of computer science, to instill ideas and practices of computational thinking, and to have students engage in activities that show how computing changes the world. The course is rigorous and rich in computational content, includes computational and critical thinking skills, and engages students in the creative aspects of the field. Through both its content and pedagogy, this course aims to appeal to a broad audience. Computational thinking practices include connecting computing, creating computational artifacts, abstracting, analyzing problems and artifacts, communications and collaborating. All students are required to take the AP Computer Science Principles examination in May.

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### ADVANCED PLACEMENT (AP) COMPUTER SCIENCE

Course: 3729Y

**Grades 10-12, E. C. Glass. Full Credit Year Course. Prerequisite: Algebra I and Foundations of Computer Science, Computer Programming, or Teacher Recommendation.**

A large part of the course is built around the development of computer programs that correctly solve a given problem. At the same time, the design and implementation of computer programs is used as a context for introducing other important aspects of computer science, including the development and analysis of algorithms, the development and use of fundamental data structures, the study of standard algorithms and typical applications, and the use of logic and formal methods. All students must take the AP Computer Science examination in May.

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## SOCIAL STUDIES

*The Regulations for Establishing Standards for Accrediting Public Schools in Virginia specifies that students must earn 3 standard units of credit in History and Social Sciences for a Standard Diploma and 4 standard units of credit for an Advanced Studies Diploma. In order to earn a Standard Diploma, students must complete one course in U.S. and Virginia History, one course in U.S. and Virginia Government, and one course in either world history, world geography, or both. Additionally, students must earn one Verified Credit. Students who complete a career and technical education sequence and pass an examination or*

occupational competency assessment in a career and technical education field that confers certification or an occupational competency credential from a recognized industry, or trade or professional association, or acquires a professional license in a career and technical education field from the State may substitute the certification, competency credential, or license for (1) the student-selected verified credit, and (2) either a science or history and social science verified credit when the certification, license, or credential confers more than one verified credit. In order to earn an Advanced Studies Diploma, students must complete at least four different courses students must complete one course in U.S. and Virginia History, one course in U.S. and Virginia Government, and two courses in either world history, world geography, or both. Students' requests to enroll in more than one History or Social Science course for new credit must receive approval from the principal. **SOL tests are available for Geography, World History I, World History II, and VA & U.S. History. Students should work with their counselor to determine which test(s) are needed to verify credits for graduation.**

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**WORLD GEOGRAPHY****Course: 4690Y**

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**Grade 9-12. Full Credit Year Course.**

The focus of these classes is the study of the world's peoples, places, and environments, with an emphasis on world regions. Near the end of the school year, the students will take the Virginia World Geography Standards of Learning test. **Near the end of the school year, students will take the Standards of Learning (SOL) Geography test if needed for graduation.**

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**ADVANCED WORLD GEOGRAPHY****Course: 4367Y**

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**Grade 9-12. Full Credit Year Course.**

The focus of these classes is the study of the world's peoples, places, and environments, with an emphasis on world regions. In these advanced-level classes students must complete in-depth projects and writing assignments, as well as additional reading assignments and research. **Near the end of the school year, students will take the Standards of Learning (SOL) Geography test if needed for graduation.**

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**WORLD HISTORY & GEOGRAPHY I (to 1500 AD)****Course: 4290Y**

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**Grade 9. Full Credit Year Course.**

These classes cover the historical development of people, places, and patterns of life from early times until about 1500 AD. Geography is emphasized in the study of each civilization. These classes are designed primarily for students seeking the standard high school diploma. **Near the end of the school year, students will take the Standards of Learning (SOL) World History I test.**

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**ADVANCED WORLD HISTORY & GEOGRAPHY I (to 1500 AD)****Course: 4397Y**

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**Grade 9. Full Credit Year Course.**

These classes cover the historical development of people, places, and patterns of life from early times until about 1500 AD. Geographic influences on history are emphasized in the study of each civilization. In these advanced-level classes students must complete in-depth projects and writing assignments, as well as additional reading assignments and research. **Near the end of the school year, students will take the Standards of Learning (SOL) World History I test.**

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**WORLD HISTORY & GEOGRAPHY II (1500 AD to PRESENT)****Course: 4200Y**

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**Grade 9 or 10. Full Credit Year Course.**

These classes cover history and geography from the late Middle Ages to the present. Other points of focus are the political boundaries that developed with the evolution of nation-states; the ways in which scientific and technological revolutions produced economic, social and political change; and the people and events of the 19th and 20th centuries as they relate to contemporary issues. This course has an associated SOL test, which can be used to verify a history credit for graduation (if needed). **Near the end of the school year, students will take the Standards of Learning (SOL) World History II test if needed for graduation.**

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**ADVANCED WORLD HISTORY & GEOGRAPHY II (1500 AD to PRESENT)****Course: 4307Y**

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**Grade 10. Full Credit Year Course.**

These classes cover history and geography from the late Middle Ages to the present. Other points of focus are the political boundaries that developed with the evolution of nation-states; the ways in which scientific and technological revolutions produced economic, social and political change; and the people and events of the 19th and 20th centuries as they relate to contemporary issues. Projects, writing assignments, additional reading assignments, and research are requirements of these classes. This course has an associated SOL test, which can be used to verify a history credit for graduation (if needed). **Near the end of the school year, students will take the Standards of Learning (SOL) World History II test if needed for graduation.**

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**ADVANCED PLACEMENT (AP) WORLD HISTORY****Course: 4469Y**

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**Grades 10-12. Full Credit Year Course.**

This course is designed for students with a keen interest in history and a desire to earn college credit in high school. Requiring extensive independent reading and writing assignments, this course has as its chronological frame the period from approximately 8000 B.C.E. to the present.

Course work focuses on continuity and change across historical periods as students analyze the processes and causes involved in these continuities and changes. Included in the course are the major civilizations in Africa, the Americas, Asia, and Europe. All students are required to take the advanced placement examination in May. Note: These classes may be taken at the 10th grade level for social studies credit in lieu of Advanced World History & Geography II (1500 AD to Present). Eleventh and 12th grade students may take the class for elective credit. **Near the end of the school year, students will take the Standards of Learning (SOL) World History I or II test if needed for graduation.**

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**AMERICAN HISTORY****Course: 4210Y**

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**Grade 11. Full Credit Year Course.**

These classes are a chronological study of American history from the Age of Discovery to the present. Although emphasis is placed on political and economic history, content also includes the major issues, movements, people, and events that shaped American culture. **Near the end of the school year, students will take the Standards of Learning (SOL) U.S. History test if needed for graduation.**

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**ADVANCED AMERICAN HISTORY****Course: 4317Y**

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**Grade 11. Full Credit Year Course.**

These advanced-level classes provide a comprehensive, in-depth study of American history from the Age of Discovery to the present. Although emphasis is placed on political and economic history, content also includes the major issues, movements, people, and events that shaped American culture. Independent reading and writing assignments, as well as individual research projects, are required. **Near the end of the school year, students will take the End-of-Course Standards of Learning (SOL) U.S. History test if needed for graduation.**

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**ADVANCED PLACEMENT (AP) AMERICAN HISTORY****Course: 4419Y**

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**Grade 11. Full Credit Year Course.**

These classes are geared to the student who has a keen interest in history and who wishes to receive college credit while in high school. During 1st semester, emphasis is on the American Revolution, the Jacksonian period, the Civil War, Reconstruction, and the Gilded Age. Second semester focuses on the politics of the Gilded Age, the Populist-Progressive era, World War I, the Depression and the New Deal, World War II, and domestic and foreign policy from Post World War II to the 1980s. Course requirements include basic text and supplementary readings, class lectures and discussions, and writing assignments (including open-ended and document-based questions). **Near the end of the school year, students will take the Standards of Learning (SOL) U.S. History test if needed for graduation. All students are required to take the advanced placement examination in May.**

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**UNITED STATES GOVERNMENT****Course: 4220Y**

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**Grade 12. Full Credit Year Course.**

These classes provide students with an understanding of the American and Virginia political systems. Included in this study are the United States and Virginia Constitutions; the structure and operation of the legislative, executive, and judicial departments of the U.S. and Virginia governments; the process of policy-making in economics, foreign affairs, and civil rights issues; and the influence of the public, interest groups, political parties, and the media on decision making. Other points of focus are a comparison of the U.S. political and economic systems to those of other nations and the role of the government in the economy. In addition, special emphasis is given to a unit on individual voting behavior, incorporating current elections.

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**ADVANCED UNITED STATES GOVERNMENT****Course: 4327Y**

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**Grade 12. Full Credit Year Course.**

This advanced-level government course focuses on the theory and practice of leadership and political behavior from the social scientist point of view as students study topics such as theories of government, federalism, state and local government, and decision-making at the national level. Additional units of study include the American Free Enterprise System, the law and society, and the involvement of the United States in foreign affairs. As in all advanced-level classes, students must be prepared to complete independent reading, writing, and research assignments.

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**ADVANCED PLACEMENT (AP) AMERICAN GOVERNMENT POLITICS & COMPARATIVE GOVERNMENT POLITICS****Courses: 4429A & 4429B**

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**Grade 12, 1st & 2nd Semester. One-half Credit Per Semester**

These classes are geared to those students with a keen interest in government and the desire to earn college credit in high school. First semester gives students a critical perspective on politics and government in the United States, involving both the study of general concepts to interpret American politics and the analysis of specific case studies. In 2nd semester, students gain knowledge of the world's diverse political structures and practices as they study five specific countries and compare their key political relationships. Both 1st and 2nd semester classes require student research and analysis. **All students must take both the American Government and AP Comparative Government examinations in May.**

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**AFRICAN-AMERICAN STUDIES****Course: 4740Y**

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**Grades 9-12. Full Credit Year Course.**

This elective course in African American Studies provides a thematic study of African American History from African origins to the present. Students will study the history and culture of African Americans and their contributions and roles in American History. An emphasis throughout the course is on how African American culture has impacted United States History. This course is taught through a variety of literature and with multiple opportunities for class discussion, expository writing, and collaborative projects.

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**ADVANCED PLACEMENT (AP) HUMAN GEOGRAPHY****Course: 4459Y**

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**Grades 9-12. Full Credit Year Course.**

The AP Human Geography course is equivalent to an introductory college-level course in human geography. The course introduces students to the systematic study of patterns and processes that have shaped human understanding, use, and alteration of Earth's surface. Students employ spatial concepts and landscape analysis to examine socioeconomic organization and its environmental consequences. They also learn about the methods and tools geographers use in their research and applications. The curriculum reflects the goals of the National Geography Standards (2012). Near the end of the school year, students will take the World Geography Standards of Learning test and the AP Human Geography examination in May. **Near the end of the school year, students will take the Standards of Learning (SOL) Geography test if needed for graduation. All students are required to take the AP Human Geography examination in May.**

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**PSYCHOLOGY****Course: 4470Y**

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**Grades 10-12. Full Credit Year Course.**

This is a general overview course focusing on the scientific study of both the behavioral and mental processes of human beings and animals. More specifically, we will be covering: history of psychology and scientific thought, biological basis of behavior, research methodology, statistics, sensation and perception, states of consciousness, memory, language and intelligence, developmental psychology, personality, and learning.

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**ADVANCED PLACEMENT (AP) PSYCHOLOGY****Course: 4479Y**

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**Grades 11 or 12. Full Credit Year Course.**

The purpose of the course itself is to introduce the systematic and scientific study of the behavior and mental processes of human beings and other animals. Included is a consideration of the psychological facts, principles, and phenomena associated with each of the major subfields within psychology. Students also learn about the ethics and methods psychologists use in their science and practice. **All students are required to take the AP Psychology examination in May.** There is no prerequisite to this course.

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**HEALTH (required for graduation)**

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*The Regulations for Establishing Standards for Accrediting Public Schools in Virginia specifies that students must earn two standard units of credit in Health and Physical Education in order to earn any type of high school diploma. The Physical Education Program offers a variety of courses designed to meet individual needs and interests; however, the underlying purpose in all courses is to promote the concept of fitness and wellness for life. All courses will include aerobic exercises and strength training in addition to skills development in the specified sports and/or recreational activities. Two semesters of physical education are required for graduation. Unless there are unusual exceptions, 9<sup>th</sup> grade students should enroll in Health and Family Living and Physical Education 9 (unless recommended for Weight Training I). Likewise, in Grade 10, unless there are unusual exceptions, 10<sup>th</sup> grade students should enroll in Driver Education and Personal Health and Social Development and either Physical Education 10, Weight Training I, or Weight Training II. Any requests for an exception should first be discussed with your counselor.*

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**HEALTH AND FAMILY LIVING****Courses: 5250A & 5250B**

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**Grades 9-12. 1st or 2nd Semester. One-half Credit Course. Prerequisite: None.**

This course fulfills the family life education requirement for students in grade nine. The course includes instruction in disease prevention, first-aid techniques, human growth and development, personal health and wellness, substance abuse, consumer health, and topics related to family living. Attitudes, morality and responsible decision making are discussed in relation to developing a healthy and productive lifestyle from adolescence to old age. Students should enroll in a semester-long health or physical education course only if they need a semester credit and not a full-year credit to fulfill graduation requirements.

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**DRIVER EDUCATION AND PERSONAL HEALTH & SOCIAL DEVELOPMENT****Courses: 5240A & 5240B**

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**Grades 9-12. 1st or 2nd Semester. One-half Credit Course. Prerequisite: None**

The Driver Education portion will provide the in-class preparation for behind-the-wheel driver training. Personal health and social development fulfills the family life education requirement for grade ten. Students should enroll in a semester-long health or physical education course only if they need a semester credit and not a full-year credit to fulfill graduation requirements. The completion of the state of Virginia's VADETS online driving course does not carry with it any high school credit.

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## **PHYSICAL EDUCATION (required for graduation)**

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### **PHYSICAL EDUCATION DRILL**

**Courses: 5140A & 5140B**

**Grades 9-12. 1st or 2nd Semester. One-half Credit Course. Prerequisite: Enrollment in ROTC I or completion of ROTC I.**

This course is designed to develop knowledge and skills related to flexibility, strength training, personal fitness, and drill activities.

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### **PHYSICAL EDUCATION 9**

**Courses: 5190A & 5190B**

**Grades 9-12, 2nd Semester. One-half Credit Course. Prerequisite: None.**

This course is designed to develop intermediate and advanced skills in activities selected from among the following: floor or field hockey, lacrosse, softball, volleyball and basketball. Students should enroll in a semester-long health or physical education course only if they need a semester credit and not a full-year credit to fulfill graduation requirements. Once students successfully complete this course, they may not enroll in this same course again for new credit.

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### **PHYSICAL EDUCATION 10**

**Course: 5191A & 5191B**

**Grades 9-12, 1st Semester. One-half Credit Course. Prerequisite: None.**

This course is designed to develop intermediate and advanced skills in activities selected from among the following: flag football, soccer, basketball, tennis, and track and field. Students should enroll in a semester-long health or physical education course only if they need a semester credit and not a full-year credit to fulfill graduation requirements.

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### **PHYSICAL EDUCATION 9 & HEALTH & FAMILY LIVING 9**

**Course: 5991Y**

**Grade 9. Full Credit Year Course. Prerequisite: None.**

This year-long course fulfills one of the two standard units of credit in Health and Physical Education required to graduate. Students will complete one semester of Physical Education, designed to develop intermediate and advanced skills in activities selected from among the following: floor or field hockey, lacrosse, softball, volleyball, and basketball. Students will complete one semester of Health, which will cover the Family Life Education requirement. Included are the studies of disease prevention, first-aid techniques (including CPR and defibrillator training), human growth and development, personal health and wellness, substance abuse, consumer health, and topics related to family living. Attitudes, morality, and responsible decision-making are discussed in relation to developing a healthy and productive lifestyle from adolescence to old age.

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### **PHYSICAL EDUCATION 10 & DRIVER EDUCATION**

**Course: 5901Y**

**Grade 10-12. Full Credit Year Course. Prerequisite: None.**

This year-long course fulfills one of the two standard units of credit in Health and Physical Education required to graduate. Students will complete one semester of Physical Education, designed to develop intermediate and advanced skills in activities selected from among the following: flag football, soccer, basketball, tennis, and track and field. The Driver Education portion will provide in-class preparation for behind-the-wheel driver training. Personal Health and Social Development covers 10th grade Family Life Education.

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### **WEIGHT TRAINING I**

**Courses: 5151A & 5151B**

**Grades 11-12 (unless recommended by staff). 1st or 2nd Semester. One-half Credit Course. Prerequisite: None.**

This introductory course is designed to give students the opportunity to learn weight training concepts and techniques used for obtaining optimal physical fitness. Students will benefit from comprehensive weight training and cardiorespiratory endurance activities. Students will learn the basic fundamentals of weight training, strength training, aerobic training, and overall fitness training and conditioning. Course includes both lecture and activity sessions. Students will be empowered to make wise choices, meet challenges, and develop positive behaviors in fitness, wellness, and movement activity for a lifetime. Any students in Grade 9 recommended to enroll in Weight Training I instead of the semester-long Physical Education 9 must still successfully complete the semester of Health and Family Living. Students in grades 11-12 who are enrolled in Weight Training I and have already completed their physical education credits required for graduation may complete this course for elective credit **if there is space available. Priority will be given to students who have not completed their graduation requirements.** If possible, students in grades 11-12 who are enrolled in Weight Training I should be scheduled into a separate section from 9th grade students enrolled in the course. **Sequential option:** Weight Training I and Weight Training II may satisfy the sequential elective requirement if taken after the student has earned the physical education credits required for graduation.

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### **WEIGHT TRAINING II**

**Courses: 5152A & 5152B**

**Grades 11-12 (unless recommended by staff). 1st or 2nd Semester. One-half Credit Course. Prerequisite: Staff Recommendation.**

This intermediate course is designed to give students who have completed Weight Training I an opportunity to become more proficient in weight and fitness training concepts and techniques. Students will continue to develop skills in weight training, strength and aerobic training, and overall conditioning. Students in grades 11-12 who are enrolled in Weight Training II may complete the course repeatedly for elective credit. These

students must still successfully complete the semester of Driver Education and Personal Health and Social Development. Students in grades 11-12 who are enrolled in Weight Training II and have already completed their physical education credits required for graduation may complete the course for elective credit.

**Sequential option:** Weight Training I and Weight Training II may satisfy the sequential elective requirement if taken after the student has earned the physical education credits required for graduation. *This course may be taken repeatedly for elective credit if space is available.*

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## **FITNESS FOR LIFE**

**Course: 5161Y**

**Grades 11-12. Full Credit Year Course. Prerequisite: PE 9 & 10 or Weight Training I & II.**

This elective course for students who have completed the Health and Physical Education graduation requirements will enable students to obtain the knowledge and skills necessary to develop and maintain a level of fitness and to increase physical competence, self-esteem, and the motivation to pursue lifelong physical activity. Students will gain an understanding of the components of health-related fitness, training principles, and the benefits of being physically active throughout their lives. In addition to practicing basic stretching and aerobic exercises, students will practice the basic fundamentals of walking/jogging; learn the rules and participate in team activities like basketball, volleyball, and softball; one-on-one or doubles sports like tennis and pickleball; and individual sports like Ultimate Frisbee and Frisbee golf.

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## **FOUNDATIONS OF PERSONAL FITNESS & WELLNESS**

**Course: 5931YS**

**Grades 9-12. Summer Only, One Credit. Prerequisite: None.**

This course fulfills one of the standard units of credit in Health and Physical Education required to graduate. Using an online approach, the course covers both health and physical education standards. The course is broken into modules that contain the learning content and activities to be completed. Students will be assigned to a licensed Lynchburg City Schools' Health/Physical Education teacher who will monitor, assist, and evaluate. For the Physical Education component, students will study and engage in applications of movement by (1) developing a personal fitness plan aimed at improving motor skills, movement patterns, strength, flexibility, and endurance and (2) completing online units of study focusing on overall wellness – their physical, mental, and emotional health and development. Units include nutrition and diet, and the functions and structures of various systems of the body, including the digestive, urinary, endocrine, and reproductive systems. Units covering the state's 9th grade Family Life Education SOLs are included. Topics include family living and community relationships; the benefits, challenges, responsibilities, and value of positive relationships for men, women, and children, and communities; abstinence education; the value of postponing sexual activity; human sexuality; human reproduction; dating violence; the characteristics of abusive relationships; steps to take to avoid sexual assault; and the availability of counseling and legal resources. Students will also study the consequences of risky behaviors and disease prevention. **There is a \$225 fee for this course.**

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## **CAREER-TECHNICAL EDUCATION**

*Career and Technical Education is an essential part of the school division's total educational program specifically designed to prepare students for gainful employment and/or post-secondary education or training. These courses are designed to enhance and support the academic curriculum by reinforcing the Standards of Learning established for English, mathematics, science, history, and social science. Career and Technical Education provides sequences of career-related courses designed to help students develop skills needed for entry-level employment, advanced technical training programs, and continuing education on the college and university level. Every program is designed to help students develop 21st-century workforce readiness skills, such as, reasoning, problem-solving, decision-making, teamwork, work ethic, and demonstrating independence and initiative. Courses that must maintain a maximum pupil-to-teacher ratio of 20 students to one teacher, due to safety regulations, will require students to fill out a "First Choice Form". A rubric will be utilized for student acceptance into that program. The rubric will include topics of attendance, grades, behavior, and career goals. An interview may be required for some courses to gauge student interest. Shuttle buses are provided for students to travel between high schools if needed. Students may require a travel period for off-site courses. Each high school has a specific career technical program based at their location, but all programs are available to students.*

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## **ARCHITECTURE & CONSTRUCTION**

*Courses in this area can prepare students for careers in designing, planning, managing, building and maintaining the built environment.*

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### **DRAFTING I**

**Course: 6740Y**

**Grades 9-12. E. C Glass. Full Credit Year Course. Prerequisite: Algebra I.**

This entry-level course is designed with an emphasis on the basic principles of drafting and sketching techniques, object visualization, the application of math concepts, and basic through intermediate computer assisted drawing (CAD) applications. Although 2D CAD techniques are emphasized, students also learn 3D modeling techniques at the end of the course. Students may be given the opportunity to compete in regional and state CAD competitions. There is a fee associated with this class. Financial assistance is available for eligible students. Industry Credentials: NOCTI Drafting.

**Sequential options:** Drafting II

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**DRAFTING II****Course: 6750Y**

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**Grades 10-12. E. C. Glass. Full Credit Year Course. Prerequisite: Drafting I (6740) & Algebra I.**

This advanced-level course begins with sharpening skills learned in Basic Technical Drawing on the Computer Assisted Drafting (CAD) software. Students will be able to construct three-dimensional and solids drawings, as well as assembly drawings. As students' skills progress, CAD will be used as a tool to assist in completing design projects of increasing difficulty. Engineering principles are introduced and explored through the design projects. Emphasis will be on the development and honing of problem-solving skills and assembling professional design portfolios. The students will also be given the opportunity to compete in regional and state competitions in CAD and engineering design. **This course may be taken as a dual enrollment course earning 6 college credits from Central Virginia Community College. The CVCC course number is DRF 201 and DRF 202.** There is a fee associated with this class. Financial assistance is available for eligible students. Industry Credentials: NOCTI Drafting.

Sequential options: Drafting III

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**DRAFTING III (formerly Architectural Drawing)****Course: 6760Y**

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**Grades 10-12. E. C. Glass. Full Credit Year Course. Prerequisite: Drafting I (6740) & Algebra I.**

This upper-level course begins with the basics of residential design and progresses through an entire set of house plans. The students will learn architectural CAD software, as a tool for creating professional, three-dimensional architectural designs and drawings. The students will design and build model displays as projects. The students will also be given the opportunity to compete in regional and state competitions in architectural design and modeling. There is a fee associated with this class. Financial assistance is available for eligible students. Industry Credentials: NOCTI Technical Drafting and Architectural Drafting.

Sequential options: Drafting I, Drafting II

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**CONSTRUCTION TECHNOLOGY****Course: 8431Y**

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**Grades 10 & 11. Heritage High. Full Credit Year Course. Prerequisite: None. Location: Heritage High School**

Students will be introduced to three general areas of study including carpentry, electrical wiring, and plumbing in this course. Students will design, build, and test scale model structures and work with projects that help them to understand the jobs of architects, carpenters, electricians, plumbers, surveyors, contractors, design engineers, and a variety of other construction careers. Maximum number of students per class 20. Industry Credentials: NCCER: Core Level 1.

Sequential options: None

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**BUILDING TRADES I****Course: 8240Y**

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**Grade 11. Heritage High. Full Credit Year Course. Prerequisite: Approved Application.**

This is a double-period course. This course is designed to prepare individuals to erect, install, maintain and repair buildings and other structures. Carpentry, masonry, electricity, and plumbing will be emphasized. Also included is instruction in cost estimating, cutting, fastening, and fitting various materials, using hand and power tools and following technical specifications and blueprints. Students have the opportunity to earn an OSHA-10 card. Maximum number of students per class 20. Industry Credentials: NCCER: Core Level 1.

Sequential options: Building Trades II

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**BUILDING TRADES II****Course: 8250Y**

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**Grade 12. Heritage High. Full Credit Year Course. Prerequisite: Building Trades I (8240Y).**

This is a double-period course. Course content includes construction, customer relations, job pricing, custom construction, and installing interior millwork. Building Codes will be stressed in carpentry, painting, electrical, plumbing and masonry. The course also includes special emphasis on job opportunities, project management, and job integrity in the construction trades. Maximum number of students per class 20. **This course may be offered as a dual-enrollment course earning six college credits from Central Virginia Community College** under the course numbers 8258AC, 8258BC (CVCC course numbers are BLD 149 (3 credits) and BLD 249 (3 credits). Industry Credentials: NCCER: Core Level 1.

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**ARTS, A/V TECHNOLOGY & COMMUNICATIONS**

*Courses in this area can prepare students for careers in designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services.*

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**ADVERTISING DESIGN A & B****Course: 8561A & 8561B**

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**Grades 10-12. E. C. Glass and Heritage High. 1st or 2nd Semester. One-half Credit Course. Prerequisite: None.**

This is an introduction class for students preparing for jobs as advertising artists, and illustrators. Students learn both hand and computer generated layout and illustration used for brochures, posters, catalogues, advertisements and logos. Students learn skills in the areas of advertising design, illustration, printing advertisements, digital photography, and digital imaging. Industry Credentials: NOCTI Marketing.

**Sequential options:** Video and Media Technology

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**VIDEO AND MEDIA TECHNOLOGY****Course: 7450Y**

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**Grades 10-12. E.C. Glass and Heritage High. Full Credit Year Course. Prerequisite: None, Approved Application.**

This course offers students an opportunity to study all aspects of video and media production, from planning and writing for production to operating studio and editing equipment. Students practice various methods of gathering news and information from individuals, research, and online resources. In addition, students are introduced to analog and digital principles of film production. Industry Credentials: NOCTI Marketing, Virginia Workplace Readiness Skills.

**Sequential options:** Advertising Design

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**BUSINESS, MANAGEMENT, ADMINISTRATION & FINANCE**

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*Courses in this area can prepare students for careers in Business Management and Administration and Finance, careers that encompass planning, organizing, directing and evaluating business functions essential to efficient and productive business operations. Business Management and Administration and Finance career opportunities are available in every sector of the economy.*

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**ACCOUNTING I****Course: 6160Y**

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**Grades 10-12. E.C. Glass and Heritage High. Full Credit Year Course. Prerequisite: None.**

Content includes theory of basic bookkeeping, use of journals and ledgers, worksheets, and income statements. Also included is the preparation of financial records, taxes and payroll projects; special problems related to sales and purchases. Students learn fundamental accounting procedures using a manual system. Industry Credentials: NOCTI Accounting.

**Sequential options:** Accounting II, Business Law, Business Management, Computer Information Systems, Design, Multimedia, & Web Technologies, Principles of Business & Marketing.

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**ACCOUNTING II****Course: 6170Y**

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**Grades 11 or 12. E.C. Glass and Heritage High. Full Credit Year Course. Prerequisite: Accounting I (6160 A & B).**

Content includes management of financial records through various business activities, partnership accounting, and general ledger. Students use manual accounting skills to analyze and interpret accounting transactions. Also included is the study of corporate and cost accounting and budgetary controls. Industry Credentials: NOCTI Accounting.

**Sequential options:** Business Law, Business Management, Computer Information Systems, Design, Multimedia, & Web Technology, Principles of Business and Marketing.

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**BUSINESS MANAGEMENT****Course: 6140A**

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**Grades 11 or 12. E.C. Glass and Heritage High. 1st Semester, One-half Credit Course. Prerequisite: None.**

This one-semester course includes an overview of American business and the social and economic environments in which it operates. Main topics of study are economics, business finance, and personnel administration. Members of the class start and operate a corporation through Junior Achievement. Industry Credentials: Virginia Workplace Readiness Skills.

**Sequential options** Accounting I, Business Law, Computer Information Systems, Design, Multimedia, & Web Technology, Marketing, Principles of Marketing.

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**BUSINESS LAW****Course: 6150B**

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**Grades 11 or 12. E. C. Glass and Heritage High. 2nd Semester, One-half Credit Course. Prerequisite: Business Management.**

This course is focused on personal law, the law of contracts and the rights and responsibilities of individuals in our society. Laws affecting daily business contracts and employment are emphasized. Industry Credentials: Virginia Workplace Readiness Skills

**Sequential options:** Accounting I, Business Management, Computer Information Systems, Design, Multimedia, & Web Technology, Principles of Business & Marketing.

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**COMPUTER INFORMATION SYSTEMS****Course: 6340Y**

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**Grades 11 or 12. Heritage High. Full Credit Year Course.**

This course develops skills and provides experience with the major business applications of the microcomputer. These include Microsoft Windows and word processing using Microsoft Office. Also included are business computer terminology, systems and procedures, spreadsheets, database management, desktop publishing, and presentation graphics using Microsoft Office. Students will attempt the Internet and Computing Core Certification (IC3) exam. The IC3 exam is offered through Certiport. Industry Credentials: Microsoft Office Specialist.

**Sequential Options:** Accounting I, Business Law, Business Management, Design, Multimedia, & Web Technology, Principles of Business and Marketing, Programming.

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**DESIGN, MULTIMEDIA, & WEB TECHNOLOGIES****Courses: 6260A & 6260B**

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**Grades 9-12. E. C. Glass and Heritage High. 1st or 2nd Semester. One-half Credit Course.**

Students develop proficiency in creating desktop publications, multimedia presentations/projects, and web sites using industry standard application software. Students incorporate principles of layout and design in completing publications and projects. Students design portfolios that may include business cards, newsletters, mini-pages, web pages, multimedia presentations, and projects, calendars, and graphics. Completion of this course may prepare students for industry certifications. Industry Credentials: Microsoft Office Specialist.

**Sequential options:** Accounting I, Business Law, Business Management, Computer Information Systems, Digital Applications, Principles of Business & Marketing, Programming.

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**DIGITAL APPLICATIONS****Course: 3740Y**

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**Grades 9-12. E. C. Glass and Heritage High. Full Credit Year Course. Prerequisite: None.**

This course develops skills and provides experience with major computer applications. These applications include word processing (using both text and graphics-based programs), spreadsheet, database, and integration of applications. Students use these applications for problem solving and file and disk management. Keyboarding and general computer understanding are addressed as needed. Also included is work with multi-media research, the Internet, presentations, desktop-publishing, video conferencing and digital cameras, computer graphics, and computer communications. Industry Credentials: Microsoft Office Specialist.

**Sequential options:** Accounting I, Business Law, Business Management, Computer Information Systems, Design, Multimedia & Web Technology, Principles of Business & Marketing, Programming.

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**PRINCIPLES OF BUSINESS & MARKETING A & B****Courses: 6370A & 6370B**

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**Grades 9-12. Heritage High. 1st or 2nd Semester. One-half Credit Course. Prerequisite: None.**

Students explore the role of business and marketing in the free enterprise system and the global economy. They study how the American economy operates as they prepare to make decisions as consumers, wage earners, and citizens. Industry Credentials: Virginia Workplace Readiness Skills.

**Sequential options** Accounting I, Business Law, Business Management, Computer Information Systems, Design, Multimedia, & Web Technology, Marketing I, Marketing II, Sports & Entertainment Management.

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**PROGRAMMING****Course: 6640Y**

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**Grades 9-12. E. C. Glass and Heritage High. Full Credit Year Course. Prerequisite: None.**

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 HTML or JavaScript to create Web pages.

**Sequential options:** AP Computer Science, AP Computer Science Principles, Computer Information Systems, Digital Applications, Principles of Business & Marketing, Design Multimedia & Web Technology

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**PERSONAL FINANCE & ECONOMICS****Course: 6151Y**

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**Grades 9-12. E. C. Glass and Heritage High. Full Credit Year Course. Prerequisite: None.**

Students explore many facets of financial decision-making involved in daily life. Skills in money management, record keeping, and banking are enhanced through the study of basic concepts of economics, insurance, credit, and other related topics. In this course, students are required to complete a program entitled "EVERFI" to satisfy the successful completion of an online course for graduation. Students must also take the W!SE Financial Literacy exam as the end-of-course exam.

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**PERSONAL FINANCE & ECONOMICS****Course: E6151YS**

**Rising Grades 10-12. E. C. Glass and Heritage High. Full credit is offered as a summer online course. Prerequisite: None.**

Students explore many facets of financial decision-making involved in daily life. Skills in money management, record keeping, and banking are enhanced through the study of related topics. Students must to take the W!SE Financial literacy exam on site to meet requirements for this course. This course satisfies the online course requirement needed for graduation.

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**EDUCATION & TRAINING**

*Courses in this area can prepare students for careers in planning, managing and providing education and training services or related learning support services.*

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**TEACHERS FOR TOMORROW I****Course: 6550Y**

**Grades 11 & 12. Full Credit Year Course, E. C. Glass and Heritage High. Prerequisite: Have & maintain a minimum 2.7 grade point average. Students must submit three satisfactory teacher recommendations, a brief essay & application to University of Lynchburg.** Virginia's Teachers for Tomorrow Program is offered to high school juniors and seniors interested in pursuing a career in teaching and education. Students will experience the profession as they are guided through the history of education and the functions of schools and school divisions. Additionally, the students will experience the classroom as they become acquainted on a personal and professional level with teachers and teaching; including a brief internship in a classroom setting. **This course may be taken as a dual-enrollment course earning 4 college credits from the University of Lynchburg under the LCS course numbers 6558AC and 6558BC.** The LC course numbers are EDUC 101 (3 credits) and EDUC 202 (1 credit).

**Sequential Options:** Teachers for Tomorrow II

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**TEACHERS FOR TOMORROW II****Course: 9072Y**

**Grades 11 & 12. E. C. Glass and Heritage High. Full Credit Year Course. Prerequisite: Teachers for Tomorrow I.**

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

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**HEALTH SCIENCES**

*Courses in this area can prepare students for careers in planning, managing, and providing therapeutic services, diagnostic services, health information science, support services, and biotechnology research and development.*

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**DENTAL CAREERS I****Course: 6810Y**

**Grade 11. E. C. Glass. Full Credit Year Course. Prerequisite: Approved application.**

This is a double-period course. This is a double period health occupational preparatory course. Students learn dental anatomy, care and sterilization of instruments, and basic oral hygiene skills. Topics include: clinical skills necessary to assist the dentist in the routine function of a dental office, chair-side dental procedures, instrument set-up, and basic laboratory procedures including material manipulation. Maximum number of students per class 20. Industry Credentials: NOCTI Dental.

**Sequential Options:** Dental Careers II

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**DENTAL CAREERS II****Course: 6820Y**

**Grade 12. E. C. Glass. Full Credit Year Course. Prerequisite: Dental Careers I (6810).**

This is a double-period course. Students continue developing their skills and mastering competencies through classroom instruction and simulated clinical experiences. Topics include: taking and processing dental x-rays, laboratory procedures, and identification of instruments and material manipulation. Students receive Dental Radiation Safety and Hygiene certification upon satisfactory completion of the unit test. The final part of the Dental Careers program combines classroom instruction with actual hands-on training with area dentist, assistants, hygienist, and laboratory technicians. The clinical training will take place during the regular school hours and will be graded but not necessarily for pay. Classroom instruction will include entry level clerical skills as well as clinical skills. Industry Credentials: NOCTI Dental.

Maximum number of students per class 20.

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**EMERGENCY MEDICAL TELECOMMUNICATIONS****Course: 8337Y**

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**Grades 11-12. E. C. Glass. Full Credit Year Course. Prerequisite: None, Approved Application.**

This course is designed to develop entry-level skills needed in a telecommunications environment for rescue, fire and police. Upon completion, students will be able to summarize issues involving the telecommunication's role and responsibilities as a member of the health and public safety environment, summarize issues involving available resources to a telecommunicator, the importance of maintaining confidentiality, liability and legal issues involving emergency telecommunicators and their agencies, and summarize the process of stress management for inside and outside a communications department/center. Industry Credentials: Virginia Workplace Readiness Skills.

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**NURSE AIDE I****Course: 8360Y**

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**Grades 11 & 12. Heritage High. Full Credit Year Course. Prerequisite: Approved Application.**

This is a one period class. Virginia Board of Nursing approved course to qualify for the Certified Nurse Aide Exam. This course features a dual focus on theory and practical skills. The theory component includes basic anatomy and physiology, ethics, health care systems, medical terminology, and professionalism. The skills are taught in the nursing lab and include transfer techniques, assessment of vital signs, assisting with patient hygiene and grooming, and infection control procedures.

**Sequential options:** Nurse Aide II

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**NURSE AIDE II****Course: 8362Y**

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**Grade 12. Heritage High. Full Credit Year Course. Prerequisite: Nurse Aide I (8360).**

This is a one period course. Virginia Board of Nursing approved course to qualify for the Certified Nurse Aide Exam. This course integrates the principles and skills introduced in Nurse Aide I. Students practice skills and concepts from the course in a closely supervised clinical setting. The course also includes preparation for the Virginia certification exam. Industry Credentials: Virginia Certified Nursing Assistant State Board.

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**ATHLETIC TRAINING I****Course: 5260Y**

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**Grades 11-12. E. C. Glass and Heritage High. Full Credit Year Course. Prerequisite: Approved Application.**

Interest in athletic training and permission of the instructor Students interested in athletic training as a career, physical therapy, or medicine should consider these courses. Sports medicine covers three aspects: recognition of injuries; prevention of injuries; and rehabilitation of injuries. Some lab work with athletic teams may be required.

**Sequential options:** Athletic Training II

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**ATHLETIC TRAINING II****Course: 5261Y**

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**Grade 12. E. C. Glass and Heritage High. Full Credit Year Course. Prerequisite: Athletic Training I and Instructor recommendation.**

Students continue their study of sports medicine topics from three aspects: recognition of injuries; prevention of injuries; and rehabilitation of injuries. Some lab work with athletic teams may be required.

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**HOSPITALITY & TOURISM**

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

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**INTRODUCTION TO HOSPITALITY, TOURISM & RECREATION****Course: 6440Y**

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**Grades 10-12. E. C. Glass. Full Credit Year Course. Prerequisite: None.**

Students enrolled in the Introduction to Hospitality, Tourism and Recreation focus on developing professional skills and using emerging technologies to prepare for employment in this global industry, rich in diverse career opportunities. The program includes instruction in the industries of lodging, food and beverage, travel and tourism, and recreation and fitness. Maximum number of students per class 20.

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**INTRODUCTION TO CULINARY ARTS****Course: 6444Y**

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**Grades 9-10. Heritage High Only. Full Credit Year Course. Prerequisite: None**

This course provides students with opportunities to explore career options within the food industry. Students investigate food safety and sanitation, explore culinary preparation foundations, practice basic culinary skills, explore diverse cuisines and service styles, investigate nutrition and menu development, and examine the economics of food. The curriculum places a strong emphasis on science and mathematics knowledge and skills.

**Sequential Options:** Culinary Arts I

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**CULINARY ARTS I****Course: 6441Y****Grades 10-11. E. C. Glass and Heritage High. Full Credit Year Course. Prerequisite: Approved Application.**

This is a double-period course. Students are taught the managerial, production, and service knowledge and skills used in government, commercial, or independently owned institutional food establishments and related food industry occupations. This course includes planning, selecting, storing, purchasing, preparing, and serving food and food products; basic nutrition, sanitation, and food safety; the use and care of commercial equipment; serving techniques; and the operation of institutional food establishments. Critical thinking, practical problem solving, and entrepreneurship opportunities within the field of culinary arts are emphasized. Maximum number of students per class 20. Industry Credentials: ProStart 1 and ProStart 2.

**Sequential options:** Culinary Arts II

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**CULINARY ARTS II****Course: 6442Y****Grades 11-12. E.C. Glass and Heritage High. Full Credit Year Course. Prerequisite: Culinary Arts I (6441).**

This is a double-period course. Students extend and expand skills learned in Culinary Arts I, preparing for occupations such as chef/cook, baker/pastry helper, pastry decorator, hospitality worker, dietetic aide/assistant, food demonstrator, mixologist, and entrepreneur. Opportunities for mentorships under the supervision of the instructor will be a part of the class curriculum. Critical thinking, practical problem solving, and entrepreneurship opportunities within the field of culinary arts are emphasized. Teachers highlight the basic skills of math, science, and communication when appropriate in content. Maximum number of students per class 20. Industry Credentials: ProStart 1, ProStart 2 and ServSafe.

**This course may be taken as a dual enrollment course for six college credits from CVCC under numbers 6448AC and 6448BC. CVCC course are HRI 106 (3 credits) and HRI 158 (3 credits).**

**Sequential options:** Culinary Arts Specialization

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**CULINARY ARTS SPECIALIZATION****Course: 6443Y****Grade 12. E. C. Glass and Heritage High. Full Credit Year Course. Prerequisite: Culinary Arts I (6441); Culinary Arts II (6442).**

The Culinary Arts Specialization curriculum provides students with continuing opportunities to obtain comprehensive knowledge of the food service industry as well as to expand their technical skills in a food service specialty. Students explore careers and refine their skills in implementing safety and sanitation standards, applying nutritional principles, planning menus, using business and math skills, and selecting and maintaining food service equipment. Students specialize in one of the following four areas: Baking and Pastry Food Preparation Techniques; Catering/Banquet Food Preparation Techniques; Restaurant Operation Techniques; or Quantity Food Preparation Techniques. The curriculum continues to place a strong emphasis on science and mathematics knowledge and skills as it emphasizes critical thinking, practical problem solving, and entrepreneurial opportunities within the field of culinary arts. Spots are limited. Industry Credentials: ProStart 1, ProStart 2 and ServSafe.

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**HUMAN SERVICES**

*Preparing individuals for employment in career pathways that relate to families and human needs.*

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**COSMETOLOGY I****Course: 8340Y****Grade 11. Heritage High. Full Credit Year Course. Prerequisite: Approved Application.**

This is a triple-period course. The course includes professional ethics, hygiene, good grooming, manicuring, and hair shaping and styling. This course also includes student practice in scalp and hair treatments, the care and styling of wigs, permanent waving and hair removal. Related topics also include skin, scalp and hair disorders. **This course has a fee.** Financial assistance is available for eligible students. Maximum number of students per class is 20.

**Sequential options:** Cosmetology II

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**COSMETOLOGY II****Course: 8350Y****Grade 12. Heritage High. Full Credit Year Course. Prerequisite: Cosmetology 1 (8340).**

This is a triple-period course. The course includes beauty salon management and operation, additional work developing competencies in electricity and light therapy, chemistry, anatomy and physiology, chemical hair relaxing and hair coloring. Students will complete final preparation for taking the state cosmetology examination for licensure. **This course has a fee.** Financial assistance is **available for eligible students.** Cosmetology students must satisfy a minimum of 840 hours of instruction in a two- or three-year coherent sequence of courses to be eligible to take the Board for Cosmetology licensing examination. Industry Credentials: Virginia Barbers and Cosmetology State Board Exam.



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## INFORMATION TECHNOLOGY

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*Courses in this area can prepare students for entry level, technical, and professional careers related to the design, development, support and management of hardware, software, multimedia, and systems integration services.*

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### COMPUTER SYSTEMS TECHNOLOGY I

**Course: 8540Y**

**Grades 9-11. Heritage High. Full Credit Year Course. Prerequisite: Approved Application. This is a double period course.**

This course focuses on the soft and technical skills needed to obtain entry-level positions as network, computer, or help-desk technicians. It provides a basic overview of networking concepts, such as LANS, WANS, networking design, setup, and software. Students will study the impact of MMO and LAN gaming on networks, including designing, building, and securing a LAN gaming network. All students will complete the (IC<sup>3</sup>®) exam by Certiport. Students will service micro-computer hardware and support peripherals; build a computer from parts; diagnose, troubleshoot, & resolve personal computer basic hardware & software issues. Industry Certifications: CISCO and A+.

**Sequential options:** CST II. This course may be taken as a dual enrollment course earning 3 college credits from Central Virginia Community College under the course numbers 8548AC, 8548BC. The CVCC course number is ETR 149.

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### COMPUTER SYSTEMS TECHNOLOGY II

**Course: 8550Y**

**Grades 10-12. Heritage High. Full Credit Year Course. Prerequisite: Computer Systems I (8540). Prerequisite may be waived by instructor if sufficient technical knowledge is proven.**

This is a one period course. This course equips students with the advanced knowledge, skills, and understanding that will enable them to install, troubleshoot and maintain computers and their associated networks. Students diagnose, troubleshoot, and resolve advanced hardware and basic networking issues. Numerous hands on exercises, including configuring, installing, and troubleshooting operating systems, third party software, and hardware will reinforce student learning and understanding. Creating email accounts, configuring wireless technologies, appropriate use of social media are part of the course work. All students will complete the CompTIA A+ Essentials and A+ Specialization exams. Students may be eligible to participate in a number of certification exams offered through CISCO and CompTIA. **This course may be taken as a dual enrollment course earning four college credits from Central Virginia Community College under the course numbers 8558AC, 8558BC. The CVCC course number is ITE 221.**

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**CYBER SECURITY****Course: 8553Y**

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**Grades 9-12. Heritage High. Full Credit Year Course. Prerequisite: Approved Application.**

This is a double period course. This course prepares students for entrance into the career of cyber security, data loss prevention, and network security. The cyber security field is the fastest growing field in the IT industry and by 2016 will be the most needed profession in the United States. Students will be prepared to take and pass the CompTIA Network+ and Security+ examinations and be able to enter the IT security field directly from high school, if they choose. Topics of study include: Linux Operating Systems; OSI model; TCP model; Local and WAN security; ethical hacking (white hat); security careers and penetration testing. Industry Certifications: CISCO and A+.

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**INFORMATION TECHNOLOGY ASSISTANT I****Course: 7140Y**

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**Grades 10-12. E. C. Glass and Heritage High. Full Credit Year Course.**

This course is designed to develop students' understanding of technical support as an assistant to the Instructor, a trained Help Desk professional. Students will learn how to diagnose, troubleshoot, and resolve computer and tablet hardware and software problems. Students will develop an understanding of the logistics of properly documenting problems and solution. Students will develop technical problem solving skills through hands-on, supervised experience. Industry Certifications: Virginia Workplace Readiness Skills.

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**INFORMATION TECHNOLOGY ASSISTANT II****Course: 7150Y**

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**Grades 11-12. E. C. Glass and Heritage High. Full Credit Year Course. Prerequisite: Information Technology Assistant I.**

This course is designed to further develop students' technical support skills while providing an opportunity for students to step into a leadership role. Students who have completed the first semester course will be challenged with increasingly difficult hardware and software problems. Students will also assist the instructor with prioritizing, planning, and scheduling tasks to IT Assistant I students and ensure work is completed correctly and in a timely manner. Industry Certifications: Virginia Workplace Readiness Skills.

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**LAW, PUBLIC SAFETY, CORRECTIONS & SECURITY**

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*Courses in this area prepare students for careers in planning, managing, and providing legal, public safety, protective services, and homeland security, including professional and technical support services.*

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**CRIMINAL JUSTICE I****Course: 8702Y**

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**Grades 10-11. E. C. Glass. Full Credit Year Course. Prerequisite: None.**

This course presents an overview of the criminal justice system and introduces the major components in law enforcement, judiciary, and corrections. Students learn theory, principles, and techniques of developing/managing services for the safety and protection of people and property. Students will participate in lessons on and off campus and in activities that take place after-school hours. Students enrolled in this course are expected to join and participate in SkillsUSA. Industry Credentials: NOCTI Criminal Justice.

**Sequential options:** Criminal Justice II

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**CRIMINAL JUSTICE II****Course: 8703Y**

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**Grades 11-12. E. C. Glass. Full Credit Year Course. Prerequisite: Criminal Justice I (8702Y).**

This is a double-period course. The course covers the complex responsibilities of criminal investigation. Students will learn the principles and techniques of conducting specific investigations such as homicide, assault, and robbery. Students will also learn the principles of crime scene investigation including photography, sketching, and the securing of evidence. Students enrolled in this course are expected to join and participate in SkillsUSA. Industry Credentials: NOCTI Criminal Justice.

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**MANUFACTURING**

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*Courses in this area can prepare students for careers in planning, managing and performing the processing of materials into intermediate or final products and related professional and technical support activities such as production planning and control, maintenance and manufacturing/process engineering.*

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**PRECISION MACHINE TECHNOLOGY I****Course: 8450Y**

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**Grade 11. E. C. Glass. Full Credit Year Course. Prerequisite: Approved Application.**

This is a double-period course. Content includes safety, hand tools, bench work, layout work, blueprint reading, drilling and tapping, machine shop math, and introduction to welding. The course also includes precision measuring tools, use of charts and tables, an introduction to the CNC mill and lathe, tool grinding, and surface grinding. Maximum number of students per class 20. Industry Credentials: NOCTI Precision Machining.

**Sequential options:** Machining II

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**PRECISION MACHINE TECHNOLOGY II - INTRODUCTION TO MACHINE TOOLS****Course: 8460Y**

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**Grade 12. E.C. Glass. Full Credit Year Course. Prerequisite: Precision Machine Technology I (8450).**

This is a double-period course. Course content includes metal lathe work, drilling, milling machine, and speed and feed calculations. Drill press work includes drilling and countersinking. Also included is an introduction to computerized vertical milling machine and lathe. Qualified seniors are eligible to participate in a work experience program with local machining companies. Maximum number of students per class 20. Industry Credentials: NOCTI Precision Machining.

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**MARKETING, SALES & SERVICE**

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*Courses in this area can prepare students for careers in planning, managing, and performing marketing activities to reach organizational objectives.*

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**SPORTS & ENTERTAINMENT MANAGEMENT****Course: 6942Y**

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**Grades 10-12. Heritage High. Full Credit Year Course. Prerequisite: Approved Application Sports, Entertainment and Recreation Marketing (SER) is an entry level course offered in the two-year marketing program.**

This course is designed to develop an understanding of sports, entertainment and recreation marketing and its importance. Students develop fundamental skills for SER event planning, implementing, and evaluating. Students will learn market research, advertising, public relations, professional communications, effective selling, licensing and merchandising, branding, and event safety and security. Students learn career options available in the SER industries as well as develop skills necessary for successful initial employment experiences. Industry Credentials: NOCTI Marketing.

**Sequential options:** Marketing I, II, and Principles of Business and Marketing

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**MARKETING I****Course: 6951Y**

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**Grades 10-12. Heritage High. Full Credit Year Course. Prerequisite: Approved Application. Continuous part-time employment and/or project plan and DECA membership are required.**

Content includes risk management, product planning, communicating effectively and selling techniques. In special situations, a project plan may be substituted for the work experience requirement. This option must be teacher approved in advance. Content also includes relationships with employers, co-workers, and customers, advertising, inventory, safety, ad layout, display, free enterprise system, pricing, and economics. Industry Credentials: NOCTI Marketing.

**Sequential options:** Marketing II, Business Management, Principles of Business and Marketing

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**MARKETING II****Course: 6960Y**

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**Grade 10-12. Heritage High. Full Credit Year Course. Prerequisite: Marketing I (6950) or Sports, Entertainment and Recreation Marketing (6942). Continuous part-time employment and/or project plan and DECA membership are required.**

Students earn one-half credit per semester for the classroom component of this course and another one-half credit per semester for the required 360 hours of on-the-job training each semester. Content includes human resource, marketing research, creative selling, payroll, merchandising, determining profit, and purchasing. In special situations, a project plan may be substituted for the work experience requirement. This option must be teacher approved in advance. Content also includes supervisory communications, personnel management, leadership styles, supervision of sales promotion, supervision of product transportation, and responsibilities of supervisory and mid-management personnel. If, in an exceptional case, a student is only able to participate in the classroom component, one-half credit per semester can be earned under the course numbers 6370A or 6370B. Industry Credentials: NOCTI Marketing.

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**SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS**

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*Courses in this area can prepare students for careers in planning, managing, and providing scientific research and professional and technical services (e.g., physical science, social science, and engineering) including laboratory and testing services, and research and development services.*

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**TECHNOLOGY OF ROBOTIC DESIGN****Course: 8427Y**

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**Grades 11 & 12. E. C. Glass. Full Credit Year Course. Prerequisites: Algebra I.**

The first semester includes study of the evolution and history of robotics with an emphasis on automated and flexible manufacturing. Topics covered will include: machining, welding, electronics, pneumatics/hydraulics, design and mechanics, sensors and controls programming. Students will apply concepts learned in class to mechanical construction with VEX Challenge. During the second semester students study nondestructive examination and testing methods in order to examine an object, material, or system without impairing its future usefulness. Students will use visual and optical testing (VT), liquid penetrant testing (PT), magnetic particle testing (MT), radiographic testing (RT), ultrasonic testing (UT), and eddy

current testing (ET) to assess various parameters. Students will also cover the basic fundamentals and application of radiation. There is a fee associated with this class. Financial assistance is available for eligible students. Industry Credentials: Virginia Workplace Readiness Skills.

This course may be taken as a dual enrollment course for 3 college credits from Central Virginia Community College under the course numbers 6778AC and 6778BC. The CVCC course number is IND 160.

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## ENGINEERING STUDIES

Course: 8491Y

**Grades 9-12. Heritage High. Full Credit Year Course. Prerequisite: None.**

In this course, students emphasize integration of mathematics, science, and English concepts and skills into engineering problems in a curriculum demanding rigorous study habits. Students are encouraged to become routinely inquisitive through brainstorming and prototyping. Students practice engineering skills and communication of technical information while applying the engineering design process to complete engineering projects. Industry Credentials: NOCTI Engineering.

**Sequential options:** Engineering Explorations

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## ENGINEERING EXPLORATION I

Course: 8450Y

**Grades 10-12. Heritage High. Full Credit Year Course. Prerequisite: Engineering Studies.**

In this course, 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. Industry Credentials: NOCTI Engineering.

**Sequential options:** Engineering Studies

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## TECHNOLOGY FOUNDATIONS

Course: 6640A

**Grades 9-12. Heritage High. Prerequisite: None.**

Technology Foundations is a modular approach to an academic and technology integrated curriculum. The topics include alternative energy, astronomy, computer-aided drafting, computer graphic design, computer problem solving, construction technology, desktop publishing, residential modeling, satellite communications, video communications, and weather and meteorology. Presentations, field trips, and guest speakers will complement the modular concept. Industry Credentials: Virginia Workplace Readiness Skills.

**Sequential options:** Technology Transfer

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## TECHNOLOGY TRANSFER

Course: 6650B

**Grades 10-12. Heritage High. Prerequisite: Technology Foundations.**

Technology Transfer is a course developed around a modular approach. The topics are animation, biotechnology, fiber optics, forensic technology, the Internet, and virtual reality. When the students complete these modules, they will be introduced to advanced levels of the modules they completed in Technology Foundations. This course will assist students in developing problem solving techniques, using resources and developing critical thinking skills. Industry Credentials: Virginia Workplace Readiness Skills.

**Sequential options:** Technology Foundations

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## TRANSPORTATION, DISTRIBUTION & LOGISTICS

*Courses in this area can prepare students for careers in planning, management, and movement of people, materials, and goods by road, pipeline, air, rail and water and related professional and technical support services such as transportation infrastructure planning and management, logistics services, mobile equipment and facility maintenance.*

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## AUTOMOTIVE TECHNOLOGY I

Course: 8131Y

**Grades 9 & 10. E. C. Glass. Full Credit Year Course. Prerequisite: None.**

Students learn fundamental skills associated with engine tune-up, electrical diagnosis and repair, lubrication and cooling system diagnosis and repair, brake system diagnosis and repair, basic fuel system diagnosis and repair, basic suspension system diagnosis and repair, and basic routine maintenance of automobiles. Maximum number of students per class 20.

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**AUTOMOTIVE TECHNOLOGY II****Course: 8142Y**

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**Grades 10 & 11. E. C. Glass. Full Credit Year Course. Prerequisite: Approved Application.**

This is a double-period course. Content includes instruction in the safe operation of laboratory power equipment, hand tools, and testing devices. Students learn to access technical data through electronic media and paper manuals. Instruction in proper wheel and brake operation is included. Also included is instruction in diagnostic procedures regarding automotive steering systems and components. Students will learn to assess and repair problems relating to wheels, alignment, suspension, shocks, struts, and axles. Maximum number of students per class 20. **Sequential options:** Automotive Service Tech II. Industry Credentials: NOCTI Auto Service Tech.

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**AUTOMOTIVE TECHNOLOGY III****Course: 8153Y**

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**Grades 11-12. E. C. Glass. Full Credit Year Course. Prerequisite: Automotive Service Technology I (8140).**

This is a double-period course. Content includes instruction in diagnostic procedures regarding automotive electrical systems and components and engine performance. Students will learn to assess and repair problems relating to circuits, battery systems, gauges, accessories, and lights. Students will learn to assess and repair problems relating to ignition, fuel, exhaust, and emission control systems. Instructional topics include pumps, carburetors, and associated electronics. Students learn to use testing and scanning equipment to analyze computer and mechanically controlled systems. Instruction will also include reading and interpreting electrical schematics. The second semester of this course provides an opportunity for students to enroll in a work-study program. Students are eligible to take the state A.S.E. Certification test upon completion of this program. Industry Credentials: NOCTI Auto Service Tech.

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**MARINE CORPS JUNIOR R.O.T.C. LEADERSHIP PROGRAM (Heritage Only)**

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*This leadership program is a three-year progression of academic courses that can be selected by anyone regardless of grade level. Participation as a fourth year student is limited to very few individuals who are subjectively selected by the leadership department chair as "exceptional" candidates to fill student leadership positions within the organization of the classes. (It is possible to be qualified but not selected due to limited availability of positions.) This program of instruction is designed to emphasize development of positive character traits, self-discipline, responsibility for self and others, and leadership skills. This program is not intended to recruit students for military service; rather, it is intended to develop productive responsible citizens using the military as a role model for teaching these positive lessons. Instructional goals are reached through training in subjects such as close order drill, marksmanship, physical fitness, leadership traits/principles, and orienteering & mentorship. All students must maintain a 2.0 GPA to remain active in the program. Course Prerequisites:*

1. *Students must have a completed school physical and be able to participate in physical fitness activities such as calisthenics, running, hiking, climbing, and jumping. Inability to participate must be temporary and documented by appropriate medical authority.*
2. *Students must conform to U. S. Marine Corps standards regarding wearing of the uniform, haircuts/hairstyle/color, make-up/jewelry, body piercing, tattoos, shave and fingernail polish. Military uniforms are worn at least once per week and at special functions. They are provided free of charge to the students.*
3. *Students must be willing to follow the direction given by the teacher and students in leadership positions acting in accordance with the rules and articles governing the program.*
4. *Students must be willing to participate in community service activities as extracurricular events necessary for attainment of points required for promotion to higher position within the program. (Simply attending class during the school day will not be sufficient to earn advancement and continuance in the program.)*

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**MCJROTC LEADERSHIP EDUCATION I A & B****Courses: 5710A & 5710B**

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**All Grades. Heritage High only. 1st & 2nd Semester. One-half Credit Per Semester. 1st Semester Prerequisite: listed above; 2nd Semester Prerequisite: Completion of 5710 with a course average of 70% or higher.**

This is an introductory course designed to provide basic knowledge in leadership training and self-discipline through close order drill, physical fitness, marksmanship, professional personal appearance through care and wearing of uniforms, and professional courtesy. Emphasis on this level is placed on personal goal setting, self-discipline and following direction.

**Sequential option:** MCJROTC II

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**MCJROTC LEADERSHIP EDUCATION II A & B****Courses: 5720A & 5720B**

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**All Grades. Heritage High only. 1st & 2nd Semester. One-half Credit Per Semester. 1st Semester Prerequisite: Completion of 5710B with a course average of 70% or higher & attainment of the rank of Cadet Lance Corporal. (Promotion requirement worksheets detailing promotion requirements available upon request). 2nd Semester Prerequisite: Completion of 5720 with a course average of 70% or higher.**

The level of this course is more advanced than 1A&B and provides general study within each major area listed in 1A. Emphasis is placed on setting group goals, teamwork, individual responsibility, and accountability.

**Sequential option:** MCJROTC I

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**MCJROTC LEADERSHIP EDUCATION III A & B****Courses: 5730A & 5730B**

**All Grades. Heritage High only. 1st & 2nd Semester. One-half Credit Per Semester. 1st Semester Prerequisite: Completion of 5720 with a course average of 70% or higher & attainment of the rank of Cadet Sergeant. (Promotion requirement worksheets detailing promotion requirements available upon request). 2nd Semester Prerequisite: Completion of 5730 with a course average of 70% or higher.**

The level of this course is more advanced than 2A&B with emphasis on attainment of group goals, personal initiative, responsibility for others, and accountability. Student leaders are normally selected from the second semester of this class.

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**MCJROTC LEADERSHIP EDUCATION IV A & B****Course: 5740A & 5740B**

**Selected Students. Heritage High only. 1st & 2nd Semester. One-half Credit Per Semester. 1st Semester Prerequisite: Selection by the leadership department chair as well as completion of 5730B with a course average of 70% or higher & attainment of the rank of Cadet Gunnery Sergeant. 2nd Semester Prerequisite: Selection by the SMI and MI as well as completion of 5740 with a course average of 70% or higher.**

This course, the final year of the four-year MCJROTC LEADERSHIP EDUCATION program, focuses on demonstrating mastery of leadership skills through practical application as a student leader. Students must be prepared to complete independent reading, writing, and research assignments/special projects.

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**AIR FORCE JUNIOR R.O.T.C. LEADERSHIP PROGRAM (E. C. Glass Only)**

*AFJROTC is available at two levels, basic and advanced. The program teaches respect for both constituted authority and parents, and self-respect. It teaches orderliness, patriotism, personal honor, and self-reliance. It provides information on aerospace and develops a background that many find valuable in aviation and space careers, such as the social and physical sciences, navigation, propulsion systems, and the history and theory of flight. No obligation to the military services or college ROTC programs is incurred; however, advanced standing can be earned. A uniform is provided by the Air Force to be worn one day per week and at special functions.*

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**AFJROTC I A & B****Courses: 5750A & 5750B**

**Grades 9-12. E. C. Glass only. 1st & 2nd Semester. One-half Credit Per Semester. Prerequisite: None.**

This course includes study of the history of aviation and space exploration, customs and courtesies of military service, and introduction to basic drill procedures. This course also includes study of aviation weather in the aerospace environment, aerospace careers, and drill and ceremonial procedures of the squad and flight.

**Sequential option: AFJROTC II**

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**AFJROTC II A & B****Courses: 5760A & 5760B**

**Grades 9-12. E. C. Glass only. 1st & 2nd Semester. One-half Credit Per Semester. Prerequisite: 5750.**

Content includes theory of flight, aircraft propulsion systems, air navigation, introduction to military justice, and a review of drill and ceremonies at the flight level. Also included is study of aerospace vehicles; aircraft, rockets and missiles, techniques of managing squadron size drill formation, and methods of military instruction.

**Sequential option: AFJROTC I**

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**AFJROTC III A & B****Courses: 5770A & 5770B**

**Grades 10-12. E. C. Glass only. 1st & 2nd Semester. One-half Credit Per Semester. Prerequisite: 5760.**

The course includes study of rocketing and spacecraft fundamentals, review of drill and ceremonies at squadron level; introduction to leadership principles and methods. Also included is the aerospace community, leadership qualities and techniques needed in the space age, vocational and educational opportunities available in aerospace enterprises, and an introduction to military management.

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**AFJROTC IV A & B****Courses: 5780A & 5780B**

**Grades 11 & 12. E. C. Glass only. 1st & 2nd Semester. One-half Credit Per Semester. Prerequisite: 5770.**

Content includes study of geopolitics, psychological foundation of leadership, military management, review of drill and ceremonies. Also included is the influence of human behavior in leadership, responsibilities and techniques of leadership, student planning and execution of instructional and co-curricular activity, introduction of survival training, and a study of Career Officer and Enlisted programs in the military services.



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## CULTURAL ARTS

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*Education and engagement in cultural arts are essential parts of the school curriculum and an important component in the educational program of every student in Lynchburg City Schools. Education in cultural arts is an integral part of human development as evidenced by brain research. Our fine arts department focuses on the disciplines of music, theatre, and visual arts. Study in the arts is integral to our society and is a part of the cultural heritage of every American. The arts are what make us most human, most complete as people. The arts develop neural systems that produce benefits ranging from fine motor skills to creativity.*

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## MUSIC

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*Band classes at the high school level are performance oriented and require the recommendation of the instructor for admission. Participation in performances and rehearsals outside school hours are required. Students will be recommended for the most appropriate program. Marching Band is an after-school activity that begins two weeks before school starts and continues through the fall season. It is extracurricular and carries no academic credit. Marching Band may be activated periodically in the spring and summer. Concerts are performed during the winter and spring. Although all band students are encouraged to perform in the Marching Band, it is not an absolute requirement. Non-band students are also eligible to try out for Marching Band as either musicians or flag and rifle corps members. Chorus classes at the high school include both introductory and performance oriented programs. All require placement by or recommendation of the instructor. Both the Concert Choir (Chorus II) and the Ensemble (Chorus III) require participation in performances and rehearsals during and outside school hours. Orchestra instruction at the high school level is performance oriented and some afternoons and evenings are required for rehearsals and performances.*

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### CONCERT BAND I

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**Course: 5340Y**

**Grades 9-12. Full Credit Year Course. Prerequisite: Staff Recommendation.**

Topics include developing competency in sight-reading, dynamics, rhythm interpretation, balance, and intonation.

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### SYMPHONIC BAND I

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**Course: 5350Y**

**Grades 9-12. Full Credit Year Course. Prerequisite: Director's Approval.**

Content includes the development of individual competency in sight reading, dynamics, rhythmic interpretation, intonation, and the concepts of ensemble performance.

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**JAZZ ENSEMBLE****Course: 5360Y**

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**Grades 9-12. Full Credit Year Course. Prerequisite: Director's Approval.**

A study of the jazz idiom and the techniques related to playing the different styles with an introduction to basic improvisational skills. Content includes development of individual competency in sight reading, dynamics, rhythm interpretation, balance, and intonation.

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**WIND ENSEMBLE****Course: 5370Y**

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**Grades 9-12. Full Credit Year Course. Prerequisite: Director's Approval & Audition.**

Content includes a continuing development of skills with a focus on performance at the highest possible level.

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**PERCUSSION TECHNIQUES****Course: 5380Y**

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**Grades 9-12. Full Credit Year Course. Prerequisite: Director's Approval & Audition.**

Content includes the development of skills on drums, xylophone, timpani, bells, and music literature.

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**CHORUS I****Course: 5460Y**

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**Grades 9-12. Full Credit Year Course. Prerequisite: None.- Placement by Instructor (no audition required).**

Content includes instruction in music fundamentals, three and four part singing, and correct vocal techniques. Placement will be according to vocal range.

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**CHORUS II - CONCERT CHOIR****Course: 5470Y**

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**Grades 9-12. Full Credit Year Course. Prerequisite: Staff Recommendation (vocal audition required)**

Content includes more difficult part work and public performances.

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**CHORUS III - ENSEMBLE****Course: 5480Y**

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**Grades 9-12. Full Credit Year Course. Prerequisite: Staff Recommendation.**

Content includes a more extensive variety of music, both for reading skills and public performance, and a particular emphasis on the development of individual skills. Afternoon and evening practices are required in preparation for performances. Choreography and showmanship are included.

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**ORCHESTRA I****Course: 5410Y**

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**Grades 9-12. Full Credit Year Course. Prerequisite: Staff Recommendation.**

Content includes opportunity for string players to develop greater facility in sight reading, bowing and articulation.

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**ORCHESTRA II****Course: 5420Y**

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**Grades 9-12. Full Credit Year Course. Prerequisite: Director's Approval (audition required).**

Content includes advanced positions, bowings, and interpretations using standard orchestra and string ensemble music. It is intended for students who have reached a high degree of performance proficiency.

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**BEGINNING MIDI & COMPUTER APPLICATIONS IN MUSIC****Course: 5430Y**

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**Grades 10-12, Heritage High only. Full Credit Year Course. Prerequisite: Some music background required.**

This course is an introduction to computer applications currently being used by composers, performers, and music educators. Topics to be covered include music notation and sequencing software, live MIDI performance techniques, educational software, CD ROM interactive applications, Internet resources, and a history of music technology.

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**ADVANCED PLACEMENT (AP) MUSIC THEORY****Course: 5439Y**

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**Grades 10-12. Full Credit Year Course. Prerequisite: Staff Recommendation based on the ability to read and write musical notation.****Also recommended: concurrent enrollment in a music course.**

This course introduces the student to musicianship, theory, musical materials and procedures. Integrates aspects of melody, harmony, texture, rhythm, form, musical analysis, elementary composition and, to some extent, history and style. Musicianship skills such as dictation and other listening skills, sight-singing, and keyboard harmony may be taught as a part of the course. **All students are required to take the advanced placement examination in May.**

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## ART

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*Two semesters of Art I are prerequisite to most other art courses. Although instructional materials are provided, the student is often required to provide materials for individual projects that he/she retains. In addition, a lab fee is often required to cover the costs of consumable materials. Several advanced placement courses are available in the curriculum.*

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### ART I

Course 5510Y

**Grades 9-12. Full Credit Year Course. Prerequisite: None.**

Art I emphasizes the development of the ability to recognize visual arts content, concepts, and skills needed to create, discuss, and understand original works of art. Students will study and use artmaking processes to communicate ideas and personal life experiences. The first semester of this course is an exploration of a variety of media, both two-dimensional and three-dimensional, with the elements of art and the development of basic studio skills as the central focus. The second-semester content includes additional media exploration and studio skills development with a central focus on composition through the study of the design process, including brainstorming, preliminary sketching, planning, reflecting, refining, elaborating, and researching.

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### ART II: DRAWING AND PAINTING

Course: 5520Y

**Grades 10-12. Grade 9 with teacher recommendation. Full Credit Year Course. Prerequisite: Art I or teacher recommendation.**

Art II 2-D focuses on both drawing and painting and is designed for students exploring these two types of art. In general, students will extend and refine the ability to investigate and respond to the visual arts. Through the design process, students will examine the importance of content, concepts, and skills involved in the creation of original works of art and design. Drawing content includes the interpretation of the three-dimensional environment to a two-dimensional surface. Realistic, naturalistic, and contemporary drawing is part of the course of study. Subject matter such as still life, figure drawing, perspective studies, and nature. Painting content introduces students to the basic techniques in opaque and transparent media, such as acrylics, oils, and watercolor. Students will receive extensive instruction and practice in brush and media control in both hard edge and blended edge technique.

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### ART III: THREE DIMENSIONAL

Course: 5530Y

**Grades 10-12. Grade 9 with teacher recommendation. Full Credit Year Course. Prerequisite: Art I or teacher recommendation.**

Students will explore and use a variety of three-dimensional media. Techniques will include both traditional and contemporary expression. The concepts of relief and in-the-round, in functional and non-functional directions, will be explored as students produce original works of art and design.

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### PHOTOGRAPHY

Course: 5560Y

**Grades 10-12. Full Credit Year Course. Prerequisite: Art I or senior exemption.**

This course is designed so that students explore such fields as Photo Journalism, Computer Graphics, and Fine Art Photography. Composition, lighting and utilizing special effects available in digital cameras are covered. Extensive use of digital photo editing software will be explored. Comfort with computer technology is recommended. Students will need to have a camera available to complete required work.

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### DIGITAL PHOTOGRAPHY & PRINTMAKING

Course: 5570Y

**Grades 10-12. Full Credit Year Course. Prerequisite: Art I or Recommendation.**

Course content includes study of traditional printing processes such as relief, monoprinting, lithography, intaglio, and serigraphy with an emphasis on design and composition. Digital photography and computer enhancement techniques will be explored. Comfort with computer technology is recommended.

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### COMMERCIAL ART

Courses: 5580A & 5580B

**Grades 10-12. 1st or 2nd Semester. One-half Credit Course. Prerequisite: Art 1 or Recommendation.**

This course covers art as it issued in careers. An exploration of various careers and skills and techniques will be the central focus. Visual design and communication will be explored in various media. Vocabulary, technical skills, and creative direction will be major elements of evaluation. Comfort with computer technology is recommended.

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### ADVANCED STUDIO ART

Course: 5510Y

**Grades 11 & 12. Full Credit Year Course. Prerequisite: Two Credits in Art and Staff Recommendation.**

This advanced-level course expands on the content presented in the introductory and second-level courses and allows students to explore areas of interest in greater depth. Students will have the opportunity to develop personal directions in the production of their works of art. Students will continue to develop and maintain a portfolio containing works selected on the basis of technical skill, personal style, direction, and intended purpose. This course may be taken repeatedly for elective credit.

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**ADVANCED PORTFOLIO ART****Course: 5527Y****Grades 11 & 12. Full Credit Year Course. Prerequisite: Advanced Studio Art.**

This course is structured around the continued building of a professional art portfolio which shows evidence of quality, concentration, and breadth of work produced throughout the high school art program. Students may develop a drawing portfolio (using a variety of 2-D media), a two-dimensional portfolio (using a variety of 2-D media with a design and graphics focus), or a three-dimensional portfolio (using a variety of 3-D media). Students must attend one portfolio day from surrounding colleges.

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**ADVANCED PLACEMENT (AP) PORTFOLIO ART****Course: 5519Y****Grades 11 & 12. Full Credit Year Course. Prerequisite: Two Credits in Art and Staff Recommendation.**

This college-level course is structured around the portfolio requirements set by the College Board evaluation program. In early May, students submit actual works of art and digital images of works for their portfolios. These works should demonstrate artistic growth and development. Students must submit a portfolio. All portfolios are assessed by six college art professors who apply standardized scoring criteria. Students may develop a drawing portfolio (using a variety of 2-D media), a two-dimensional portfolio (using a variety of 2-D media with a design and graphics focus), or a three-dimensional portfolio (using a variety of 3-D media).

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**ADVANCED PLACEMENT (AP) ART HISTORY****Course: 5529Y****Grades 11 & 12. Full Credit Year Course. Prerequisite: Previous experience in advanced placement.**

In this college-level, elective course, students will learn to analyze critically works of art within diverse historical and cultural contexts, considering issues such as politics, religion, patronage, gender, and ethnicity. Students will explore major forms of artistic expression including architecture, sculpture, painting, and other media across a variety of cultures. Additionally, students will learn about the purpose and function of art as they develop their ability to articulate visual and art historical concepts in verbal and written form. This course is for students with a strong desire to explore, study, and write about the history of art. All course activities are in preparation for the AP exam. All students are required to take the AP examination in May.

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**DRAMA**

*Several opportunities are offered for students to develop their knowledge and skills in the dramatic arts, both "behind the scenes" and on stage. An active Drama Club and public performances are important parts of the program. Additional drama courses may be taken through Independent Study.*

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**INTRODUCTION TO THEATRE****Course: 5610Y****Grades 9-12. Full Credit Year Course. Prerequisite: None.**

This course is a basic introduction to acting and other theatre skills. Course content includes units in Theatre Games, Improvisation, Stagecraft, Theatre Vocabulary and Terminology, and Theatre History.

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**MUSICAL THEATRE DANCE****Course: 5611Y****Grades 9-12. Full Credit Year Course. Prerequisite: Introduction to Theatre or Staff Recommendation.**

This course focuses on the various styles of dance prevalent in the musical theatre. Students will work in each dance style while learning how it has been used to develop and advance musical theatre. This course may be taken repeatedly for elective credit.

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**ACTING I****Course: 5620Y****Grades 9-12. Full Credit Year Course. Prerequisite: Introduction to Theatre or Staff Recommendation.**

This course includes the study of specific acting techniques and the practical application of those techniques in graded scene performances in class. The course is intended for students with a serious interest in acting as a career or hobby. This course may be taken repeatedly for elective credit.

**Sequential option:** Acting II

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**ACTING II****Course: 5630Y****Grades 11 & 12. Full Credit Year Course. Prerequisite: Acting I and Staff Recommendation.**

This course is performance-oriented and includes public performances involving all class members during the year. This course may be taken repeatedly for elective credit.

**Sequential option:** Acting I

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**PLAYWRITING****Course: 5622A****Grades 11 & 12. 1st Semester Only. One-half Credit Course. Prerequisite: Acting I or Staff Recommendation.**

This course will focus on the analysis of dramatic form and style; examination of plot, character, and thought; and expression through dialogue. It will include the practical application of theory by writing one-page plays and will culminate in the creation of a ten-minute play.

Sequential option: Creative Writing

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**DIRECTING****Course: 5623B****Grades 11 & 12. 2nd Semester Only. One-half Credit Course. Prerequisite: Acting 1 or Staff Recommendation.**

This course offers students an opportunity to learn the techniques of directing a play. Each student will be required to direct two graded scenes in public performance during the semester.

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**APPLIED TECHNICAL THEATRE I****Course: 5640Y****Grades 9-12. Full Credit Year Course. Prerequisite: Introduction to Theatre or Staff Recommendation.**

The course is designed to give students a working knowledge of the many aspects of backstage work. The course includes an overview of theatre history, safety, set construction, scene painting, electrics, sound stage rigging, backstage management and some design. The course includes classroom instruction, supplemental reading assignments, and practical hands-on work.

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**TECHNICAL THEATRE I DESIGN****Course: 5641A & 5641B****Grades 9-12. 1st or 2nd Semester. One-half Credit Course. Prerequisite: Introduction to Theatre or Staff Recommendation.**

This course introduces students to the principles of design as they apply to performance and the design process. This is primarily a project-based class in which students will deal with the basic principles of scenic, costume, sound, and lighting design.

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**TECHNICAL THEATRE I PRODUCTION****Course: 5642B****Grades 9-12. 2nd Semester Only. One-half Credit Course. Prerequisite: Introduction to Theatre and Staff Recommendation.**

This course is an introduction to scenic construction, lighting, sound, stage organization, and terminology. Students will study the methods and materials of set construction and the methods of implementing lighting, costumes, props and sound within a production.

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**APPLIED TECHNICAL THEATRE II****Course: 5650Y****Grades 9-12. Full Credit Year Course. Prerequisite: Applied Technical Theatre I and Staff Recommendation.**

This is an advanced course that will focus on the design elements of the theatre. Students receive instruction in set, lighting and sound design and are required to complete design projects in class and out. The course includes a study of different design techniques, methods of presenting design effectively, and an emphasis on using design as a tool to further express the drama. This course may be taken repeatedly for elective credit.

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**TECHNICAL THEATRE II****Course: 5651Y****Grades 10-12. Full Credit Year Course. Prerequisite: Technical Theatre I Design, Technical Theatre I Production or Staff Recommendation.**

This course will focus on advanced design and implementation of elements in the theatre. As part of this course, students will be involved in the backstage aspects of school productions. This course may be taken repeatedly for elective credit.

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**STUDENT INTERN PROGRAMS**

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**ELEMENTARY OR MIDDLE SCHOOL STUDENT INTERN****Course: 7130Y****Grades 11 & 12. Full Credit Year Course. Prerequisite: Staff Recommendation.**

Content includes assignment to an elementary or middle school teacher one period daily. Students may tutor, help with projects, read stories, or perform clerical duties. In addition, middle school student interns may work in lab settings. Seminars are presented by educators in various fields during the semester. This course offers a career exploration opportunity for students considering elementary education or a child related field. Students must have their own transportation or be assigned to a school within walking distance.

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**GENERAL STUDENT CAREER INTERN****Course: 7131Y**

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**Grade 12 Only. Full Credit Year Course. Prerequisite: Staff Recommended and Approved Application.**

This course is ONLY available to seniors who want to gain experience in a career field which they are interested in pursuing after high school. Students must submit an application for acceptance in the program to their counselor during the registration process in Grade 11. Students will choose their internship placement from the list of cooperating businesses or by working with the teacher and business to secure placement. During the first five weeks of the course, students will complete the Workplace Readiness Skills curriculum. Topics include initiative, work ethic, teamwork, confidentiality, independence, communications, problem solving, decision making, computer applications, and employment issues. Students will be required to serve three hours a week in their internship. Students will be responsible for their own transportation.

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**TEACHER/OFFICE INTERN****Courses: 7110A & 7110B**

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**Grades As Determined by Administrator. 1st or 2nd Semester. One-fourth Credit, Prerequisite: Staff Recommended.**

Course includes opportunities to assist staff. This course is graded as pass or fail. This course may be taken repeatedly for elective credit.

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**NEWSPAPER & YEARBOOK**

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**NEWSPAPER****Course: 7410Y**

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**Grades 10-12. Full Credit Year Course. Prerequisite: Staff Recommendation.**

Content includes preparation, editing and publication of school newspaper. This course meets daily, just as other credit-bearing courses. This course may be taken repeatedly for elective credit.

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**YEARBOOK****Course: 7420Y**

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**Grades 10-12. Full Credit Year Course. Prerequisite: Staff Recommendation.**

Content includes preparation, editing and publication of school yearbook. This course meets daily, just as other credit-bearing courses. This course may be taken repeatedly for elective credit.

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**LEADERSHIP**

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**LEADERSHIP TRAINING****Courses: 7770Y**

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**Grades 9-12. 1st or 2nd Semester. One-half Credit Course. Prerequisite: Student Interest and Staff Recommendation.**

This is a one semester elective credit course that provides opportunities for students to learn about and engage in leadership activities. This course may be taken repeatedly for elective credit.

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**ACADEMIC SUPPORT**

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*These courses can be taken repeatedly for elective credit.*

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**SOL REVIEW FOR ENGLISH: READING 11****Courses: 7211A & 7211B**

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**Grade 12. 1st or 2nd Semester. One-half Credit Course. Prerequisite: Passed English 11 but failed Reading SOL test.**

A one semester elective credit course including a review of the standards covered on the English: Reading/Literature/Research SOL test for 11th grade. This course will focus on the content of the test and on study and testing-taking strategies. Specific diagnostic information from practice SOL testing will guide direct teaching and computer-assisted instruction targeting each student's knowledge and skill deficits.

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**SOL REVIEW FOR ENGLISH: WRITING 11****Course: 7212A**

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**Grade 12. 1st Semester. One-half Credit Course. Prerequisite: Passed English 11 but failed Writing SOL test.**

A one semester elective credit course including a review of the standards covered on the English: Writing SOL test for 11th grade. This course will focus on the content of the test and on study and testing-taking strategies. Specific diagnostic information from practice SOL testing will guide direct teaching and computer-assisted instruction targeting each student's knowledge and skill deficits.

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**SOL REVIEW FOR MATH****Courses: 7221A & 7221B**

**Grades 10-12. 1st or 2nd Semester. One-half Credit Course. Prerequisite: Passed a math course (Algebra 1, Geometry, or Algebra 2) but failed the associated SOL test.**

A one semester elective credit course including a review of the math standards covered on the appropriate math SOL test. This course will focus on the content of the test and on study and testing-taking strategies. Specific diagnostic information from practice SOL testing will guide direct teaching and computer-assisted instruction targeting each student's knowledge and skill deficits.

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**SOL REVIEW FOR SCIENCE****Courses: 7231A & 7231B**

**Grades 10-12. 1st or 2nd Semester. One-half Credit Course. Prerequisite: Passed a science course (Earth Science or Biology) but failed the associated SOL test.**

A one semester elective credit course including a review of the science standards covered on the appropriate science SOL test. This course will focus on the content of the test and on study and testing-taking strategies. Specific diagnostic information from practice SOL testing will guide direct teaching and computer-assisted instruction targeting each student's knowledge and skill deficits.

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**SOL REVIEW FOR SOCIAL STUDIES****Courses: 7241A & 7241B**

**Grades 10-12. 1st or 2nd Semester. One-half Credit Course. Prerequisite: Passed a social studies course (World History and Geography 1, World History and Geography 2, Geography, or U.S. History) but failed the associated SOL test.**

A one semester elective credit course including a review of the social studies standards covered on the appropriate social studies SOL test. This course will focus on the content of the test and on study and testing-taking strategies. Specific diagnostic information from practice SOL testing will guide direct teaching and computer assisted instruction targeting each student's knowledge and skill deficits.

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**ENGLISH AS A SECOND LANGUAGE (ESL) SUPPORT****Courses: 1930A & 1930B**

**Grades 9-12. 1st or 2nd Semester. One-half Credit Course. Prerequisite: Identified ESL students only.**

This is a one semester elective credit course that provides additional support to assist students with Limited English Proficiency (LEP) in their acquisition of English language knowledge and skills.

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**ACCELERATING READING I****Course: 1192Y**

**Grade 9. Full Credit Year Course. Prerequisite: Identified students only.**

This is an elective credit course that provides additional strategies and skills for students who are working to improve their vocabulary, reading fluency and comprehension.

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**ACCELERATING READING II****Course: 1130Y**

**Grades 10-12. Full Credit Year Course. Prerequisite: Identified students only.**

This is an elective credit course that provides additional strategies and skills for students who are working to improve their vocabulary, reading fluency and comprehension.

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**FOUNDATIONAL STUDY SKILLS****Course: 7660Y**

**Grades 9-12.**

This is an elective credit course designed to teach students organizational techniques and study skills. Support with time management, studying, taking notes, and organizing academic materials will be provided.

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**STUDY SKILLS FOR SUCCESS IN ADVANCED COURSES****Course: 7620Y**

**Grades 9-12.**

This is an elective credit course to support students who are taking an advanced, AP, or Dual Enrollment course with study skills for enhanced success in the advanced course.

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**MATH LAB****Course: 7222Y**

**Grades 9-10. Full Credit Year Course. Prerequisite: Identified students only.**

This course is designed to strengthen essential computational, pre-algebraic, and algebraic skills while the student is concurrently enrolled in Algebra 1. The course is provided using a research-based, computer-assisted instructional program with topics aligned with the content in the core Algebra 1 course. This course awards elective credit.

## **ADDITIONAL COURSES OFFERED TO ELIGIBLE STUDENTS**

*The following courses are designed to provide students with identified disabilities the knowledge and skills necessary to qualify for a diploma as determined by the IEP team.*

**READING I (1040Y)**, Grades 9-12. Full Credit Year Course. Prerequisite: None.

**READING II (1041Y)** Grades 9-12. Full Credit Year Course. Prerequisite: Reading I

**READING III (1042A, 1042B)** Grades 9-12. Full Credit Year Course. Prerequisite: Reading II

**EDUCATION FOR EMPLOYMENT (6030Y)**, Grades 9-12. Full Credit Year Course. Prerequisite: None.

**WORK EXPERIENCE 1 (6040Y)**, Grades 9-12. Full Credit Year Course. Prerequisite: Education for Employment.

This is a double-period course. This same course is available in a single period for one-half credit per semester under course number 6041 A&B.

**WORK EXPERIENCE II (6050Y)**, Grades 9-12. Full Credit Year Course. Prerequisite: Work Experience I.

This is a double-period course. This same course is available in a single period for one-half credit per semester under course number 6051.

**INTERPERSONAL SKILLS (5050Y)**, Grades 9-12. Full Credit Year Course. Prerequisite: None.

**OCCUPATIONAL SKILLS (5051Y)**, Grades 9-12. Full Credit Year Course. Prerequisite: None.

**RECREATION AND LEISURE SKILLS (5052Y)**, Grades 9-12. Full Credit Year Course. Prerequisite: None.

**FUNCTIONAL ACADEMICS (5053Y)**, Grades 9-12. Full Credit Year Course. Prerequisite: None.

**DAILY LIVING SKILLS (5070Y)**, Grades 9-12. Full Credit Year Course. Prerequisite: None.

*The following courses are designed to provide students with identified disabilities the knowledge and skills necessary to qualify for an Applied Studies Diploma.*

**FUNCTIONAL MATH (2030Y)**, Grades 9-12. Full Credit Year Course. Prerequisite: None

**FUNCTIONAL READING (1030Y)**, Grades 9-12. Full Credit Year Course. Prerequisite: None

**FUNCTIONAL HISTORY (4030Y)**, Grades 9-12. Full Credit Year Course. Prerequisite: None

**FUNCTIONAL SCIENCE (3030Y)**, Grades 9-12. Full Credit Year Course. Prerequisite: None

**ADAPTIVE PHYSICAL EDUCATION (5071 A & B)**, Grades 9-12. 1st or 2nd Semester. One-half Credit Per Semester, Prerequisite: None.

**CAREER BASED JOB TRAINING (5072 A & B)**, Grade 9-12. 1st or 2nd Semester. One-half Credit Per Semester, Prerequisite: None.

**GENERAL RESOURCE (5040 A & B)**, Grade 9-12. 1st or 2nd Semester. One-half Credit Per Semester, Prerequisite: None.(Can be taken repeatedly for elective credit)

**SUPPORT RESOURCE I (5041 A & B)**, Grades 9-12. 1st or 2nd Semester. One-half Credit Per Semester, Prerequisite: None

**SUPPORT RESOURCE II (5042 A & B)**, Grades 9-12. 1st or 2nd Semester. One-half Credit Per Semester, Prerequisite: None.

**SUPPORT RESOURCE III (5043 A & B)**, Grades 9-12. 1st or 2nd Semester. One-half Credit Per Semester, Prerequisite: None

*For additional information about these courses or the applied studies diploma, please contact the counselor or special education teacher at either high school.*

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## III. SPECIAL PROGRAM OPPORTUNITIES

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### Gifted Education

The high school program for gifted education is designed to serve those students who are identified as gifted. The program is provided through course offerings listed in the program of studies under the heading of Advanced and Advanced Placement Courses. These courses offer students an opportunity to accelerate their program as well as provide an enriched and in-depth classroom experience. Any interested student may enroll in one or more of these courses as long as he or she has successfully completed any prerequisites. The Lynchburg City Schools also participates in the regional Central Virginia Governor's School (CVGS) for Science and Technology and the state-sponsored Summer Governor's School programs. These programs provide unique opportunities for gifted students to pursue special areas of interest. Students and their parents are encouraged to contact their counselor to learn more about these programs and the opportunities they provide. Course offerings for CVGS are included in another section of this program of studies.

### Special Education

Special education programs and services are available to students with disabilities. The special education services are provided based on an individualized education plan which is developed by a student's parent(s) and a school-based instructional team. When a parent, teacher, or counselor suspects a student is disabled, a referral is processed through the building principal to the school-based child study committee. Upon receipt of a referral, the child study committee meets within 10 working days. If the child study committee suspects the child may have a disability, a comprehensive evaluation is completed after securing parent written permission to evaluate. Placement in a special education program or class is contingent on the results of extensive diagnostic testing and assessment as well as the decision of a school-based eligibility committee's review of the assessment results and the eligibility criteria set forth in the *Regulations Governing Special Education Programs in Virginia*.

Students with disabilities shall be eligible to receive a Standard Diploma, Advanced Studies Diploma or Advanced Studies Diploma with Lynchburg Honors Seal upon earning the units of credit prescribed and by passing the Standards of Learning Tests.

### Alternative and Adult Education Program Information

Lynchburg City Schools offers a variety of alternative programs available to students on an individual basis. These programs include the Fort Hill Community School, the Empowerment Academy, the homebound programs, RODEO (Reach Out to Develop Educational Opportunities) and other pre-General Educational Development (GED) certificate programs. Students in an alternative program completing requirements for a diploma will be eligible to participate in graduation at either the high school or alternative school, as determined by that program.

### AP Capstone

AP Capstone™ is an innovative diploma program from the College Board that equips students with the independent research, collaborative teamwork, and communication skills that are increasingly valued by colleges. AP Capstone is built on the foundation of two AP courses — AP Seminar and AP Research — and is designed to complement and enhance the in-depth, discipline-specific study experienced in other AP courses. In AP Seminar, 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. In AP Research, students cultivate the skills and discipline necessary to conduct independent research in order to produce and defend a scholarly academic thesis. **Students who earn scores of 3 or higher in AP Seminar and AP Research and on four additional AP Exams of their choosing will receive the AP Capstone Diploma.** Students who earn scores of 3 or higher in AP Seminar and AP Research but not on four additional AP Exams will receive the AP Seminar and Research Certificate. AP Seminar may also be taken as a stand-alone option. A \$15 unused test fee will be assessed in the event a student is unable to take the test when scheduled.

### CVCC Transition Program

The CVCC Transition Program provides high school students with disabilities the opportunity to acquire skills leading to independent living, employment and self-advocacy. This program is available to high school students identified with disabilities through the Individual Education Plan (IEP). For additional information on this program please contact your student's IEP case manager.

### Dual Enrollment Courses

**\*\*Students may require a travel period for off-site courses\*\***

The Dual Enrollment (DE) program with Central Virginia Community College (CVCC) and the University of Lynchburg provides highly motivated students the opportunity to experience college-level work while in high school and receive both high school and college credit. Dual enrollment courses in the core content areas are weighted at 5.0 quality points. Many Governor's School courses are Dual Enrollment and count as 5.0. Dual enrollment courses in non-core content career and technical fields are weighted at 4.5 quality points. The College Success Skills course is weighted at 4.0 quality points.

Students enrolled in these courses may earn college credit from CVCC and/or University of Lynchburg by fulfilling course requirements. Regardless of the course grade, the course will appear on the student's permanent record at CVCC or University of Lynchburg. **If a student**

receives a D or F, it does have the potential to affect college financial aid eligibility and/or guaranteed admissions agreements with four-year colleges and universities. Students enrolled in DE courses need to abide by the policies and procedures of CVCC and University of Lynchburg as well as LCS.

To be eligible for a Dual Enrollment course, and student must:

1. Be a junior or senior
2. Apply to CVCC / University of Lynchburg and meet entrance criteria
3. Demonstrate college readiness (satisfied through VPT placement testing for CVCC admission)
4. Submit a parent/guardian permission form
5. Have permission of LCS
6. Meet all prerequisite requirements for each dual enrollment course for which enrollment is sought

The costs for tuition and the required textbooks for dual enrollment courses taught at the high school, Central Virginia Governor's School, and the Governor's STEM Academy will remain the responsibility of the school division. However, there is a \$75 fee for a course withdrawal if the CVCC drop date has passed. This payment is due to the school division within two weeks of dropping the class. Checks should be made payable to LCS and sent to the curriculum and instruction department. Please be aware that timelines for withdrawing from a course are different for DE courses. See Section III for more information on dual enrollment options.

### Virginia Placement Test (VPT) Admission Criteria for Dual Enrollment Courses at CVCC

Course	English VPT Score	Math VPT Score
BIOLOGY 101/102	English 111	MTE 1-3
ENGLISH 111/112	English 111	MTE 1
MATH 161/261 (Pre-Calc/Applied Calc)	English 111	MTE 1-9
IND 195 (Robotics)	ENF 1	MTE 1
HRI 158 (Culinary Arts)	ENF 1	MTE 1
DRF 201/202 (STEM)	ENF 1	MTE 1
ITE 221 (Information Technology)	ENF 1	MTE 1
Other courses	See counselor	See counselor

### Admission Criteria for Dual Enrollment Courses at University of Lynchburg

Course	Requirements
TEACHERS FOR TOMORROW I	2.7 GPA and 3 Satisfactory Teacher Recommendations
TEACHERS FOR TOMORROW II	Prerequisite: Teachers for Tomorrow I

**Any student seeking to take courses on the CVCC campus on their own and not a part of any LCS approved program must seek prior approval and all costs for books and tuition are the responsibility of the family.**

### Early College Program

*\*\*Students may require a travel period for off-site courses\*\**

The Early College Program is designed for juniors and seniors who have exhibited the dedication to academics necessary to complete a college curriculum while also completing their secondary education requirements. Students accepted into the program will have the opportunity to receive their high school diploma and their Associate of Arts and Science degree in General Studies from Central Virginia Community College in two years. Each year's cohort class will consist of up to 24 students. Of the 24 students, eight (8) slots will be reserved for the top eight (8) applicants from each high school (16 total). The final eight (8) slots will be filled by the remaining top eight (8) applicants regardless of high school. A selection rubric based on current high school G.P.A., scores on the Virginia Placement Test in mathematics and English, teacher recommendations, attendance history, and the general quality of the application packet will be used to rank all applicants. CVCC officials will assess and rank the applications. Parents/Families will be responsible for tuition fees to CVCC. There is limited financial support to students with financial need. Financial hardship forms are available in the counseling office. Lynchburg City Schools will provide transportation to and from the student's high school to CVCC, the campus on which all classes will be held. The school division will also pay textbook costs. All students will complete the same courses, and all students' daily schedules will be the same. CVCC classes will begin at 8:00 a.m. and conclude by 1:00 p.m. A shuttle bus will return students to their high school campus in time for 7th period and after-school activities in case they choose to participate. All Early College students are eligible to participate in any extra-curricular sports and activities at their high schools. The Early College Program will follow the CVCC calendar for all Early College courses, including observing the same holidays and academic breaks (fall, winter, and spring). CVCC staff will use the 10-point LCS grading scale. No course substitutions may be made. **The tuition for the Early College Program is the responsibility of each family.**

There are opportunities for financial assistance to families with financial hardship. Counselors have financial hardship forms available each spring.

### Junior Year

CVCC Course Number	LCS Course Number	Course Title	Credits First Sem.	Credits Second Sem.	Course Weight
English 111-112	1328AS/BS	College Composition	3	3	5.0
History 121-122	4318AS/BS	United States History I-II	3	3	5.0
Math 163	2328AS	Pre-Calculus I	3		5.0
Math 261	2338BS	Applied Calculus I		3	5.0
Biology 101-102	3328BS	General Biology I-II	4	4	5.0
Comm. Studies 100	5858AS	Principles of Public Speaking		3	4.5
Student Dev. 100	7770AS	College Success Skills	1		4.0
Inform. Technology 115	8538AS/BS	Intro. to Computer Apps and Concepts	3		4.5

### Senior Year

CVCC Course Number	LCS Course Number	Course Title	Credits First Sem.	Credits Second Sem.	Course Weight
English 241-242	1228AS/BS	Survey of American Literature I-II	3	3	5.0
Political Science 211-212	4328AS	U. S. Government I-II	3	3	5.0
Math 162	2348AS	Pre-Calculus II	3		5.0
Math 245	2428BS	Statistics		3	5.0
Psychology 230	3438AS/BS	Developmental Psychology	3		4.5
Art 101	TBD	Art Appreciation	3		4.5
Music 121	TBD	Music Appreciation I		3	4.5
Health 116	TBD	Intro to Personal Wellness		2	4.5

## Lynchburg Regional Governor's XLR8 STEM Academy

*\*\*Students may require a travel period for off-site courses\*\**

The Lynchburg Regional Governor's STEM Academy, located at Central Virginia Community College in the Framatome Technology Center, focuses on Science, Technology, Engineering and Math, thus the name STEM. This regional program for accepted high school juniors and seniors is supported by Region 2000 Technology Council; Future Focus Foundation; Central Virginia Community College; the Region 2000 Workforce Investment Board; area business partners including AMTI, Framatome, The BWX Technologies, Centra and Delta Star; and the school divisions of Amherst, Appomattox, Bedford, Campbell and Lynchburg. The goal of this program is to close the gap between education and industry, thereby furthering the economic vitality of this region. The STEM Academy differs from the Central Virginia Governor's School in that the courses will have a career and technical educational focus. The curriculum will be driven by needs and projected growth of regional industry. Currently, the two identified student pathways offered at the Academy will be Health Care Technologies and Mechatronics – the blending of mechanical and electrical engineering disciplines. Graduates of this program will be workforce-ready to further the economic growth in Region 2000.

### Cyber Security Courses

The career studies certificate is designed as an enhanced module to provide expertise in security to networking specialists. This curriculum will prepare networking specialists for employment as network security specialists or Internet security specialists. This career studies certificate also helps prepare students for the CompTIA Security+ and the CISSP (Certified Information Systems Security Professional) certification exams.

## XLR8 STEM Academy Courses

XLR8 Course Name	Semester	Grade Level	CVCC Course Number	CVCC Course Name	CVCC Credits	LCS Weight
Introduction to Engineering Design (PLTW)	Fall	11	EGR 115 (2 credits) EGR 123 (2 Credits)	EGR 115-Engineering Graphics  EGR 123- Introduction to Engineering Design	4	4.5
Principles of Engineering (PLTW)	Spring	11	MEC 140 (3 credits) EGR 105(1 credit)	MEC 140 -Introduction to Mechatronics  EGR 105-- Introduction to Problem Solving & Technology	4	4.5
Engineering Design and Development (PLTW)	Fall	12	DRF 161  SAF 130	DRF 161-Blueprint Reading  SAF 130- Industrial Safety-OSHA 10	2  1	4.5
Digital Electronics (PLTW)	Spring	12	ETR 167	ETR 167- Logic Controls & Circuits	3	4.5
Introduction to Computer Applications & Concepts	Fall, Spring	11,12	ITE 115	Introduction to Computer Applications & Concepts	3	4.5
Introduction to Network Concepts	Fall	11	ITN 101	Introduction to Network Concepts	3	4.5
Software Design	Fall	11	ITP 100	Software Design	3	4.5
Network Security Basics	Fall, Spring	11,12	ITN 260	Network Security Basics	3	4.5
Network Attacks, Computer Crime & Hacking	Fall, Spring	11,12	ITN 261	Network Attacks, Computer Crime & Hacking	3	4.5
Network Communication, Security & Authentication	Fall	11,12	ITN 262	Network Communication, Security & Authentication	4	4.5
Internet/Intranet Firewalls & E-Commerce Security	Spring	12	ITN 263	Internet/Intranet Firewalls & E-Commerce Security	4	4.5
Network Security Layers	Spring	12	ITN 266	Network Security Layers	3	4.5
Legal Topics in Network Security	Spring	12	ITN 267	Legal Topics in Network Security	3	4.5
Medical Terminology	Fall	12	HLT 143	Medical Terminology I	3	4.5
Developmental Psychology	Spring	12	PSY 230	Developmental Psychology	3	4.5
Statistical Reasoning	Fall	11	MTH 155	Statistical Reasoning	3	5.0
Pre-Calculus I	Spring	11	MTH 161	Pre-Calculus I	3	5.0
Applied Calculus I	Fall, Spring	11,12	MTH 261	Applied Calculus I	3	5.0
Precalculus II	Spring	12	MTH 162	Precalculus II	3	5.0
Calculus I	Fall, Spring	12	MTH 173	Calculus I	3	5.0
Calculus II	Spring	12	MTH 174	Calculus II	3	5.0
College Chemistry I	Fall	11	CHM 111	College Chemistry I	4	5.0
College Chemistry 2	Spring	11	CHM 112	College Chemistry II	4	5.0
Physics I	Fall	12	PHY 121	Principles of Physics I	4	5.0
Physics II	Spring	12	PHY 122	Principles of Physics II	4	5.0

Human Anatomy & Physiology I	Fall	12	BIO 141	Human Anatomy and Physiology I	4	5.0
Human Anatomy & Physiology II	Spring	12	BIO 142	Human Anatomy and Physiology II	4	5.0
College Success Skills	Fall	11	SDV 100	College Success Skills	1	4.0
Internship	Spring	12	MEC 190 HLT 190 EGR 190	Coordinated Internship	1	4.0

## Other CVCC Opportunities

CVCC has created an opportunity for rising seniors who are interested in getting a head start on their career in the fields of RN, EMT, HVAC, Welding, or Machinist. Seniors will take required high school courses at their base schools and their college courses at CVCC. The courses taken at CVCC will count for both college and high school credit. Transportation will be provided, but tuition costs will be the responsibility of the students and their families. See your school's career or guidance counselor for more information. *Students may require a travel period for off-site courses.*

## Machine Tool

CVCC Course Number	LCS Course Number	Course Title	Credits First Sem.	Credits Second Sem.	Course Weight
MAC 161-162	8417AC	Machine Shop Practices I & II	6		4.5
MAC 163-164	8347BC	Machine Shop Practices III & IV		6	4.5
MAC 181	8457AC	Machine Blueprint Reading	3		4.5
SAF 126	8617BC	Principles of Industrial Safety		3	4.5
HLT 110	5248BC	Concepts of Personal & Community Health		2	4.5
SDV 100	7770AS	College Success Skills	1		4.0

## Central Virginia Governor's School (CVGS)

*\*\*Students may require a travel period for off-site courses\**

The Lynchburg City Schools' partners with the Central Virginia Governor's School for Science & Technology ([www.cvgs.k12.va.us](http://www.cvgs.k12.va.us)) to provide opportunities beyond the scope of normal high school curricula to gifted students interested in mathematics, science and technology. CVGS students pursue an innovative curriculum, which allows them to cultivate their special talents in mathematics and science through an individual research program, in-depth laboratory experiences and extensive integration of technology into all courses. Instruction is designed to meet the needs of the gifted learner in a challenging independent learning environment that stimulates critical thinking and creative problem solving and emphasizes the development of time management and collaboration skills. CVGS is one of 19 Academic Year Governor's Schools across the state approved by the Virginia Board of Education and sponsored and evaluated by the Virginia Department of Education.

LCS students, who have a 3.0 unweighted GPA in high school science and mathematics courses, are eligible to apply for admission to the program in February of their sophomore year. Students who do not have an unweighted 3.0 GPA in these courses may apply if they have a PSAT score in math greater than 65 or SAT score in math that is greater than 650. Students must complete an application and must demonstrate an interest in math, science, and technology as well as the ability to work independently. Selection is competitive, and successful applicants from the Lynchburg City Schools must maintain a high GPA in order to remain in the program.

Students from Amherst County, Appomattox County, Bedford County, Campbell County and Lynchburg City Schools attend the Governor's School. Each school division has an identified number of spots for students. The selection of students is based on procedures and policies developed within each school division. Successful applicants from the Lynchburg City Schools have been students who have received high grades in the most rigorous math and science courses available, who have been extremely successful in other academic areas, and who have strong standardized test scores. The average SAT scores for recent Governor's School students are verbal-662, math-658.

The following courses are offered at the Central Virginia Governor's School. In all cases the prerequisite for a course is admission to the Central VA Governor's School. For more information contact your student's counselor or our LCS Supervisor of Math, Science, & Gifted Education at 434-515-5044.

### Dually Enrolled Courses

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#### MATH ANALYSIS (1 high school credit)

Course: 2317YG

**CVCC Code: MTH 167 (5 college credits for a year-long course). SCED Code: 02110 Pre-Calculus.**

Math Analysis is a pre-calculus course that includes an in-depth conceptual analysis of algebraic, polynomial, rational, logarithmic, exponential, and trigonometric functions. Topics include graphical behavior, domains and ranges, roots (real & complex), the first derivative, graphing, application problem solving and data analysis, and an introduction to integration. Parametric equations are presented with a focus on applications and conceptual analysis. Analysis includes required algebraic proofs and/or conceptual explanations in written and oral presentations. Graphing calculators, spreadsheets, and a computer algebra system are used extensively. The study of matrices is included, and optional topics include an introduction to sequences and series. **This course is taught over a full academic year.**

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#### CALCULUS I (1 high school credit)

Course: 2329YG

**CVCC Code: MTH 263 (4 college credits for a year-long course). SCED Code: 02121 Calculus.**

A college level study of differential calculus; this course includes the study of limits, continuity, derivatives (concept and definition), derivatives of parametric equations and polar curves, differentiation techniques (including inverse trigonometric functions), curve sketching, optimization applications and an introduction to antiderivatives (concept and definition) and definite integrals with applications. **This course is taught over a full academic year.**

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#### CALCULUS I (0.5 high school credit, one semester)

Course: 2329AG OR 2329BG

**CVCC Code: MTH 263 (4 college credits). SCED Code: 02121 Calculus.**

A college level study of differential calculus; this course includes the study of limits, continuity, derivatives (concept and definition), derivatives of parametric equations and polar curves, differentiation techniques (including inverse trigonometric functions), curve sketching, optimization applications and an introduction to antiderivatives (concept and definition) and definite integrals with applications.

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#### CALCULUS II (0.5 high school credit, one semester)

Course: 2349AG OR 2349BG

**CVCC Code: MTH 264 (4 college credits). SCED Code: 02121 Calculus.**

A college level study of integral calculus; this course includes the study of Riemann Sums, Trapezoidal and Simpson's Rules, antiderivatives, definite and indefinite integrals (concept and definition), integration technique, applications of integrals, solving differential equations, parametric equations and polar curves, convergence of sequences and series, and Taylor and Maclaurin Series.

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**CALCULUS III (VECTOR CALCULUS) (0.5 high school credit, one semester)****Course: 2429BG****CVCC Code: MTH 265 (4 college credits). SCED Code: 02122 Multivariate Calculus. Virginia Course Code: 3178 Multivariate Calculus.**

Vector calculus includes vector-valued functions, functions of several variables, vector fields, partial derivatives and multiple integrals. Computational techniques, geometry and theoretical structure, creative problem solving, and proofs are emphasized.

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**HUMAN ANATOMY & PHYSIOLOGY (1 high school credit)****Courses: 3339AG & 3339BG****CVCC Courses: BIO 141 (4 college credits) first semester; BIO 142 (4 college credits) second semester. SCED Code 03053 Anatomy and Physiology (year-long). Virginia Course Code: 4330 BIO II-Anatomy/Physiology.**

This college level course provides an overview of cellular physiology and reviews many human organ systems including the nervous, respiratory, circulatory, digestive, skeletal, endocrine, muscular, urinary, reproductive, and lymphatic systems. Students will explore organ systems through the use of interactive modeling and will discuss current medical cases with local health care professionals.

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**COMPUTER SCIENCE/PROGRAMMING (1 high school credit)****Courses: 3729AG & 3729BG****CVCC Code: CS 201 (4 college credits) first semester; CS 202 (4 college credits) second semester. SCED Code 10152 Computer Programming Course (year-long). Virginia Course Code: 6641 Advanced Programming.**

This college level sequence introduces algorithm and problem solving methods and emphasizes structured programming concepts. Students examine constructs for logic control, sequencing statements, input/output, searching and sorting as well as explore data structures including lists, trees, arrays, files, queues and stacks. Students learn object oriented programming techniques by making use of methods, classes and objects to demonstrate the object oriented concepts of encapsulation, inheritance, and polymorphism.

**Non-Dually Enrolled Courses**

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**PHYSICS (1 high school credit) Course: 3219YG****Not Dual Enrollment. SCED Code: 03152 Physics Advanced Studies.**

CVGS physics is a college level introduction using basic calculus and vector analysis to study the particle and wave nature of everyday phenomena. Topics include Newtonian and fluid mechanics, conservation laws, thermodynamics, vibrations and waves, electricity and magnetism, optics, and modern physics. Concepts are explored and applied through hands-on activities and in a computer based laboratory through investigations requiring data collection and analysis or use of models and computer simulations that show interdisciplinary relationships between physics, life sciences, mathematics, and technology. Development of problem solving, analytical thinking, laboratory and communication skills is also stressed.

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**RESEARCH (1 high school credit)****Course: 3217YG****Not Dual Enrollment. SCED Code: 03212 Scientific Research and Design.**

This unique course is an introduction to the research process including literature research, project design, elementary statistical analysis, scientific writing and multimedia presentations. Each student completes an individual research project. Students design a study, collect and analyze data, and report the results in paper, PowerPoint, poster and web page formats. The statistical analysis of data is conducted using Microsoft Excel. During the second semester students complete a 36-hour internship.

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**CONNECTIONS IN MATHEMATICS (0.5 high school credit per semester)****Courses: 2228AG & 2228BG****Not Dual Enrollment. SCED Code: 02102 Discrete Mathematics. Virginia Course Code: 3154 Discrete Mathematics.**

This course provides students with introductory experiences in symbolic logic, graph theory, probability, voting schemes and apportionment methods in the first semester and examines topics in economics, personal finance, and mathematical proofs in the second semester. Emphasis is placed on conceptual understanding, solving real world applications, using technology, and fostering mathematical reasoning and communication.

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**SENIOR SEMINAR (1 high school credit)****Course: 3227YG****Not Dual Enrollment. SCED Code: 22999 Miscellaneous Other. Virginia Course Code: 9826 Local Elective I.**

During the first six-weeks period students participate in an engineering design-build-test project with local engineers serving as mentors. For the next four six-weeks periods, students explore and use sophisticated technologies choosing from among biotechnology, computer-aided design and 3D printing, desktop publishing, electron microscopy, writing iPad applications, scientific photography, microbiology, nuclear science, and robotics. Students end the course with a six-week period of using technology in the completion of the Senior Science Scenario capstone project

*Please visit the Central Virginia Governor's School website at: <http://www.cvgs.k12.va.us/> for course descriptions and any additional information regarding the Central Virginia Governor's School.*

# NCAA & NAIA College Freshman Athletic Eligibility Standards

All potential college student-athletes must register with the NCAA Initial-Eligibility Clearinghouse and meet NCAA academic requirements. Excerpts from the Eligibility Standards are provided on this page. Please see your counselor for additional information.

## Core Courses

- **NCAA Division I requires 16 core courses as of August 1, 2008.** This rule applies to any student first entering any Division I college or university on or after August 1, 2008. Please see the chart below for a breakdown of this 16 core-course requirement.
- **NCAA Division II requires 16 core courses as of August 1, 2013.** See the breakdown of core-course requirements below.

## Test Scores

- **Division I** has a sliding scale for test score and grade-point average.
- **Division II** has a minimum SAT score requirement of 820 or an ACT sum score of 68.
- The SAT score used for NCAA purposes includes **only** the critical reading and math sections. The writing section of the SAT is not used.
- The ACT score used for NCAA purposes is a **sum** of the four sections on the ACT: English, mathematics, reading and science.
- **All SAT and ACT scores must be reported directly to the NCAA Eligibility Center by the testing agency. Test scores that appear on transcripts will not be used. When registering for the SAT or ACT, use the Eligibility Center code of 9999 to make sure the score is reported to the Eligibility Center.**

## Grade-Point Average

- Only core courses are used in the calculation of the grade-point average.
- **Be sure** to look at your high school's list of NCAA-approved core courses on the Eligibility Center's Web site to make certain that courses being taken have been approved as core courses. The Web site is [www.ncaaclearinghouse.net](http://www.ncaaclearinghouse.net).
- **Division I** grade-point-average requirements are listed on the NCAA web site.
- **The Division II** grade-point-average requirement is a minimum of 2.0.

### DIVISION I 16 Core-Course Rule

#### 16 Core Courses:

- 4 years of English.
- 3 years of mathematics (Algebra I or higher). Two years of natural/physical science (1 year of lab if offered by high school).
- 1 year of additional English, mathematics or natural/physical science.
- 2 years of social science.
- 4 years of additional courses (from any area above, world languages or non-doctrinal religion/philosophy).

### DIVISION II 16 Core-Course Rule

#### 16 Core Courses:

- 3 years of English.
- 2 years of mathematics (Algebra I or higher).
- 2 years of natural/physical science (1 year of lab if offered by high school).
- 2 years of additional English, mathematics or natural/physical science.
- 2 years of social science.
- 4 years of additional courses (from any area above, world languages or non-doctrinal religion/philosophy).

**PLEASE NOTE:** Beginning August 1, 2013, students planning to attend a NCAA Division II institution will be required to complete 16 core courses.

## Other Important Information:

Students enrolling at an NCAA Division I or II institution for the first time need to complete the amateurism questionnaire through the Eligibility Center Web site. Students need to request final amateurism certification prior to enrollment.

For more information regarding the rules, please go to [www.ncaa.org](http://www.ncaa.org). You should click on "Academics and Athletes" then "Eligibility and Recruiting." You can also visit the Eligibility Center Web site at [www.ncaaclearinghouse.net](http://www.ncaaclearinghouse.net).

You can also call the NCAA Eligibility Center if you have questions. The toll-free number is 877-262-1492.

### NAIA

Graduate from high school and also meet two out of three of the following requirements:

- Achieve a minimum of 18 on the ACT or 860 on the SAT
- Achieve a minimum GPA of 2.0
- Graduate in the top half of the senior class

# NCAA Divisions I and II Initial-Eligibility Requirements

## Core Courses

- NCAA Division I requires 16 core courses. NCAA Division II currently requires 14 core courses. Division II will require 16 core courses for students enrolling on or after August 1, 2013. See the charts below.
- NCAA Division I will require 10 core courses to be completed prior to the seventh semester (seven of the 10 must be a combination of English, math or natural or physical science that meet the distribution requirements below). These 10 courses become "locked in" at the seventh semester and cannot be retaken for grade improvement.
- Beginning August 1, 2016, it will be possible for a Division I college-bound student-athlete to still receive athletics aid and the ability to practice with the team if he or she fails to meet the 10 course requirement, but would not be able to compete.



## Test Scores

- Division I uses a sliding scale to match test scores and core grade-point averages (GPA). The sliding scale for those requirements is shown on Page No. 2 of this sheet.
- Division II requires a minimum SAT score of 820 or an ACT sum score of 68. (After August 1, 2018 use sliding scale
- to match test scores and core GPA)
- The SAT score used for NCAA purposes includes **only** the critical reading and math sections. The writing section of the SAT is not used.
- The ACT score used for NCAA purposes is a **sum** of the following four sections: English, mathematics, reading and science.
- When you register for the SAT or ACT, use the NCAA Eligibility Center code of 9999 to ensure all SAT and ACT scores are reported directly to the NCAA Eligibility Center from the testing agency. Test scores that appear on transcripts will not be used.

## Grade-Point Average

- Be sure to look at your high school's List of NCAA Courses on the NCAA Eligibility Center's website ([www.eligibilitycenter.org](http://www.eligibilitycenter.org)). Only courses that appear on your school's List of NCAA Courses will be used in the calculation of the core GPA. Use the list as a guide.
- Division I students enrolling full time before August 1, 2016, should use Sliding Scale A to determine eligibility to receive athletics aid, practice and competition during the first year.
- Division I GPA required to receive athletics aid and practice on or after August 1, 2016, is 2.000 (corresponding test-score requirements are listed on Sliding Scale B on Page No. 2 of this sheet).
- Division I GPA required to be eligible for competition on or after August 1, 2016, is 2.300 (corresponding test-score requirements are listed on Sliding Scale B on Page No. 2 of this sheet).
- The Division II After August 1, 2018, core GPA required minimum 2.2 GPA.
- Remember, the NCAA GPA is calculated using NCAA core courses only.

### DIVISION I 16 Core-Course Rule

#### 16 Core Courses:

- 4 years of English
- 3 years of mathematics (Algebra I or higher)
- 2 years of natural/physical science (1 year of lab if offered by high school)
- 1 year of additional English, mathematics or natural/physical science
- 2 years of social science
- 4 years of additional courses (from any area above, world languages or comparative religion/philosophy)

### DIVISION II 16 Core-Course Rule

#### 16 Core Courses (2013 and After):

- 3 years of English
- 2 years of mathematics (Algebra I or higher)
- 2 years of natural/physical science (1 year of lab if offered by high school).
- 3 years of additional English, mathematics or natural/physical science.
- 2 years of social science
- 4 years of additional courses (from any area above, world languages comparative religion/philosophy)

## Sequential Electives

The following sequences are approved to meet the sequential electives requirement of the Standard Diploma or Applied Studies Diploma. Please see the graduation requirements charts for more detailed information.

<b>Architecture &amp; Construction</b>		
Building Trades I	Followed by	Building Trades II
<b>Arts, A/V Technology, &amp; Communications</b>		
Advertising Design	Followed by	Video & Media Production
Video & Media Production	Followed by	Advertising Design
<b>Business, Management, Admin, &amp; Finance</b>		
Accounting I	Followed by	Accounting II, Business Law, Business Management, Computer Information Systems, Design, Multimedia & Web Technologies, Principles of Business & Marketing
Accounting II	Followed by	Business Law, Business Management, Computer Information Systems, Design, Multimedia & Web Technologies, Principles of Business & Marketing
Business Law	Followed by	Accounting I, Accounting II, Business Management, Computer Information Systems, Design, Multimedia, & Web Technologies, Principles of Business & Marketing
Business Management	Followed by	Accounting I, Accounting II, Business Law, Computer Information Systems, Design, Multimedia, & Web Technologies, Principles of Business & Marketing
Computer Information Systems	Followed by	Accounting I, Accounting II, Business Management, Business Law, Design, Multimedia, & Web Technologies, Principles of Business & Marketing, Programming
Design, Multimedia, & Web Technologies	Followed by	Accounting I, Accounting II, Business Law, Business Management, Computer Information Systems, Digital Applications, Principles of Business & Marketing, Programming
Digital Applications	Followed by	Accounting I, Accounting II, Business Law, Business Management, Computer Information Systems, Design, Multimedia, & Web Tech, Principles of Business & Marketing, Programming
Principals of Business & Marketing	Followed by	Accounting I, Accounting II, Business Law, Business Management, Computer Information Systems, Design, Multimedia, & Web Tech, Marketing I, Marketing II, or Sports & Entertainment Management
Programming	Followed by	AP Computer Science A, AP Computer Science Principles, Computer Information Systems, Design, Multimedia, & Web Technologies, Digital Applications,
<b>Education &amp; Training</b>		
Teachers for Tomorrow I	Followed by	Teachers for Tomorrow II
<b>Health Sciences</b>		
Athletic Training I	Followed by	Athletic Training II
Dental I	Followed by	Dental II
Nurse Aide I	Followed by	Nurse Aide II
<b>Hospitality &amp; Tourism</b>		
Culinary Arts I	Followed by	Culinary Arts II
Culinary Arts II	Followed by	Culinary Arts III
<b>Human Services</b>		
Cosmetology I	Followed by	Cosmetology II
<b>Information Technology</b>		
Computer Systems Technology I	Followed by	Computer Systems Technology II
<b>Research</b>		
AP Capstone Seminar	Followed by	AP Capstone Research
<b>Law, Public Safety, Corrections, &amp; Security</b>		
Criminal Justice I	Followed by	Criminal Justice II

<b>Manufacturing</b>		
Precision Machine Technology I	Followed by	Precision Machine Technology II
<b>Marketing, Sales, &amp; Service</b>		
Marketing I	Followed by	Marketing II or Sports Entertainment Management
<b>Science, Technology, Engineering, &amp; Math</b>		
Drafting I	Followed by	Drafting II, Drafting III
Engineering Studies	Followed by	Engineering Explorations
Technology Foundations	Followed by	Technology Transfer
<b>Transportation &amp; Distribution</b>		
Automotive Technology I	Followed by	Automotive Technology II
<b>JROTC</b>		
MCJROTC Leadership I	Followed by	MCJROTC Leadership II
AFJROTC Leadership I	Followed by	AFJROTC Leadership II
<b>Cultural Arts</b>		
Orchestra I	Followed by	Orchestra II
Concert Band I	Followed by	Symphonic Band I
Concert Band I Symphonic Band I	Followed by	Jazz Ensemble, Wind Ensemble, Percussion Ensemble
Chorus I	Followed by	Chorus II
Chorus II	Followed by	Chorus III
Art I	Followed by	Art II: Drawing and Painting, Art III: Three Dimensional
Introduction To Theater	Followed by	Musical Theatre Dance Acting I, Applied Theatre Tech I, Technical Theatre I Design, Technical Theatre I Production
Acting I	Followed by	Acting II
Applied Theatre Tech I	Followed by	Applied Theatre Tech II
Technical Theatre I Design	Followed by	Technical Theatre II
Technical Theatre I Production	Followed by	Technical Theatre II
<b>English Electives</b>		
Creative Writing	Followed by	Playwriting
Exploring Language & Culture	Followed by	Exploring Language & Culture Through Hip-Hop II

**Note: Taking Orchestra II, Concert Band I, or Chorus I twice for elective credit may fulfill the sequential elective requirement as long as the student is progressing through a set of skills outlined in the curriculum.**

<b>World Languages (only courses not needed for graduation can count as a sequential elective)</b>		
French I	Followed by	French II
German I	Followed by	German II
Latin I	Followed by	Latin II
Spanish I	Followed by	Spanish II
French IV	Followed by	French V
German IV	Followed by	German V
Latin IV	Followed by	Latin V
Spanish IV	Followed by	Spanish V

## Graduation Requirements for First-Time Transfers into a Virginia Public High School

**Graduation requirements** – in compliance with [8VAC 20-131-60](#) – for a student transferring into a Virginia public school for the first time in grades 9-12, depends on the grade the student is transferring into and when in the school year the student is transferring.

A student is considered to have transferred:

- at the beginning of the school year if 20 or fewer hours of instruction have been completed.
- during the school year if more than 20 hours of instruction has been completed.

Federal law requires each student to be tested in mathematics at least once during high school, therefore some students will be required to complete a mathematics end-of-course test in high school if one was not completed prior to enrolling in a Virginia public high school.

Students entering a Virginia high school during the tenth grade or later may benefit by having to earn a reduced number of verified credits, as stated in 8VAC20-131-60.G, and summarized in the following table.

A student entering a Virginia high school for first time:	Prior to 2018-2019 school year:	2018-2019 school year:	2019-2020 school year:	2020-2021 school year:	2021-2022 school year and thereafter:
<b>At the beginning of or during ninth grade</b>	All requirements for the Standard Diploma and Advanced Studies Diploma	All requirements for the Standard Diploma and Advanced Studies Diploma	All requirements for the Standard Diploma and Advanced Studies Diploma	All requirements for the Standard Diploma and Advanced Studies Diploma	All requirements for the Standard Diploma and Advanced Studies Diploma
<b>At the beginning of or during tenth grade</b>	All diploma requirements except:  For a <u>Standard diploma</u> , only four verified credits required: English (1), mathematics (1), history (1), and science (1)  For an <u>Advanced Studies diploma</u> , only six verified credits required: English (2), mathematics (1), history (1), science (1), and student-selected (1) science (1), and student-selected (1)	All diploma requirements except:  For a <u>Standard diploma</u> , only four verified credits required: English (1), mathematics (1), history (1), and science (1)  For an <u>Advanced Studies diploma</u> , only six verified credits required: English (2), mathematics (1), history (1), science (1), and student-selected (1) English (2), mathematics (1), history (1), science (1), and student-selected (1)	All requirements for the <u>Standard diploma &amp; Advanced Studies diploma</u> .	All requirements for the <u>Standard diploma &amp; Advanced Studies diploma</u> .	All requirements for the <u>Standard diploma &amp; Advanced Studies diploma</u> .

A student entering a Virginia high school for first time:	Prior to 2018-2019 school year:	2018-2019 school year:	2019-2020 school year:	2020-2021 school year:	2021-2022 school year and thereafter:
<b>At the beginning of eleventh grade</b>	<p>All diploma requirements except:</p> <p>For a <u>Standard diploma</u>, only four verified credits required: English (1), mathematics (1), history (1), and science (1)</p> <p>For an <u>Advanced Studies diploma</u>, only six verified credits required: English (2), mathematics (1), history (1), science (1), and student-selected (1)</p>	<p>All diploma requirements, except:</p> <p>For a <u>Standard diploma</u>, only four verified credits required: English (1), mathematics (1), history (1), and science (1)</p> <p>For an <u>Advanced Studies diploma</u>, only six verified credits required: English (2), mathematics (1), history (1), science (1), and student-selected (1)</p>	<p>All diploma requirements except:</p> <p>For a <u>Standard diploma</u>, only four verified credits required: English (1), mathematics (1), history (1), and science (1)</p> <p>For an <u>Advanced Studies diploma</u>, only six verified credits required: English(2), math (1), history (1), science (1), and student-selected (1)</p>	<p>All requirements for the <u>Standard diploma</u> and <u>Advanced Studies diploma</u>.</p>	<p>All requirements for the <u>Standard diploma</u> and <u>Advanced Studies diploma</u>.</p>
<b>During eleventh grade</b>	<p>All diploma requirements except:</p> <p>For a <u>Standard diploma</u>, only two verified credits required: English (1), and student-selected (1). The student-selected credits must be in mathematics..</p> <p>For an <u>Advanced Studies diploma</u>, only four verified credits required: English (1), and student-selected (3). One of the student-selected credits must be in mathematics.</p>	<p>All diploma requirements except:</p> <p>For a <u>Standard diploma</u>, only two verified credits required: English (1), and student-selected (1). The student-selected credits must be in mathematics.</p> <p>For an <u>Advanced Studies diploma</u>, only four verified credits required: English (1), and student-selected (3). One of the student-selected credits must be in mathematics.</p>	<p>All diploma requirements except:</p> <p>For a <u>Standard diploma</u>, only two verified credits required: English (1), and student-selected (1). The student-selected credits must be in mathematics.</p> <p>For an <u>Advanced Studies diploma</u>, only four verified credits required: English (1), and student-selected (3). One of the student-selected credits must be in mathematics.</p>	<p>All diploma requirements except only two verified credits required: English and mathematics, if mathematics testing required by federal law, otherwise verified credit may be of student's own choosing.</p>	<p>All diploma requirements of for the <u>Standard diploma</u> &amp; <u>Advanced Studies diploma</u>, except only two verified credits required: English and mathematics, if mathematics testing required by federal law, otherwise verified credit may be of student's own choosing</p>

A student entering a Virginia high school for first time:	Prior to 2018-2019 school year:	2018-2019 school year:	2019-2020 school year:	2020-2021 school year:	2021-2022 school year and thereafter:
<b>At the beginning of twelfth grade</b>	<p>All diploma requirements except:</p> <p>For a <u>Standard diploma</u>, only two verified credits required: English (1), and student-selected (1). The student-selected credits must be in mathematics if mathematics testing is required by federal law.</p> <p>For an <u>Advanced Studies diploma</u>, only four verified credits required: English (1), and student-selected (3). One of the student-selected credits must be in mathematics.</p>	<p>All diploma requirements except:</p> <p>For a <u>Standard diploma</u>, only two verified credits required: English (1), and student-selected (1). The student-selected credits must be in mathematics if mathematics testing is required by federal law.</p> <p>For an <u>Advanced Studies diploma</u>, only four verified credits required: English (1), and student-selected (3). One of the student-selected credits must be in mathematics.</p>	<p>All diploma requirements except:</p> <p>For a <u>Standard diploma</u>, only two verified credits required: English (1), and student-selected (1). The student-selected credits must be in mathematics if mathematics testing is required by federal law.</p> <p>For an <u>Advanced Studies diploma</u>, only four verified credits required: English (1), and student-selected (3). One of the student-selected credits must be in mathematics.</p>	<p>All diploma requirements except:</p> <p>For a <u>Standard diploma</u>, only two verified credits required: English (1), and student-selected (1). The student-selected credits must be in mathematics if mathematics testing is required by federal law.</p> <p>For an <u>Advanced Studies diploma</u>, only four verified credits required: English (1), and student-selected (3). One of the student-selected credits must be in mathematics.</p>	<p>All diploma requirements for the <u>Standard diploma</u> and <u>Advanced Studies diploma</u>, except only two verified credits required: English and mathematics, if mathematics testing required by federal law, otherwise verified credit may be of student's own choosing</p>
<b>During twelfth grade</b>	<p>Students should be given every opportunity to earn a diploma following the graduation requirements in <u>8VAC20-131-50</u>. If not possible, arrangements should be made for the student's previous school to award the diploma. If these arrangements cannot be made, a waiver of the verified credit requirements may be requested to the VDOE.</p>	<p>Students should be given every opportunity to earn a diploma following the graduation requirements in <u>8VAC20-131-50</u>. If not possible, arrangements should be made for the student's previous school to award the diploma. If these arrangements cannot be made, a waiver of the verified credit requirements may be requested to the VDOE</p>	<p>Students should be given every opportunity to earn a diploma following the graduation requirements in <u>8VAC20-131-50</u>. If not possible, arrangements should be made for the student's previous school to award the diploma. If these arrangements cannot be made, a waiver of the verified credit requirements may be requested to the VDOE.</p>	<p>Students should be given every opportunity to earn a diploma following the graduation requirements in <u>8VAC20-131-50</u>. If not possible, arrangements should be made for the student's previous school to award the diploma. If these arrangements cannot be made, a waiver of the verified credit requirements may be requested to the VDOE.</p>	<p>Students should be given every opportunity to earn a diploma following the graduation requirements in <u>8VAC20-131-51</u>. If not possible, arrangements should be made for the student's previous school to award the diploma. If these arrangements cannot be made, a waiver of the verified credit requirements may be requested to the VDOE.</p>

*The Lynchburg City School Division does not discriminate in admission to, or access to, or treatment or employment in its educational programs, services, or activities based on race, color, national origin, sex, disability, or age in accordance with state Inquiries regarding this policy may be directed to the Director of Personnel, 915 Court Street, P.O. Box 2497, Lynchburg, Virginia 24505-2497; telephone number (434) 515-5050.*

## Course Numbers for Transfer Courses

When possible, transfer courses should be equated to corresponding courses in the Program of Studies, and those courses should be transcribed with a "T" appended to the course number.

However, in some cases courses approved for credit in other states might not have an equivalent match in this Program of Studies. In those cases, a generic course number indicating the grade and content area can be used. All such courses are weighted at 4.0 for an "A." The course numbers in the table below represent the first semester courses. By placing a "B" where the "A" is the second semester course numbers can be derived.

Subject Area	Grade 9	Grade 10	Grade 11	Grade 12
English	1190AT	1100AT	1110AT	1120AT
Math	2190AT	2100AT	2110AT	2120AT
Science	3190AT	3100AT	3110AT	3120AT
History	4190AT	4100AT	4110AT	4120AT
Elective	5190AT	5100AT	51150AT	5120AT



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