INTRODUCTION

Welcome to the 2010 Guide to High School Credit Courses for Albemarle County Public Schools. This guide is provided as a tool to enable you to embrace learning, to excel in your work and readiness for a career and education beyond high school, and to own your future!

January is the time of year for students to make plans and choose courses for the coming school year. As a part of this process, the Guide to High School Credit Courses is provided to assist you with course selections and long-term educational/career planning. School counselors, in collaboration with parents and teachers, assist each student in planning a program of study and selecting courses for the next school year.

How to Use This Guide

On page 3 of this guide, you will find a five-year planning form. This form does not take the place of your career plan; rather, it is meant to be used as a planning worksheet by you, your parents, and your school counselor.

This guide is organized in sections as outlined in the table of contents. The guide begins by identifying specialty centers and specialty programs offered at the high school level so you can think about pathways leading to them, if you choose.

Next, the guide is divided into department and course subject areas.

For each core subject, a chart is included to show how different course decisions will affect your path through the subject area. The final sections of this guide include general information about graduation requirements, diploma options, and programs for enrichment. An index is also provided on pages 90-92.

The Process Timeline

Course selection for the upcoming year is an opportunity for you to think carefully about your interests, achievements, and educational and career goals. Give very serious consideration to this registration process. Here is the timeline:

January
1. Guide to High School Credit Courses will be made available to students and parents in January to make preliminary selections and plans.

January
2. Teacher recommendations will be completed for each student in mid-January.

January/February
3. Curriculum Expos for current high school students and rising 9th graders will take place in January or February.

January/February
4. Classroom Presentations and Small Group Program Planning Sessions will take place with school counselors in January and February as they visit classrooms to explain the Guide to High School Credit Courses. School counselors will begin meeting with students individually to review teacher recommendations, five year plans, and transcripts.

April
5. Students may schedule a meeting with school counselors to select courses through April.

May
6. Copies of course selections will be sent home in May.

June
7. To allow for the building of a balanced master schedule, all course request adjustments must be made by June 10.

To ensure the best choice of courses, especially elective courses, all selections should be given your most thoughtful consideration. Your school will develop the master schedule and allocate teaching staff around students’ choices early in the process, so alternate courses may not be available at a later date.
Course Descriptions
As you get further into the guide and start reading about courses, you will find that each course description has several parts. Here is an explanation for the course descriptions.

The listings for courses in this Guide to High School Credit Courses include the following information (where applicable):

- **Course title**
- **Course level**—see page 77 for an explanation of course levels
- **Prerequisite(s)**—courses that must be passed before taking this course
- **Grade level**—9, 10, 11, 12
- **Credit**—unless otherwise noted, .5 credit is awarded at the end of each semester
- **Location**—if not indicated, the course is taught at all three high schools: AHS, MoHS, and WAHS.

We provide icons to indicate important information about courses.

<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
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<tbody>
<tr>
<td><img src="image" alt="SOL" /></td>
<td>Indicates Standards of Learning Test (SOL)</td>
</tr>
<tr>
<td><img src="image" alt="CATEC" /></td>
<td>Indicates the course is offered at CATEC</td>
</tr>
<tr>
<td><img src="image" alt="PVCC" /></td>
<td>Indicates this course is offered through Piedmont Virginia Community College</td>
</tr>
</tbody>
</table>

**Dual Enrollment Courses** The student is responsible for the college expenses, including the college textbook associated with Dual Credit courses.

**Sequential Electives**
Students qualifying for a Standard Diploma or a Modified Standard Diploma must successfully complete two elective courses that are sequential (courses that provide a foundation for further education, training, or preparation for employment). A course may satisfy the requirement for fine arts or career and technical education and for sequential electives. Sequential elective courses may be taken in consecutive years or two years of high school.

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**How do I start making a career plan?**

It might sound like a huge task to plan your whole career, but if we understand that everything can be done systematically, then it won’t turn into a hassle in the end. According to research, these are the four main pillars and units of career planning:

- **Self-Assessment** – Learn more about you; be clear about your likes, dislikes, values, personality and learning style.

- **Research** – Find out more about the careers that interest you, – about the output of these careers and what the working situations will be like.

- **Make a Fit** – Match your skills with the career that best suits you and your skill sets.

- **Create a Plan** – Craft a whole plan which includes discovery of an education program, selection of a school, financial aid, resumé preparation, standardized admission tests, and interviewing techniques.

Adapted from Career Planning Tools on www.OnlineEducationFacts.com
## Course Selection Worksheet/Career Plan

### Full Name ____________________________ Current Grade ________________ Counselor __________________________

### Career Pathway ____________________________________________________________

### Career Planning Goals ________________________________________________________________

### Post Secondary Plan: Four year school ________ Two year school ________ Technical Training ________ Military__________ Other ______________

### Grade | Diploma Type | English | Social Studies | Math | Science | Health/PE Elective | World Language/ Elective | Electives | Verified Credits
--- | --- | --- | --- | --- | --- | --- | --- | --- | ---
### Middle School 6-8

#### 9
- **Advanced**
  - English 9
  - World History I
  - Algebra I
  - Geometry
  - Algebra II
- **Standard**
  - English 9
  - World History I
  - Algebra I
  - Fundamental Skills

#### 10
- **Advanced**
  - English 10
  - World History II
  - Geometry
  - Algebra II
  - Math Analysis
- **Standard**
  - English 10
  - World History II
  - Algebra Function Data

#### 11
- **Advanced**
  - English 11
  - US/VA History
  - Algebra II
  - Math Analysis
  - College Algebra/Trig
- **Standard**
  - English 11
  - US/VA History
  - Algebra Function Data

#### 12
- **Advanced**
  - English 12
  - US/VA Government
  - Math Analysis
  - AP Math or PVCC Dual Enrollment Math
  - College Algebra/Trig
- **Standard**
  - English 12
  - US/VA Government

### Notes:
- * SOL Course
- ** 1 of the 6 electives must be a Fine Art or CTE
12 Lifelong-Learning Standards

The Division developed 12 Lifelong-Learning Standards through which we set rigorous expectations for how students learn, analyze information, and communicate, leading to increased student engagement, content mastery, and higher-order thinking. Students who attain these standards will be equipped with a foundation for lifelong inquiry and learning. In addition to high levels of achievement as measured by state assessments, students demonstrate their depth of understanding through locally-developed benchmark performance assessments within the context of each academic discipline.

Lifelong-Learning Standards

1. Plan and conduct research;
2. Gather, organize, and analyze data; evaluate processes and products; and draw conclusions;
3. Think analytically, critically, and creatively to pursue new ideas, acquire new knowledge, and make decisions;
4. Understand and apply principles of logic and reasoning; develop, evaluate, and defend arguments;
5. Seek, recognize and understand systems, patterns, themes, and interactions;
6. Apply and adapt a variety of appropriate strategies to solve new and increasingly complex problems;
7. Acquire and use precise language to clearly communicate ideas, knowledge, and processes;
8. Explore and express ideas and opinions using multiple media, the arts, and technology;
9. Demonstrate ethical behavior and respect for diversity through daily actions and decision making;
10. Participate fully in civic life, and act on democratic ideals within the context of community and global interdependence;
11. Understand and follow a physically active lifestyle that promotes good health and wellness; and,
12. Apply habits of mind and metacognitive strategies to plan, monitor, and evaluate one’s own work.
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We want to offer you choices in your education. As a result, we are always seeking new pathways for enrichment, learning support, and expanded career and continuing educational opportunities. The programs and courses on the following pages represent larger-scale centers housed at different schools.

**Overview of CATEC Career Programs**

The Charlottesville-Albemarle Technical Education Center (CATEC) operates with a very special purpose in mind: to provide high school students and adults in the community an opportunity to prepare for successful careers or to update existing skills. Students may choose to seek employment upon graduation and/or to continue their formal education through apprenticeship programs or advanced study in technical institutes, community colleges, and universities.

Students may be admitted to the center if they meet the following criteria:

I. Attend Albemarle County or Charlottesville City Schools

II. Attend Fluvanna High School or neighboring high schools (admitted on space available basis)

III. Have parental permission

IV. Submit application through their school counselors and meet requirements for admission to programs

V. Pay tuition if they are adults and space is available in the class

**Application & Selection Process**

Students wanting to enroll in CATEC programs must complete an Application for Enrollment, available through their home high school counseling office. Students return completed applications to their school counselor who will forward the applications to CATEC.

Since class sizes at CATEC are limited, CATEC will review the applications and select students based upon the following:

I. Applicants will be considered for the programs if they meet listed prerequisites.

II. CATEC will review the following information on applicants: attendance, disciplinary record, grades, grade level, age, and personal interview, if applicable. Final selection for each program will then be based upon a variety of factors, including the above information, the number of enrollments from each school, and the total enrollments from each school division.

III. Current CATEC students wishing to return to either complete their program or enter a new program, must obtain a grade level of “C” or higher.

IV. Juniors & Seniors are given priority in all programs with Sophomores being accepted on a case by case basis in all but the following programs: Cosmetology, Barbering, Auto Tech, Practical Nursing, Pharmacy Tech, Dental Assistant and EMT/FF.
Program Completer/Certificate/Seal Options
All credit(s) for CATEC programs meet the requirements for a career and technical education elective(s).
Students who finish any state-approved one or two-year sequence of technical courses and earn a high school diploma will constitute a “program completer.”
Program completers receive a Career and Technical Education Certificate of Completion (based upon program requirements).
Students earn a Career and Technical Education Seal if they complete one of the following:
I. Achieve a B average in a sequence of courses
II. Pass an examination that confers certification from a recognized industry, trade, or professional association
III. Acquire a professional license in the field from the Commonwealth of Virginia
Students will receive a Certificate of Participation upon completion of a one-year program or one year of a two-year program (based upon program/certificate requirements), or complete a two-year program and do not earn a high school diploma.

Verified Credits
Career and technical students may earn two verified credits toward a Standard Diploma by completing a program sequence and passing a recognized certification or licensure examination. One of these may be substituted for a verified credit in either science or history and the other used as a student-selected verified credit.

Technical Education Organizations for Students
Student participation in SkillsUSA or Health Occupations Student Association (HOSA) is an integral part of instruction in all of CATEC’s programs. These organizations provide opportunities for students to develop personal leadership and communication skills and motivate them to excel in their chosen fields of study.

Curriculum Focus
While there are many technical “hard” skills taught in our programs at CATEC, an increased portion of our instruction is geared towards workplace readiness skills, known as “soft” skills. These skills are incorporated into the curriculum for each trade area, as well as implemented school-wide in lessons to better prepare students for the workplace environment.

In addition to the workplace skills, we incorporate Entrepreneurship and Technology Skills into the trade areas to better prepare students for opportunities once they have completed their program of study.

Businesses and community members who are interested in making connections and developing programs should check out our web-site at www.catec.org
Summer Programs

<table>
<thead>
<tr>
<th>Internship Program</th>
<th>Grade</th>
<th>Prerequisite</th>
<th>Credits</th>
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<tbody>
<tr>
<td>The Summer Internship Program allows students to explore a career interest in the Health and Medical Sciences field or the Information Technology field. Students are paired with a mentor for 3 weeks during this work experience. Students will also receive several hours of employability skills training at CATEC. Students must go through an application process to be considered for an internship, and not all students are guaranteed a placement. The application process will take place during the month of April.</td>
<td>11-12</td>
<td>None</td>
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<tr>
<th>Camp Opportunities</th>
<th>Grade</th>
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<tr>
<td>Opportunities are being explored for summer classes at CATEC that will work in conjunction with local businesses to develop programs of enrichment and skill training. Visit <a href="http://www.catec.org">www.catec.org</a> in January for additional information.</td>
<td>8-10</td>
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<td>Technical Programs</td>
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<td><strong>Audio, Media &amp; Communications</strong></td>
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<td>Music Industry Technology</td>
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<td><strong>Automotive Technology</strong></td>
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<td>Auto Body Technology I</td>
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<td>Auto Body Technology II</td>
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<td>Automotive Service Technology I</td>
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<td>Automotive Service Technology II</td>
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<td><strong>Engineering &amp; Construction</strong></td>
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<td>Building Trades I</td>
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<td>Building Trades II</td>
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<td>Masonry I</td>
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<td>Masonry II</td>
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<td><strong>Health Sciences</strong></td>
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<tr>
<td>Dental Assistant</td>
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<td>Emergency Medical Technician/Fire Fighting</td>
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<td>Nurse Aid</td>
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<td>Pharmacy Tech</td>
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<td><strong>Service Industries</strong></td>
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<tr>
<td>Barbering I</td>
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<td>Barbering II</td>
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<td>Cosmetology I</td>
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<td>Cosmetology II</td>
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<tr>
<td>Intro to Culinary Arts</td>
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<tr>
<td>Culinary Arts I</td>
<td></td>
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<tr>
<td>Culinary Arts II</td>
<td></td>
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</tbody>
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*Note: pass certification and be a CTE completer to earn 2 verified credits

NOCTI – National Occupational Competency Testing Institute

HBRCRA- Home Builders Residential Construction Academy

Changes in scheduling may occur based on enrollment numbers
Specialty Centers

The Math, Engineering and Science Academy offers a four-year program designed to prepare students for a college preparatory pathway to a career in engineering. Students will thrive in a state-of-the-art laboratory environment designed to provide authentic experiences in mathematics, engineering, and science. Academy students will explore science and mathematics through the lens of engineering research and design. Students will learn to communicate complex ideas reflecting the rapid growth of technologies applicable in the global community. Students enrolled in the Academy will have the opportunity to experiment with cutting-edge technologies as they interact and intern with professionals in the science, mathematical, and engineering fields.

ENGINEERING ALGEBRA II / MATH ANALYSIS (2 year program)
Prerequisites: Algebra I, Geometry (concurrently), Teacher Recommendation, Application
Co-requisite: Eng. Science & Research
Grades: 9/10: (students must enter the program in their 9th grade year)
2 Credits
Students will complete the Algebra II and Pre-Calculus curriculum in a project enriched class environment which will bring real-world focus and meaning into complex mathematical concepts. Students will study a variety of functions in-depth, along with their applications; uses and derivations of conic sections, systems of equations and their use in engineering design; basic differential calculus and its applications; complex numbers and their uses in electrical engineering; polar coordinates and more. Enrichment topics, as they relate to the mathematical concepts and/or cross curricular science topics, will be explored throughout the two-year course. Emphasis will be placed on the physical applications for concepts. Students will take the Algebra II SOL at the end of the first year. At the end of this course, students will be prepared for the rigors of AP Calculus.
Honors 3166 3167

"Engineering design, analysis and teamwork will be emphasized through a semester-long project involving the Lego® Mindstorms Robot."
—EGR 120

ENGINEERING ANALYSIS AND APPLICATIONS
EGR 120: Introduction to Engineering
Prerequisite: qualifying COMPASS, AP, SAT II 680
Co-requisites: Sci & Eng Part 1; Math 164; Grade: 11
1 High School Credit; 2 College Credits (transferable to UVA, VATECH, ODU, VCU)
This course allows students to examine systems, the interaction of technology and society, ethics in a technological world, and the fundamentals of modeling while applying the engineering design process to areas of the designed world. Students will participate in hands-on projects in a laboratory setting as they communicate information through team-based presentations, proposals, and technical reports.

This course is dual enrolled with PVCC as EGR 120 Introduction to Engineering. EGR 120 is an introductory-level engineering class designed to introduce student to ideas, concepts and methods universal to all disciplines of engineering. Engineering design, analysis and teamwork will be emphasized through a semester-long project involving the Lego® Mindstorms Robot. In addition to problem solving, this class will emphasize important skills that will be useful to the students throughout their career, including technical documentation, presentation skills and the use of software-based computational tools for solving engineering problems. EGR 120 is guaranteed to be transferable to UVA, VPI, ODU and VCU.

8451
ENGINEERING ANALYSIS
AND APPLICATIONS EGR 115:
Introduction to Engineering

Prerequisite: Introduction to Engineering, Math 164, Calculus A/B, Qualifying COMPASS or SAT Score, Instructor Approval, Taken concurrently with Science, Engineering Research Methods Part I

Co-requisite: Sci. & Eng. Part II Grade: 12

1 High School Credit; 2 College Credits (transferable to UVA, VATECH, ODU, VCU)

This course allows students to examine systems, the interaction of technology and society, ethics in a technological world, and the fundamentals of modeling while applying the engineering design process to areas of the designed world. Students will participate in hands-on projects in a laboratory setting as they communicate information through team-based presentations, proposals, and technical reports.

Students will learn the principles of orthographic projection and multiview drawings. Other topics include descriptive geometry with relationships of points, lines, and planes. Sectioning, dimensioning, and computer graphic techniques will be introduced.

8450

ENGINEERING, SCIENCE AND RESEARCH
(2 year program)

Prerequisites: Algebra I, Geometry (concurrently), Teacher Recommendation, Application

Co-requisite: Engineering Alg II / Math Analysis

Grades: 9/10 (students must enter the program in their 9th grade year)

3 Credits (Earth Science, Chemistry and Physics)

Students will complete three levels of science in two years in an integrated science course that focuses on research and projects that overlap the disciplines and create a richer understanding of the sciences. The major concepts of earth science, geology, oceanography, astronomy and meteorology will be studied through the chemistry and physics framework. Chemical bonding, atomic structure, reactions, and gas laws will become the fundamentals upon which earth science is brought into focus. The physical forces of nature and energy relationships, along with molecular kinetic theory, waves, gravity, motion, electricity and circuitry will allow the student to understand the sciences and the natural world in a holistic context. The investigative skills used by practicing scientists are heavily emphasized. Students will take the Earth Science and Chemistry SOL upon completion of this course. At the end of this course students will be prepared for the rigors of AP Chemistry or AP Physics.

Honors .......................... 4202 4203

SCIENCE & ENGINEERING
RESEARCH METHODS PART I

Prerequisite: Algebra II, Physics (concurrently), Teacher Recommendation, and Application

Co-requisite: Engineering Analysis (EGR120)

Grades: 11 1 Credit: (Science elective)

Students will further develop strong research and analysis skills through hands on experiments. Experiments will be in various science disciplines with a focus on data collection, validation and analysis. A project suitable for entry in the science fair will be required upon completing the 1st semester. The second semester will explore engineering principles and techniques through hands on experiments and research.

8454

SCIENCE & ENGINEERING
RESEARCH METHODS PART II

Prerequisite: Math 164, Calculus A/B, Qualifying COMPASS or SAT Score, Instructor Approval

Co-requisite: Engineering Analysis (EGR 115)

Grade: 12 1 Credit: (Science elective)

The MESA course is designed to allow students the flexibility to investigate scientific areas that interest them, with guidance that accentuates (stresses, emphasizes) essential skills needed to excel and succeed in a global environment: teamwork, communication, and creativity.

8452

Indicates PVCC Dual Enrollment

Dual Enrollment offers the student credit through Piedmont Virginia Community College (PVCC), as well as high school credit, for courses offered during the regular school day at the high school. Dual Enrollment/Credit courses taken in the core areas (English, history/social sciences, science and mathematics) are weighted as college/dual enrollment courses. Students taking Dual Enrollment courses follow the college add/drop policy and deadlines. See your school counselor for more information.

MESA is offered at AHS; however, students from MoHS and WAHS may apply for admission to this program. Students must enroll as full-time students and provide their own transportation to Albemarle High School. See your school counselor for more information.
ENGLISH
The English curriculum at Murray High School includes a multi-grade, thematic approach to courses. Each student must successfully complete four credits in English to meet state graduation requirements. Both the Albemarle County curriculum and the Virginia Standards of Learning are included in the English curriculum. The English curriculum emphasizes the continuous development and improvement of reading, writing, speaking, and listening skills. Students study major works of literature throughout the curriculum. The English curriculum courses are open to students at any grade level and students will receive the appropriate level of English credit. Students take the English Standards of Learning Test in the eleventh grade or at the completion of their 3rd English credit. English classes may include but are not limited to the following:

- Advanced Placement English Literature (College level course)
- English through Journalism
- American Studies (English 11 and United States History)
- English through Poetry
- English through The Short Story and Novel
- English through Leadership
- English through African American Literature
- English through Drama
- English through Multimedia

SOCIAL STUDIES
Students must earn three social studies credits for a standard diploma and four for an advanced studies diploma. All students must take one world history or geography class, the United States history class, and government. Advanced studies diploma students take two world history/geography classes. The social studies curriculum is based on the Virginia Standards of Learning and incorporates project-based and inquiry-based instruction. The social studies courses at Murray High School may include but are not limited to the following:

- World History To 1500*
- World History From 1500 To Present*
- World Geography*
- Virginia and United States History
- Virginia And United States Government: This course requires that each student complete ten hours of community service.
- Philosophy: (Social studies elective)

* (SOL test required)
MATHEMATICS

- **Study Skills Math**—Preparation for Algebra I
- **Algebra I**—Prerequisites: 8th grade Math and/or teacher recommendation
- **Geometry**—Prerequisite: Algebra I
- **Algebra II**—Prerequisite: Algebra I
- **Algebra Functions, And Data Analysis (AFDA)**
  Prerequisite: Algebra I
- **College Algebra III/Trigonometry**
  Prerequisite: Algebra I
- **Computer Math**—Prerequisite: Algebra I

* (SOL test required)

SCIENCE

Students must take three sciences in two disciplines for a standard diploma and four sciences in three disciplines for an advanced studies diploma. The science curriculum is based on the Virginia SOLs and includes a project-based, inquiry-based approach. The science courses at Murray High School include, but are not limited to, the following:

- **Earth Science**
- **Ecology**
- **Biology**
- **Oceanography**
- **Chemistry**
- **Physics**
- **Anatomy and Physiology**

* (SOL test required)

WORLD LANGUAGES

The main purpose in studying a world language is to understand and communicate with peoples of different nationalities and ethnic groups and to appreciate their contributions to the development of our own nation and culture. The world languages offered at Murray HS consist of the following:

- **Spanish I, II, and III**
  (There may be a workbook fee.)
- **Additional languages** are offered as computer-based instruction through the Virtual Virginia High School or other online resources.

HEALTH AND PHYSICAL EDUCATION

Classes are scheduled by semester so that the health and the physical education components occur and are graded separately. Students may elect to complete their two required semesters of health and/or physical education in the same year.

- **Physical Education I-II** (.5 credits each) involves the study of and participation in a variety of activities. These activities include physical fitness, strength training, recreational sports activities, yoga, Pilates, dance and movement, and other types of physical activities.
- **Health Education I** (.5 credits) Areas of study for Health Education I include the following: nutrition, diseases, first aid, and family life.
- **Health Education II** (.5 credits) Areas of study for Health Education II include the following: substance abuse, driver education, mental health, and family life.
- **Weight Lifting I-IV**
- **Physical Education Electives** (offered based on student interests and needs.)

DRIVER’S EDUCATION

- **Part I Classroom**
  During the student’s sophomore year, the 36-hour driver’s education classroom instruction component is provided as a part of the Health II curriculum. Students are cautioned not to be absent during this 6-week period, as excuses from parents and doctors do not exempt one from the DMV requirement for classroom instruction. (Students may get a learner’s permit from DMV at 15 ½ years of age.) Students should be scheduled for Behind-the-Wheel training at around 16 years of age. (Students may not get their license until they have had their permit for 9 months, and they are at least 16 years and 3 months old.) Murray High School does not offer Behind-the-Wheel training. Students are encouraged to sign up at their base school for this portion of driver’s education.

- **Part II Behind the Wheel**
  **Note:** Tuition is charged for this portion of the class. Students must have completed or at least begun the 36-hour classroom portion before beginning Behind-the-Wheel training. Driver’s Education Behind-the-Wheel will be offered at the three comprehensive high schools in the morning before school and in the afternoon after school throughout the school year. Please call one of the three comprehensive high schools to take Behind the Wheel.
FINE ARTS
These courses are designed to stimulate creativity; develop critical thinking skills; impart technical knowledge; and expand expressive skills through a wide variety of developmental experiences in the arts. Murray High School offers courses in the visual and musical arts:

- **Four levels of visual arts—Art 1 through Art 4** (Drawing, painting, multimedia crafts, and sculpture are included)

- **Music course offerings include Jazz History.** Other music classes are dependent on student interest.

Advancement from one level to the next is upon recommendation of the instructor. Fundamental skills are developed in a traditional academic approach to the arts. Creative assignments are designed to develop the personal style of the student.

Art and music classes charge a fee of $25.00.

ADDITIONAL COURSES

**INDEPENDENT STUDY**
Prerequisite: Teacher recommendation and proposal approval. Proposal information is available in the school counseling office.

1 Credit or .5 Credit per semester
Independent study provides the opportunity for students to investigate a topic of personal interest that is outside the scope of current course offerings. Mentors for independent study can be faculty from the school or community members. Students submit a proposal to be considered for independent study. The proposal should include a commitment from a mentor and a plan for carrying out the independent study.

**SPECIAL EDUCATION PROGRAMS**
The Special Education Program is provided for students who have been identified with a disability and found eligible for special education services. Assistance is provided using various levels of service including consultation/monitor, collaboration, and resource classes.

**CONSULTATION/MONITOR and COLLABORATION—Non-Credit**
The special education teacher offers support to students in mainstream classes through consultation and collaboration with regular education teachers, monitoring student performance, and direct assistance on an as-needed basis.

**RESOURCE—Non-Credit**
Direct assistance is available for a variety of student needs, including test-taking, homework and make-up work, project/research paper development, and organization and study skills.

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**RESOURCE—Non-Credit**
Direct assistance is available for a variety of student needs, including test-taking, homework and make-up work, project/research paper development, and organization and study skills.

**LEADERSHIP**
Leadership courses are offered as electives. These courses may focus on understanding personal leadership through the study of issues related to social justice or on school leadership issues. See page 56 for course descriptions.

**COURSES THROUGH PVCC**
Seniors are encouraged to take courses offered at Piedmont Virginia Community College (PVCC). A three-hour college class is equal to a .5 high school credit. COMPASS placement testing and assistance with PVCC registration are available at Murray in the guidance office.
As you plan your pathway, consider these opportunities for enrichment, learning support, and expanded career and continuing educational opportunities.

The programs and courses on the following pages are offered at one or more schools. The course or program description will provide details about school locations.

When you consider a course or a program, think about the college and career readiness skills that it offers beyond what seems to be the career pathway. For example, the Air Force Junior Reserve Officer Training Corps (AFJROTC) program offered at Monticello High School is a great set of courses designed to help you develop time management skills, team building abilities, and leadership. While many students enter the military as a career through JROTC, participation in this program does not incur military service.

The Partnership for 21st Century Skills has identified Learning and Thinking Skills for College and Career Readiness. As much as students need to learn academic content, they also need to know how to keep learning—and make effective and innovative use of what they know—throughout their lives. Learning and Thinking Skills are comprised of:

- Critical Thinking and Problem Solving Skills
- Communication Skills
- Creativity and Innovation Skills
- Collaboration Skills
- Information and Media Literacy Skills
- Contextual Learning Skills

AIR FORCE JUNIOR RESERVE OFFICER TRAINING CORPS

The objectives of AFJROTC are to educate and train high school cadets in citizenship; promote community service; instill responsibility, character, and self-discipline; and provide instruction in air and space fundamentals. AFROTC courses throughout the country are rotational and not sequential. There are no prerequisites to participate in this course and it is offered for grades 9-12.

Students earn 1 elective credit per year.

AIR FORCE, JR. ROTC I

Aerospace Science I; A Journey into Aviation History, is a course designed to acquaint the student with the historical development of flight and the role of the military in history. It contains concise overviews of the principles of flight to include basic aeronautics, aircraft motion and control, flight power, and rockets (40%).

Leadership Education I is comprised of lessons on the heritage, organization and traditions of the Air Force JROTC. Students are introduced to concepts dealing with individual self control, leadership, teamwork, community service, and how to be a good citizen (40%). Throughout the course, there are readings, videos, hands-on activities, and in-text and student workbook exercises to guide in the reinforcement of the materials.

AIR FORCE, JR. ROTC II

Aerospace Education II, The Science of Flight, is a science course designed to acquaint the student with the aerospace environment, the human requirements of flight, principles of aircraft flight, and principles of navigation. The course begins with a discussion of the atmosphere and weather. After developing an understanding of the environment, how that environment affects flight is introduced. Discussions include the forces of lift, drag, thrust, and weight. Students also learn basic navigation including map reading, course plotting, and the effects of wind. The portion on the Human Requirements of Flight is a survey course on human physiology. Discussed here are the human circulatory system, the effects of acceleration and deceleration, and protective equipment (40%).

The Leadership Education II curriculum stresses communication skills and cadet corps activities. The curriculum provides instruction on communicating effectively, understanding groups and teams, preparing for leadership, solving conflicts and problems, and personal development. Written reports and speeches compliment the academic materials. Cadet corps activities include holding positions of greater responsibility in the planning and execution of corps projects (40%).

Note: Currently AFJROTC is offered at MoHS; however, students from AHS and WAHS may apply for admission to this program. Students must enroll as full-time students and provide their own transportation to Monticello High School. See your school counselor for more information.
All cadets are awarded an AF Form 1256, Certificate of Completion of Training, for successful completion of 2 academic program years of AFJROTC. AFJROTC Certificate of Completion, will be awarded to all cadets for successful completion of 3 or 4 academic program years of AFJROTC.

AFJROTC graduates receive scholarship board emphasis.
3 or 4 years of AFJROTC = 1 year of ROTC college credit.

All branches of the military services offer the following for AFJROTC cadets: 20 set aside appointments for High School and College cadets.

AFJROTC graduates receive scholarship board emphasis.
3 or 4 years of AFJROTC = 1 year of ROTC college credit.

AIR FORCE, JR. ROTC III
Aerospace Education III, Exploration of Space, is a science course examines our Earth, the Moon and the planets, the latest advances in space technology, and continuing challenges of space and manned spaceflight. Issues that are critical to travel in the upper atmosphere such as orbits and trajectories, unmanned satellites, space probes, guidance and control systems are explained.

The manned spaceflight section covers major milestones in the endeavor to land on the moon, and to safely orbit humans and crafts in space for temporary and prolonged periods. It also covers the development of space stations, the Space Shuttle and its future, and international laws for the use of and travel in space (40%).

The Leadership Education III component provides information on applying for admission to college or to a vocational or technical school. Information on how to begin the job search is available to students who decide not to go to college or vocational school. Information about financial planning and how to save, invest, and spend money wisely, as well as how not to get caught in the credit trap. Students are informed about real life issues such as understanding contracts, leases, wills, warranties, legal notices, and personal bills. Citizen responsibilities such as registering to vote, jury duty, and draft registration will be helpful to. For those students who may be moving into an apartment of their own, information is presented on apartment shopping and grocery shopping skills. There is information on how to prepare a resumé and the importance of good interviewing skills. If there are students who are interested in a career in the military, in the federal government, or in the aerospace career, information is also provided for them (40%).

AIR FORCE, JR. ROTC DRILL ONLY CLASS
The Drill and Ceremonies course provides in-depth knowledge and realistic experience on military style drill and ceremonies. The Drill and Ceremonies course concentrates on the elements of military drill, and describes individual and group precision movements, procedures for saluting, drill, ceremonies, reviews, parades, and development of a command voice. Students are provided detailed instruction on ceremonial performances and protocol for civilian and military events and personally learn drill movements as an individual and within a group. Though each class will follow an established lesson plan, most of the work is hands-on. Students must be concurrently enrolled in an AFJROTC I-IV course to be eligible to participate in this Drill Only Class. All students satisfactorily participating in the Drill Only Class are eligible to compete on the AFJROTC Drill Team and Color Guard Team. (Year Long Course, 1 elective credit each year the course is taken, up to 4 credits)
AIR FORCE, JR. ROTC
ADVANCED DRILL ONLY CLASS

Prerequisite: Enrollment in AFJROTC I, II, III, or IV & 1 year of the AFJROTC Drill Only Class

Students will learn advanced military drill maneuvers, drill sequence development, individual training techniques, team building, leadership skills, and project management. Participants will be able to demonstrate the ability to use leadership and interpersonal skills to develop a cohesive team of twelve to fifteen students. Students will develop drill sequences, train students on drill maneuvers, and command a group of students through a drill sequence. Students enrolled in the Advanced Drill Only Class are eligible to participate on the AFJROTC competitive drill team.

SIMMER LEADERSHIP SCHOOL JUNIOR COURSE

Prerequisites: A student must have completed at least one year of AFJROTC and received an invitation from the AFJROTC Instructors.

.5 Credit

Held in-residence on a university campus, the course is for students who have demonstrated leadership ability and desire to become future leaders within AFJROTC. Content centers on leadership, management, personal standards, character education/ethics, education and careers, customs and courtesies, geography, physical training, drill and ceremonies, and survival skills. Students earn credit towards graduation. Students will receive 80 hours of instruction.

AIR FORCE JUNIOR ROTC-410

Prerequisites: A student must have completed at least two years in AFJROTC and have the written approval of the AFJROTC Instructors on their schedule request.

.5 Credit

This course is for students who are responsible for management of the AFJROTC Cadet Corps. It covers the same material as the other courses on a yearly rotating basis. Students apply what they have learned to lead and manage the AFJROTC program. Students also meet the requirements of AFJROTC 400 for wellness and drill and drill ceremonies.

HONORS AND TECHNOLOGY CAMPS

Prerequisites: Available to current AFJROTC cadet sophomores or juniors (Seniors are not eligible). Cadets must possess a 3.0 GPA (may be lower with strong recommendation letter), be enrolled or have completed college prep math and science courses, demonstrate leadership potential inside and outside of AFJROTC, be physically fit, have a good military image, be a US citizen, and be 15 years of age or older by 1 June of the year applying.

.5 Credit

The Honors and Technology Camps are 5 days in duration and are held at various times and locations throughout the United States from mid-June through the end of July. Several camps are offered and each has a specific specialty such as Aerospace Science, Medical applications, Naval applications, Army applications, and Marine Outdoor Odyssey camp.

Cadets who attend the Honors and Technology Camp must apply between Dec 1 and Jan 30.

SUMMER LEADERSHIP SCHOOL SENIOR COURSE

Prerequisites: A student must have completed at least two years of AFJROTC, the Summer Leadership School Junior Course and received an invitation from the AFJROTC Instructors.

.5 Credit

Similar to the Summer Leadership School Junior Course, the course is for student leaders who will lead the AFJROTC program. Students attend more in-depth classes than the junior course and assist instructors with operating the school as part of their leadership development. Students earn credit towards graduation. Students will receive 80 hours of instruction.

AVID: Advancement Via Individual Determination

AVID, Advancement Via Individual Determination, is a college preparatory support program for students wishing to enter a four-year college.

Students in AVID focus on college-level entry skills, academic survival skills, study skills, communication skills and PSAT/SAT preparation. The writing process is an integral component of the program. Tutorial assistance is provided within the AVID class to support and extend students’ efforts in rigorous course work.

Motivational activities, guest speakers, and field trips further enhance the course. Students must apply for the program through their school counselor.

AVID

Prerequisite: Desire to go to college

1 Credit Offered at MoHS, WAHS

AVID 9 and 10 are designed with a focus on organization and academic skills to help students transition into high school and to be successful in rigorous college preparatory classes.

AVID 11, for juniors, continues to build on academic skills, but the focus changes to college readiness. Students review career goals and begin to design education plans that involve college exploration, test preparation, and financial aid awareness.

AVID 12 begins the transition to post-secondary educational planning. Students focus on taking the SAT/ACT, exploring college, completing college and financial aid applications. Students are provided continued support as they engage in college preparatory courses. Students in AVID 12 must have completed a previous AVID class.

9th .......................... 9815
10th .......................... 9816
11th .......................... 9817
12th .......................... 9818

AVID TUTOR

Prerequisite: Two successful years of AVID

1 Credit Offered at MoHS, WAHS

AVID Tutor is an elective course for students wishing to be tutors in the AVID elective program. Students will tutor 5-7 AVID students twice per week during the tutorial portion of the AVID elective class and assist the teacher in providing academic and organizational skills to students. The tutors are expected to be able to help in at least three academic subjects in which they have been successful at the Honors or Advanced level. These would include but not be limited to world languages, language arts, mathematics, science, and social studies. Tutors will receive instruction and training using the inquiry method that encourages higher level thinking by students.

17
C-QUEST

Prerequisite: Teacher Recommendation
Grades: 11-12
.5 Credit
Offered at MoHS

C-QUEST is a privately funded program designed to support disadvantaged students who wish to attend competitive four-year colleges. Juniors and seniors enrolled in advanced courses and achieving at satisfactory levels are prepped for requisite standardized testing, escorted on numerous college visits and offered individualized assistance in identifying colleges and universities that suit their needs/interests. Completing applications, essays, recommendation requests, scholarship/financial aid paperwork and assisting students in communicating with schools of interest all take place during C-QUEST classes.

INDEPENDENT STUDY

INDEPENDENT STUDY

Prerequisite: Teacher recommendation and proposal approval. Proposal information is available in the school counseling office or online at www.k12albemarle.org/instruction/gifted
Grades: 9-12
1 credit or .5 credit per semester, Pass-Fail Grading

Independent study provides the opportunity for students to investigate a topic of personal interest that is outside the scope of current course offerings. Mentors for independent study can be faculty from the school or community members. Students may orient independent studies toward research, special experiences, or performance. Students submit a proposal to be considered for independent study. The proposal should include a commitment from a mentor and a plan for carrying out the independent study.

LAUNCH

LAUNCH (Language Arts United with Numbers Combined with History)

Prerequisite: Teacher recommendation
Grade: 9
2 elective credits
Offered at WAHS

LAUNCH is a program for rising 9th graders who have not passed either their reading or math SOL. LAUNCH will provide instructional support in the core areas of reading, math, social studies and science to assure success on the Virginia Standards of Learning (SOL) test. Additionally students will focus on the study skills necessary to pass all their classes. Recommendation from the 8th grade teacher is required for participation in this program.

MEDIATION TRAINING

MEDIATION TRAINING I

Grades: 9-12
.5 Credit

This course introduces the students to interpersonal and social conflict, and examines the causes and implications of conflict in personal relationships, in literature, and in history. Students learn to improve their communication skills, and develop strategies for resolving conflict through the use of the peer mediation model of conflict resolution. Students in the class are required to complete a minimum of six weeks training, beginning with simulated mediations before becoming eligible to conduct actual mediations. Much of the work in the class is group-oriented, with an emphasis on learning to manage the mediation process through practice simulations. This course is recommended for all students considering careers in law, business, or counseling, and for those who wish to improve their ability to deal with conflict in their lives.

MEDIATION II

Prerequisite: Mediation I and Teacher Recommendation
Grades: 10-12
1 Credit
Pass/Fail Grading

Students serve as peer mediators.

TEACHING FELLOWS PROGRAM

Grades: 11-12
1 Credit
Offered at WAHS

The Teaching Fellow program is designed for juniors and seniors who are interested in working with students with disabilities. Each teaching fellow will be responsible for assisting a special needs student in an elective class. Responsibilities include not only assisting, but direct teaching and modifying assignments, when needed, to fit the student’s needs in order to promote success or mastery. Teaching fellows become a mentor, teacher and friend.
Special Education

SPECIAL EDUCATION PROGRAMS

Special Education Diplomas
The Special Education Program is provided for students who have been identified with a disability and found eligible for special education services. Assistance is provided using various models of instruction: Consultation/ Monitor, Resource, Collaborative, Departmentalized, and Individual Education Program (IEP) diploma classes (Self-Contained) (see next column).

Special Diploma Options
In addition to the Advanced and Standard Diploma, students with disabilities who receive special education services have available to them an additional diploma option described below.

Modified Standard Diploma
The Modified Standard Diploma program is intended for certain students at the secondary level who have a disability and are unlikely to meet the credit requirements for a Standard Diploma. Eligibility and participation in the Modified Standard Diploma program are determined by the student’s Individualized Education Program (IEP) team including the student, where appropriate, at any point after the student’s eighth grade year. The school must secure the informed written consent of the parent/guardian and the student to choose this diploma program after review of the student’s academic history and the full disclosure of the student’s options. The student who chooses to pursue a Modified Standard Diploma shall also be allowed to pursue the Standard or Advanced Studies Diploma at any time throughout that student’s high school career. Students pursuing the Modified Standard Diploma must pass the 8th grade Standards of Learning tests in reading and mathematics. The student shall not be excluded from courses and tests required to earn a Standard or Advanced Studies Diploma. For details about the course credits required for a Modified Standard Diploma, see the Graduation Requirements section.

Special Education Course Delivery Models
Consultation/ Monitor
The Special Education Department offers support to students in mainstream classes through consultation with regular education teachers, monitoring of the student’s performance, and direct assistance on an as-needed basis.

Study Skills
Direct assistance is available for a variety of student needs including the following: test-taking, homework and make-up work, project/research paper development, and organization and study skills. This class is designed for students in credit-bearing classes.

Collaborative Classes—Credit
Regular and special education teachers work together to teach core subjects. Registration MUST note that a collaborative section is needed.

Departmentalized Model/ Self-Contained Core Classes—Credit
These classes are taught at the standard level by special education teachers. These classes are intended for students with significant levels of need such that they would not be successful in collaborative classes. In order for students to be enrolled in these departmentalized classes, need and placement must be documented through the IEP process. Small group and/or individualized instruction is provided in a setting where several content areas are being taught simultaneously. Students in these classes take the designated SOL tests, if appropriate.

Departmentalized Model/ Self-Contained Elective Classes—Credit
These classes are taught by special education teachers. These classes are intended for students with significant levels of need such that they would not be successful in collaborative classes. In order for students to be enrolled in these departmentalized classes, need and placement must be documented through the IEP process. Small group and/or individualized instruction is provided in a setting where several content areas are being taught simultaneously.

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COMMUNICATION MATTERS
Grades 9-12 1 credit
This course is designed to help students who have difficulty passing the Virginia English end-of-year Writing SOL test. Through extensive work on various grammar rules and terminology, students will understand how having a greater knowledge of the proper way to write helps them to communicate more clearly. Students will write extensively in this class. Through independent writing projects, students will learn how to apply their cognitive strengths in conjunction with various writing process strategies. Students will learn to use a writing process, including prewriting, drafting and editing, that helps them best communicate their ideas. Students will work independently a great deal in this class while the teacher gives students one-on-one instruction in specific areas of need.

BASIC COMPUTER SKILLS
1 credit
Students will learn basic keyboarding and introductory typing skills as well as proper typing technique, basic typing position, posture, practice key stroking, spacing, return, and other typing skills. Students will also learn basic computer and printer set up and how to use computer programs such as word processing, PowerPoint, and spreadsheets in order to gain skills needed to secure employment as members of a global community and economy.

MATH SKILLS
Prerequisite: Math 8
Grade: 9-10 1 Elective Credit
Offered at MoHS
This class is designed for students with special needs working towards a Modified Standard Diploma. The course addresses the objectives found in the numeric assessment including early algebra skills, basic geometry, statistics, probability and more. NOTE: This course does not count for the required math credit.

PERSONAL LIVING AND FINANCE
Grades 9 – 12 1 Credit – Elective
Personal Living and Finance gives instruction in those skills necessary to manage personal finances and make sound financial decisions. The objectives are to compute and understand taxes; prepare and balance a personal/family budget; manage debt, including retail and credit card debt; examine and compare various savings options; and identify consumer rights and responsibilities. This course serves as a math credit for the Modified Standard Diploma.

READING SKILLS
1 Credit Offered at MoHS
This course is offered for students whose reading ability is significantly below grade level. It is designed to develop fundamental reading skills. Course content will focus on word study, vocabulary development, reading comprehension, and fluency. This course is taken along with, and not in place of, English. Students should be placed in this class according to their individualized weaknesses as documented through the IEP process.

STUDY/ORGANIZATIONAL SKILLS
Grades 9-12 1 Elective Credit
Students are provided support in reading, writing, spelling, grammar, language, and vocabulary. They will investigate effective methods of studying in order to improve their academic performance. This course includes such topics as test-taking skills, test preparation, reports and note-taking skills, organizational skills, and time management. A percentage of class time is devoted to applying these skills to core subjects.

WRITING SKILLS
1 Credit Offered at MoHS
This course is offered for students whose writing skills are significantly below grade level. It is designed to develop fundamental writing skills. This course will focus on improving different types of writing and the writing process itself. This course is taken along with, and not in place of, English. Students should be placed in this course according to their individual growth areas as documented through their IEP process.
SPECIAL EDUCATION

SPECIAL (IEP) DIPLOMA/ SELF-CONTAINED FUNCTIONAL CLASSES
These classes are designed to assist students in improving and maintaining a foundation of basic skills and knowledge applicable to practical life experiences. In addition, a heavy emphasis is placed on providing students with vocational training and employment skills. All or some of the following courses are taken to fulfill the requirements of the IEP diploma. Only special education students may earn elective credit for these courses.

COMMUNITY LIFE SKILLS
Grades 10-12  1 Elective Credit
Students are taken on daily trips into the community to practice essential life skills that will be needed after high school. This model permits individuals to practice academic skills in a variety of community settings. Students are exposed to community services available after exiting high school and are trained to use alternative methods of transportation.

EDUCATION FOR EMPLOYMENT I
Grades 9-12  1 Elective Credit
Students explore reasons for working, examine their own vocational interests, and the role that attitudes and behaviors play in determining success or failure on the job. Students become familiar with the types of jobs available in the community and the skills needed to perform them. Filling out job applications, learning interview techniques, and locating job openings are covered.

EDUCATION FOR EMPLOYMENT II
Grades 9-12  1 Elective Credit
This course is a continuation of Education For Employment I. It is designed to support students in jobs in the community. Increased emphasis is placed on the skills needed to maintain successful job performance and to improving vocational opportunities.

FUNCTIONAL ENGLISH I-IV
Grades 9-12  1 Elective Credit
This course emphasizes language arts skills in reading, writing, and listening related to practical life and vocational experiences.

FUNCTIONAL MATH I-IV
Grades 9-12  1 Elective Credit
I-III offered at MoHS
This course focuses on the basic operations of math in a consumer and life-skills setting. Review and remediation is provided in basic skills while also stressing earning money, budgeting, banking, shopping for food and clothing, buying and maintaining an automobile, paying rent and/or maintaining a home, traveling, paying taxes and insurance, and preparing for a career.

HEALTH/RECREATION I-II
Grades 9-12  1 Elective Credit
This course focuses on health related issues such as mental health, first aid, tobacco, alcohol, and drugs, diseases, family life, exercise, and leisure.

LEGAL ISSUES
Grades 9-12  1 Elective Credit
This course provides students with the practical legal background one needs to function as an adult. It enables the young adult to foresee and avoid legal problems and to obtain professional help when necessary. Topics studied include contracts, property, marriage, wills, civil and criminal procedure, and consumer protection.

PRACTICAL SCIENCE I
Grades 9-12  1 Elective Credit
Offered at MoHS and WAHS
This class explores basic science topics in the areas of earth science, biology, and physics as they relate to the students. Areas of focus are Earth Science and Physical Science.

PRACTICAL SCIENCE II
Grades 9-12  1 Elective Credit
Offered at MoHS and WAHS
This class explores basic topics in science as related to students. Areas of focus are biology and ecology.

SOCIAL STUDIES
Grades 9-12  1 Elective Credit
This class focuses on local and national issues in such a way as to prepare students to be positive and productive members of their communities. History, geography, and government are considered in combination.

WORK STUDY
Grades 9-12  1 Elective Credit Pass/Fail
Prerequisite: Education for Employment or taken concurrently with teacher permission.
This program provides vocational training and transitional assistance. Vocational counseling, help with job training/placement, job monitoring and follow-up are provided for students identified as appropriate through the IEP process.

COMMUNITY BASED INSTRUCTION PROGRAM (CBIP)
Non-Credit
This program is designed for students with significant disabilities in need of intensive life-skills instruction provided in a self-contained setting. The focus is on functional academics, life skills, leisure skills, vocational skills, and social skills both at home and in the community. Instruction within this program may be supplemented with choices made from other areas of the program of studies; these choices should be related to the student interests, and as deemed appropriate through the IEP process. Prerequisite: This program receive a Special (IEP) diploma. Enrollment in the Post-High Program is a possible extension of the CBIP program.
Course Descriptions

Career and Technical Education (CTE)
Albemarle County offers Career and Technical Education programs that prepare students to succeed in a world that is increasingly focused on highly skilled jobs. Students participate in a rigorous and relevant career and technical education program which leads to academic success and employment in a local and global economy.

Career and Technology Education (CTE) courses and career pathway programs lead to great opportunities across a variety of career studies and provide the sequential electives required for the standard diplomas.

Through the Virginia Department of Education’s High School Industry Credentialing initiative, students can earn a credential or license by passing an approved exam. Students who successfully complete a career and technical education program and pass the accompanying state-approved credentialing exam may earn two verified credits to fulfill a graduation requirement. These students have a higher earning potential and ultimately will be more marketable.

Career Technical Education Graduation Requirement can be fulfilled with courses described in this section. The following pages list the courses available by program area. For additional information on course offerings, consult your school counselor.

CTE Sequential Electives
Students qualifying for a Standard Diploma or a Modified Standard Diploma must successfully complete two elective courses that are sequential (courses that provide a foundation for further education, training, or preparation for employment). A course may satisfy the requirement for fine arts or career technical education and for sequential electives. Sequential elective courses may be taken in consecutive years or two years of high school.

BUSINESS AND INFORMATION TECHNOLOGY

<table>
<thead>
<tr>
<th>Diploma with some training</th>
<th>Certification or Associate degree</th>
<th>College degree plus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer Service Representative</td>
<td>Office Manager</td>
<td>Human Resources Specialist</td>
</tr>
<tr>
<td>Bookkeeper, Fiscal Tech.</td>
<td>Property Manager</td>
<td>Management Analyst</td>
</tr>
<tr>
<td>Medical Administrative Specialist</td>
<td>Administrative Assistant, Secretary</td>
<td>Chief Executive Officer (CEO)</td>
</tr>
</tbody>
</table>

Have you ever thought of starting your own business?
Do you like working in an office and using computers?
Do you enjoy dealing with the public?
Do you communicate effectively?

These courses fulfill Fine Art/Career Technical Education graduation requirement
Unless otherwise indicated, all courses are offered at all high schools.

BUSINESS MANAGEMENT
Grades 9-12 1 Credit
Offered at AHS, MoHS

This is a foundation course for students to explore the roles of business and marketing in the free enterprise system and the global economy. Students receive instruction in developing communication and interpersonal skills, making consumer choices, and developing employability skills.

To be a CTE Completer and fulfill your sequential elective requirement (2 credits), a student may take Computer Information Systems I or II, Design Multimedia and Web Technologies I or II, Finance or Principles of Business and Marketing.

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COMPUTER INFORMATION SYSTEMS I
Grades 9 – 12 1 Credit
(also eligible for Business Co-Op credit)

Students apply problem-solving skills to real-life situations through word processing, spreadsheet, database, multimedia presentation software, and integrated software activities. Students work individually and in groups to explore computer concepts, operating systems, networks and telecommunications, and emerging technologies.

Industry Certification/Credentialing Exam may be required at the end of this course.

To be a CTE Completer and fulfill your sequential elective requirement (2 credits), a student may take Computer Information Systems II, Design Multimedia and Web Technologies I or II, Finance, Information Technology Fundamentals, Office Specialist, Principles of Business and Marketing or Computer Science I or II, Business Management.

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These courses fulfill Fine Art/Career Technical Education graduation requirement
Unless otherwise indicated, all courses are offered at all high schools.
**COMPUTER INFORMATION SYSTEMS II**

**Prerequisite:** Computer Information Systems I  
**Grades 10-12** 1 Credit (also eligible for Business Co-Op credit)

Students apply problem-solving skills to real-life situations through advanced integrated software applications, including printed, electronic, and Web publications. Students work individually and in groups to explore advanced computer maintenance concepts, logic procedures, and object-oriented programming to develop an advanced level program application in one or more programming languages. Programming languages may include Visual Basic.Net, Java, Python, C#, and C++. In addition, HTML, JavaScript, or other industry-recognized programming language may be integrated in advanced Web page development or for use in industry certification programs.

Industry Certification/Credentialing Exam is required at the end of this course.
To be a CTE Completer and fulfill your sequential elective requirement (2 credits), a student may take Business Management, Computer Information Systems I, Design Multimedia and Web Technologies I or II, Finance, Information Technology Fundamentals, Office Specialist, Principles of Business and Marketing or Computer Science I or II.

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**COMPUTER SCIENCE I**

**Prerequisite:** Algebra I  
**Grades 9 – 12** 1 Credit

Students explore computer concepts, use logic procedures, and implement programming procedures using one or more programming languages, such as Visual Basic. Net, Java, Python, C #, and C++. In addition, HTML or JavaScript may be used to create dynamic Web pages.

Industry Certification/Credentialing Exam may be required at the end of this course.
To be a CTE Completer and fulfill your sequential elective requirement (2 credits), a student may take Computer Science II, Computer Information Systems I or II, Design Multimedia and Web Technologies I or II, or Information Technologies Fundamentals.

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**COMPUTER SCIENCE II**

**Prerequisite:** Computer Science I  
**Grades 10 – 12** 1 Credit

Students use their knowledge of computer concepts, logic procedures, and object-oriented programming to develop an advanced level program application in one or more programming languages. Programming languages may include Visual Basic.Net, Java, Python, C#, and C++. In addition, HTML, JavaScript, or other industry-recognized programming language may be integrated in advanced Web page development or for use in industry certification programs.

Industry Certification/Credentialing Exam is required at the end of this course.
To be a CTE Completer and fulfill your sequential elective requirement (2 credits), a student may take Computer Science I, Computer Information Systems I or II, Design Multimedia and Web Technologies I or II, or Information Technologies Fundamentals.

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**DESIGN, MULTIMEDIA, AND WEB TECHNOLOGIES I**

**Grades 9-12** 1 Credit

Design, Multimedia, and Web Technologies is part one of a two year sequence designed to develop students’ skills in Graphic, Print, and Web Design. Students will develop proficiency in using desktop publishing software to create a variety of printed and electronic publications such as personal resumes, brochures, and newsletters. Students will create advanced Web sites (individually and in teams) using HTML code and/or Web creation software such as Dreamweaver. In addition students will use graphic design software Fireworks and animation software Flash to populate their web pages with eye-catching graphics and animations.

Industry Certification/Credentialing Exam is required at the end of this course.
To be a CTE Completer and fulfill your sequential elective requirement (2 credits), a student may take one of these classes—Design Multimedia and Web Technologies II, Computer Information Systems I or II, Information Technologies Fundamentals, Principles of Business and Marketing, Computer Science I, or Computer Science II.

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**DESIGN, MULTIMEDIA, AND WEB TECHNOLOGIES II**

**Prerequisite:** Design, Multimedia and Web Technologies I  
**Grades 10-12** 1 Credit

This course is for students interested in the programs and languages involved in designing sites for online distribution. Students will have the opportunity to investigate careers in various web design fields. Students will create sites through code and web publishing software. Students will use software to create custom elements for their sites and to add animation to those elements. Students will be using the following methods to create sites, HTML programming, CSS, JavaScript, XML, Dreamweaver, Fireworks, and Flash. Students will create advanced webpage mirrored after real life examples and projects using the above mentioned programming and software mediums. The focus of this course is to instruct students on advanced techniques related to web design. Students will learn not only the initial steps taken in creating a site, but the upkeep involved as well. Students will also explore ethical concerns, “cyberethics”, involved when creating a site. Students will be required to present many of their projects, which will enhance communication skills that will enhance their employment or further education.

Industry Certification/Credentialing Exam is required at the end of this course.
To be a CTE Completer and fulfill your sequential elective requirement (2 credits), a student may take one of these classes—Design Multimedia and Web Technologies II, Computer Information Systems I or II, Information Technologies Fundamentals, Principles of Business and Marketing, Computer Science I, or Computer Science II.

\[ \text{6200} \]
INFORMATION TECHNOLOGY FUNDAMENTALS
Grades 9-12 1 Credit
Offered at WAHS
The focus of the course is on introducing skills related to information technology basics, internet fundamentals, network systems, computer maintenance/upgrading/troubleshooting, computer applications, programming, graphics, web page design, and interactive media. Students explore ethical issues related to computer and Internet technology and develop teamwork and communication skills that enhance their employability.
To be a CTE Completer and fulfill your sequential elective requirement (2 credits), a student may take one of these classes—Design Multimedia and Web Technologies II, Computer Information Systems I or II, Information Technologies Fundamentals, Office Administration, Computer Science I or II.

MUSIC INDUSTRY TECHNOLOGY
Grades 11, 12 2 Credits
Offered at CATEC
Working in conjunction with the Music Resource Center, this course is designed to provide in-depth instruction on music industry elements such as composition, recording systems, mixing and processing techniques, and live sound. Students will also be exposed to musical theory, computer use, and instrument understanding and function. Projects will include recording of instruments and arranging recording tracks on an album, including, but not limited to, the arrangement of multiple microphones, use of synthesizers, applying compression and equalization, and amplifying sound. Students will incorporate advertising and marketing aspects in these projects and study the possible careers available in the field.

OFFICE SPECIALIST II
Prerequisite: Office Specialist I
Grades 10–12 1 Credit
Offered at MoHS
The combined second and third year course continues the development of skills from the first year of the Office Specialists sequence. Students learn to apply these skills by delivering office and business related services such as copying, binding, and creating personalized products. Students completing the Office Specialists sequence will have developed the skills necessary to be a competitive applicant for jobs set in an office environment. Industry Certification/Credentialing Exam may be required at the end of this course.

OFFICE SPECIALIST III
Prerequisite: Office Specialist II
Grades 11-12 1 Credit
Offered at MoHS
The combined second and third year course continues the development of skills from the first year of the Office Specialists sequence. Students learn to apply these skills by delivering office and business related services such as copying, binding, and creating personalized products. Students completing the Office Specialists sequence will have developed the skills necessary to be a competitive applicant for jobs set in an office environment. Students may also complete Office Specialist III through a supervised employment arrangement with local businesses, students choosing the Office Specialist III work a minimum average of 15 hours on the job each week. Assistance is offered in locating suitable work situations, with emphasis placed on the selection of a job which provides training to help the student reach his/her career goal. Industry Certification/Credentialing Exam may be required at the end of this course.
MARKETING

Do you enjoy providing a service to others?
Can you write a good advertisement?
Do you like helping people find solutions to their problems?
Are you good at persuading people to make purchases and convincing people to do things?
Are you a creative person?

These courses fulfill Fine Art/Career Technical Education graduation requirement
Unless otherwise indicated, all courses are offered at all high schools.

<table>
<thead>
<tr>
<th>Diploma With Some Training</th>
<th>Certification Or Associate Degree</th>
<th>College Degree Plus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicle Sales</td>
<td>Real Estate Sales Agent</td>
<td>Sales Engineer, Buyer</td>
</tr>
<tr>
<td>Sales Associate/Assistant Manager</td>
<td>Sales Representative, Store/Regional Manager</td>
<td>Marketing Manager, Public Relations Representative</td>
</tr>
<tr>
<td>Telemarketer</td>
<td>Auctioneer, Merchandise Display Artist</td>
<td>Market Research Analyst</td>
</tr>
</tbody>
</table>

PRINCIPLES OF BUSINESS AND MARKETING

Grades 9-10 1 Credit
Students discover the roles of business and marketing in the free enterprise system and the global economy. Basic financial concepts of banking, insurance, credit, inheritance, taxation, and investments are investigated to provide a strong background as students prepare to make sound decisions as consumers, wage earners, and citizens. The real-world impact of technology, effective communication, and interpersonal skills is evident throughout the course. This course also supports career development skills and explores career options.

To be a CTE Completer and fulfill your sequential elective requirement (2 credits), a student may take one of the following: Marketing I, Marketing II, Sports Entertainment and Recreation Marketing I and/or II.

MARKETING I (co-op available)
Grades 10-12 1 Credit (2 if taking Marketing Cooperative Education)
Students examine activities in marketing and business important for success in marketing employment and postsecondary education. Students will learn how products are developed, branded, and sold to businesses and consumers. Students will analyze industry trends and gain hands-on experience in the marketing of goods, services, and ideas. Topics will include professionalism in the workplace, product planning and position, promotion, pricing, selling, economic issues, and the impact of technology on the marketplace.

This course reinforces mathematics, science, English, and history/social science Standards of Learning (SOLs). Computer/technology applications and DECA activities enhance the course. DECA, the co-curricular student organization, offers opportunities in leadership, community, and competitive events. The cooperative education method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year.

To be a CTE Completer and fulfill your sequential elective requirement (2 credits), a student must take Marketing II.

STUDENT ORGANIZATIONS that Focus on CTE

There are several co-curricular student organizations available to all students taking courses in Career and Technical Education. These organizations are designed to complement, supplement, and strengthen the instructional program. Students participate in local, state and national activities, and in competitive events. Students learn to work as part of a team, develop leadership ability, problem solving skills, and skills for life. Students in the Career and Technical Education programs are expected to take advantage of the opportunities available to them through these student organizations.

These organizations include:
- FBLA—Future Business Leaders of America;
- FCCLA—Family, Career and Community Leaders of America;
- DECA—Distributive Education Clubs of America;
- TSA—Technology Students Association;
- HOSA—Health Occupation Students of America; and
- SkillsUSA
MARKETING II (co-op available)

Prerequisite: Successful completion of Marketing I

Grades 11-12 1 Credit (2 if taking Marketing Cooperative Education)

Student build knowledge gained in a prior marketing course. Students participate in supervisory management activities focusing on the marketing mix, purchasing, financing, human resources, global marketing, pricing, and emerging technologies. Students will prepare for advancement in marketing careers and postsecondary education. This course reinforces mathematics, science, English, and history/social science Standards of Learning (SOLs). Computer/technology applications and DECA activities enhance the course. DECA, the co-curricular student organization, offers opportunities in leadership, community, and competitive events. The cooperative education method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year. Industry Certification/Credentialing Exam is required for all students at the end of this course.

To be a CTE Completer and fulfill your sequential elective requirement (2 credits), a student must take Marketing I.

SPORTS, ENTERTAINMENT, AND RECREATION MARKETING

(co-op available)

Grade 10-12 1 Credit

Grade 11-12 1 Credit

This introductory course helps students develop a through understanding of fundamental marketing concepts and theories as they relate to the sports, entertainment, and recreation industries. Students will investigate the components of branding, sponsorship and endorsements, as well as promotion plans needed for sports, entertainment and recreation events. The course also supports career development skills and explores career options. Academic skills (mathematics, science, English, and history/social science) related to the content are a part of this course. The cooperative education method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year. Industry Certification/Credentialing Exam may be required at the end of this course.

To be a CTE Completer and fulfill your sequential elective requirement (2 credits), a student may take Sports, Entertainment, and Recreation Marketing, or Marketing I.

To be a CTE Completer and fulfill your sequential elective requirement (2 credits), a student may take Sports, Entertainment, and Recreation Marketing, or Marketing I.

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Interested in Teaching? See the Special Programs Section for information on the Teaching Fellows Program offered at WAHS for Juniors and Seniors interested in working with students with disabilities.

**SMART MONEY MANAGEMENT/ECONOMICS**
Grades 9-12 1 Credit
Students learn how to navigate the financial decisions they must face and to make informed decisions related to career exploration, budgeting, banking, credit, insurance, spending, taxes, saving, investing, buying/leasing a vehicle, living independently, and inheritance. Development of financial literacy skills and an understanding of economic principles will provide the basis for responsible citizenship and career success. Students will also explore entrepreneurship as they learn the skills needed to plan, organize, manage, and finance a small business.
* Graduation requirement for students entering the 9th grade in 2010.

**JUNIOR/SENIOR INTERNSHIP PROGRAM**
Grade 11-12 1 Credit
The Junior/Senior Internship program is designed to support a student's long-range education and career goals. This program provides the opportunity to experience “first-hand” a particular career or career field by interning with professionals in the community. Students enhance their academic and technical skills as well as become more informed about certain career field expectations and requirements before entering college and/or the workforce. Typical internships can be developed in areas of medicine, architecture, law, television production, law enforcement, journalism, finance, accounting, veterinary medicine, business management, computer technology, engineering, and many more. All students complete the application packet. See your high school counselor for more information.

**VIRGINIA TEACHERS FOR TOMORROW I, II**
SDV Orientation To Teaching As A Profession
Grades 11-12 Credit: 1 credit (3 college credits)
This course introduces students to a career in teaching and education by allowing students to experience the components of the learner, the school environment, and the classroom teaching environment.
Virginia Teachers for Tomorrow aims to attract high school junior and seniors to the field of education through participation in a rigorous, world-class curriculum and field experiences related to teaching. Students will explore the exciting profession of teaching through a variety of classroom experiences and by teaching lessons they create. In the first part of the course, future teachers will learn the fundamentals of education theory including learning styles, needs, growth, and development. The second portion of the course is devoted to preparing and teaching lessons in local schools.
This course offers a unique opportunity for high school students to gain authentic experience in a profession. As part of that professional experience, students will be required to create a personal portfolio. In the portfolio, students reflect on and synthesize their learning by assembling a representative sample of their projects, observation forms, pupil assignments, self-assessments, and other evidence of their success in examining teaching as a profession. Students will earn 3 college credits that will transfer to the two year Associate’s Degree at PVCC. Transfer of credit to a four-year college/university cannot be guaranteed.
This state program requires students to submit an application, recommendations and meet specific criteria. See your school counselor or Teacher for Tomorrow instructor for more information.

**INTERNSHIPS**
Typical internships can be developed in areas of:
- medicine
- architecture
- law
- television production
- law enforcement
- journalism
- finance
- accounting
- veterinary medicine
- business management
- computer technology
- engineering, and many more
FAMILY AND CONSUMER SCIENCE

EARLY CHILDHOOD DEVELOPMENT
Grades 9–12 .5 Credit
Offered at AHS

This course focuses on the principles of child growth and development. Students use these principles to develop learning experiences for children in a safe and healthy environment. Careers related to the child care industry are emphasized.

To be a CTE Completer and fulfill your sequential elective requirement (2 credits), a student may take Introduction to Culinary Arts, or Life Management I.

Industry Certification/Credentialing Exam may be required at the end of this course.

Fee: $5

INTRODUCTION TO CULINARY ARTS
Grades 9–12 .5 Credit
Offered at MoHS

This course focuses on careers in food service industry. Units of study will include different types of food preparation, food science, food safety and sanitation, nutrition, service styles and etiquette, foods from around the world, and how culture and environment influence foods eaten. A student will have taken Life Management I and II to make this course a sequential elective.

Industry Certification/Credentialing Exam may be required at the end of this course.

Fee $15

INTERNATIONAL FOODS
Grades 9–12 .5 Credit
Offered at AHS, MoHS

In addition to teaching food safety, sanitation, nutrition, and basic food preparation skills, the class identifies origins of foods, explains how climate, geography, and culture affect cuisine, and prepares foods from six main regions of the world. These regions include the United States and Canada, Latin America, Europe, Mediterranean Countries, Middle East, Africa, and Asia.

To be a CTE Completer and fulfill your sequential elective requirement (2 credits), a student may take Life Management I and II and Introduction to Culinary Arts.

Industry Certification/Credentialing Exam may be required at the end of this course.

Fee: $15

FASHION DESIGN
Grades 11-12 .5 Credit
Offered at AHS, MoHS

Students prepare for a career in the fashion industry by learning to use basic construction. Focus is on the Textile Industry and how to use principles of color and design to produce original textiles. This course explores the individual careers within the fashion design, manufacturing, and merchandising industry.

To be a CTE Completer and fulfill your sequential elective requirement (2 credits), a student may take Life Management I and II.

Industry Certification/Credentialing Exam may be required at the end of this course.

Fee: $15 for small sewing equipment. Students will purchase their own fabric, patterns, and notions.

INTRODUCTION TO INTERIOR DESIGN AND HOUSING
Grades 11-12 .5 Credit
Offered at AHS, MoHS

This course focuses on identifying and exploring the individual careers in all areas of housing and interior environment, career options in residential and commercial interior design. The individual characteristics and skills necessary for career success in the industry of housing and interior environments are investigated. Units of study include investigation of careers in construction, real estate, home design, and home care and maintenance. Math, science, and communication skills are emphasized throughout this course.

Industry Certification/Credentialing Exam may be required at the end of this course.

To be a CTE Completer and fulfill your sequential elective requirement (2 credits), a student may take a combination of Life Management I, International Foods, or Early Childhood Development.

Fee: $5 per semester. All project materials will be purchased by the student.

These courses fulfill the Fine Art/Career Technical Education graduation requirement. Unless otherwise indicated, all courses are offered at all high schools.
LIFE MANAGEMENT I
Grades 9–12 1 Credit
Offered at AHS, MoHS

This introductory course explores managing resources to achieve individual goals, making informed consumer choices, personal finance, creating and maintaining a living environment that supports the well-being of individuals, living in a global environment, making decisions related to nutrition, clothing, and housing, and managing a household. Several food labs and opportunities for sewing or clothing repair are included as appropriate to content. The course reinforces basic skills of math, science, and communication when appropriate in the content.

To be a CTE Completer and fulfill your sequential elective requirement (2 credits), a student may take Life Management II and/or Introduction to Culinary Arts, International Foods. Industry Certification/Credentialing Exam may be required at the end of this course.

Fee: $30 per year

LIFE MANAGEMENT II
Prerequisite: Life Management I
Grades 10–12 1 Credit
Offered at AHS

In this advanced course, students continue exploring managing resources to achieve individual goals, making informed consumer choices, creating and maintaining a living environment that supports the well-being of individuals, living in a global environment, making decisions related to nutrition, clothing, and housing, and managing a household. Several food labs and opportunities for sewing or clothing repair are included as appropriate to content. The course reinforces basic skills of math, science, and communication when appropriate in the content.

To be a CTE Completer and fulfill your sequential elective requirement (2 credits), a student will have taken Life Management I. Industry Certification/Credentialing Exam may be required at the end of this course.

Fee: $30 per year

DENTAL ASSISTANT
1 Year Program
Prerequisites: C or better in Biology
Grades: 11, 12 2–3 Elective Credits*
Offered at CATEC

This one-year program prepares students to perform all the tasks of a Dental Assistant. These tasks include exposing, processing, and mounting x-rays, preparing materials for various procedures, including impressions, removing sutures, placing topical anesthetics, and making diagnostic study models for alginate impressions.

Dental Assistant students also study maintenance of patient records, sterilization, disinfectant of instruments and equipment, preparation of patients for dental treatment, application of topical anesthetics, arrangement of dental instruments, materials and medications on chair side trays, use of oral evaluation system, mixtures and preparation procedures of materials such as fillings and cements, laboratory procedures such as pouring/trimming/polishing cast, post op, and oral hygiene instructions for patients. This program will give students a foundation to pursue a Dental Hygienist post-secondary degree through a two- or four-year college.

Certifications: Dental Assisting Assessment (NOCTI), Radiation Health and Safety, Infection Control

*2 elective credits taken in conjunction with a CATEC English class.

Verified credits: 1 – 2 (completer, certification)

EMERGENCY MEDICAL TECHNICIAN & FIREFIGHTING
1 Year Program
Firefighting 1 Elective Credits
EMT 1 Elective Credits
Grades: 11, 12 Offered at CATEC

Prerequisites: Must be 16 or older by start of school & 11th or 12th grade academically. Cumulative GPA 2.0 recommended. C in Biology (EMT). Other requirements as assigned by the Virginia Office of Emergency Medical Services.

First semester instruction includes fire department organization, use of various equipment, methods of entry and rescue, salvage practices and equipment, and fire and arson inspection and investigation techniques. Supervised internships are provided with fire and rescue managed by the teacher. The focus of the second semester focuses on the role and responsibilities of emergency rescue workers, basic medical terminology, and health care skills that include first aid; cardiopulmonary resuscitation; aseptic technique; and related anatomy, physiology, and disease knowledge. Course requires strenuous physical activity & occasional exposure to smoke-filled environments.

Class will run from 9:25—11:00 am Mon–Fri. Students can elect to take an English class at 11:00 am if they desire and earn 1 additional credit. Students not taking an English class at 11:00 am may return to their home school (must provide your own transportation).

Certifications: EMT Basic, Firefighter I
Verified Credits: 1–2 (certification, completer)
Fees: $55 for uniform and shoes and $27.50 for a workbook. $25 for SkillsUSA due (optional).

Firefighting: 8705
EMT: 8334

HEALTH AND MEDICAL SCIENCE

<table>
<thead>
<tr>
<th>Diploma with some training</th>
<th>Certification or Associate degree</th>
<th>College degree plus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dental Assistant</td>
<td>Dental Hygienist</td>
<td>Dentist</td>
</tr>
<tr>
<td>Home Health Aide, Nurse Aide</td>
<td>LPN, Registered Nurse, EMT</td>
<td>Physician</td>
</tr>
<tr>
<td>Most careers in Health Science require certification or college degrees</td>
<td>Surgical Technician, Biotechnology Technician</td>
<td>Radiation Therapist</td>
</tr>
<tr>
<td>Fitness Trainer, Physical/Occupational Therapy Assistant</td>
<td>Physical/Occupational Therapist, Athletic Trainer</td>
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</tr>
</tbody>
</table>

Pathways to Your Future—Guide to High School Credit Courses 29
A Career and Technical Education Completer (CTE Completer) is a student who completes a CTE concentration. A concentration is a coherent sequence of courses (courses totaling 2 credits) completed by a student in a specific career area or specialization and meets all high school graduation or GED requirements.

HEALTH AND MEDICAL SCIENCES I
Prerequisites: Sciences at grade level or above
Grades 9-12 1 Credit
Offered at MoHS, AHS
Health and Medical Science I is a survey course covering healthcare and the healthcare system. Focus on: history, structure, services, payment systems, contemporary issues and jobs and career possibilities within this system. Students are supported in understanding their interests and strengths with a goal of matching these to a particular health job/career.
Industry Certification/Credentialing Exam may be required at the end of this course.
To be a CTE Completer and fulfill your sequential elective requirement (2 credits), a student must take Health and Medical Sciences II.

-------- 8302

HEALTH AND MEDICAL SCIENCES II
Prerequisites: Sciences at grade level or above, Health & Medical Services I
Grades: 10-12 1 Credit
Offered at MoHS, AHS
A continuation of H&MS I with a focus on anatomy and physiology, common health alterations, laboratory data and interpretation, testing modalities and their utility in healthcare. Further investigation, delineation and clarification of students’ career interests with a mapping of steps to achieve their goals.
Industry Certification/Credentialing Exam may be required at the end of this course.
To be a CTE Completer and fulfill your sequential elective requirement (2 credits), a student must have taken Health and Medical Sciences I.

-------- 8303

PHARMACY TECHNICIAN
1 Year Program
Prerequisites: C or better in Biology
Grades: 11, 12 2-3 Elective Credits
Offered at CATEC
This one-year program will prepare students to perform all the tasks of a Pharmacy Technician. These tasks include assisting the licensed Pharmacist with serving patients, and ordering, stocking, and packaging prescription and over-the-counter medications. Pharmacy Tech students also study safety procedures, medication and inventory control, maintaining records, preparing labels, and processing insurance claims.
This program can prepare you to successfully complete the Certified Pharmacy Technician (CPhT) examination.
Certifications: Virginia Pharmacy Technician
Verified Credits: 1-2 (certification, completer)

-------- 8305

NURSE AIDE
1 Year Program
Prerequisites: C or better in Biology. Ability to work and socially interact with people in a public environment.
Grades: 11, 12 3 Elective Credits
Offered at CATEC
This course emphasizes study of nursing occupations, body systems and disorders, basic nursing skills, study of human growth and development, first aid, nutrition, simple body structure, medical terminology, microbes and disease, vital signs, and patient care. Clinical experience provided in nursing homes and hospitals. Community service outreach projects are required and organized by students.
Certifications: Certified Nursing Assistant (I)
Verified Credits: 1-2 (certification, completer)
College Credits: NA
Fees: $80 for a uniform, $30 HOSA dues, lab kit, Mantoux testing and CPR/First Aid training.
Nurse Aid I 8360
Nurse Aid II 8362

-------- 8360

-------- 8362
**TECHNICAL DRAWING**

Grades 9-12 1 Credit

Technical Drawing is an introductory course without a prerequisite. The purpose is to familiarize a student with various drafting practices, using the drawing board and a Computer-Aided-Drafting (CAD) system. Emphasis is placed on interpretation and use of industrial prints, handbooks, and other resource materials as they adhere to established standards of technical drawing. The course covers the important aspects of the application of drafting principles of typical engineering drawings and design problems.

To be a CTE Completer and fulfill your sequential elective requirement (2 credits), a student may take Architectural Drawing or Engineering Drawing.

Fee: $20

................................. 8435

**ARCHITECTURAL DRAWING**

**ARCHITECTURAL DRAWING ARC 121**

**Architectural Drafting I**

Prerequisite: Technical Drawing, COMPASS Test and application

Grades 10-12 1 Credit (3 College Credits)

Students learn more about the principles of architecture and increase understanding of drafting practices, working drawings, and construction techniques. Students use Computer-Aided Drafting (CAD) programs and established standards or codes to prepare plans for presentation. The course provides information helpful for the homeowner and is especially beneficial to the future architect, interior designer, homebuilder, or anyone planning a career in the construction industry. This course is dual enrolled with PVCC as ARC 121 Architectural Drafting I. ARC 121 introduces techniques of architectural drafting, including lettering, dimensioning, and symbols. This course requires production plans, sections, and elevations of a simple building. Students study common reference material and the organization of architectural working drawings. This course requires development of a limited set of working drawings, a site plan, related details, and pictorial drawings. Students will earn 3 college credits that will transfer to the two year Associate's Degree at PVCC. These credits will not transfer to the four year college/university.

Industry Certification/Credentialing Exam is required at the end of this course.

To be a CTE Completer and fulfill your sequential elective requirement (2 credits), a student may take Architecture II, Technical Drawing, Engineering Drawing.

Fee: $20

................................. 8654

**ARCHITECTURE II**

Prerequisite: Architectural Drawing

Grades 11-12 1 Credit

Offered at WAHS

This is a 100% computer assisted drawing course. Students learn to customize a menu, to adjust dimensioning variables and to use commands to create, edit, dimension and plot to scale. They are able to create blocks with attributes and to create tiled view ports. They also study and duplicate commercial blueprints. This course is recommended for all students, especially those interested in pursuing an architecture career or major.

Industry Certification/Credentialing Exam may be required at the end of this course.

To be a CTE Completer and fulfill your sequential elective requirement (2 credits), a student may take Architectural Drafting, Basic Technical Drawing, Engineering Drawing.

Fee: $20

................................. 8492
CONSTRUCTION TECHNOLOGY
Prerequisite: Materials Processes Technology or Technical Drawing
Grades 10-12 1 Credit
Offered at MoHS
Students design, build, and test scale-model structures using basic hand tools and power tools. Hands-on experiences include calculations, measurements, and problem-solving activities related to the construction industry. Students work with projects that help them gain the skills required by the construction industry. (Students who complete Construction Technology I at the home high school may be eligible to enter Building Trades II with teacher recommendation and be considered a career/technical education completer.) To be a CTE Completer and fulfill your sequential elective requirement (2 credits), a student must take Materials and Processes Technology and/or Manufacturing Technology or Manufacturing Technology II.
Fee: $20

DIGITAL IMAGING TECHNOLOGY
Grades 9-12 1 Credit
Offered at MoHS
Digital Imaging Technology is a course in which students study the development of photography as a communication medium and its evolution into the digital realm. Students will learn to use specialized editing software such as Photoshop to manipulate images. Course topics include: elements of design; digital photo technique; differences between computer technology imaging and print imaging; how various graphic activities affects web imaging; video, sound and animation design; and storage and memory issues.
Industry Certification/Credentialing Exam may be required at the end of this course.
To be a CTE Completer and fulfill your sequential elective requirement (2 credits), a student must also complete Geospatial Technology I and II.
Fee: $30 per semester
I ........................................... 8456
II ........................................... 8459

ENGINEERING DRAWING DR 140
Technical Drawing
Prerequisite: Technical Drawing, COMPASS Test and application
Grades 10-12 1 Credit (3 College Credits)
This course provides students the opportunity to learn the skills and concepts required for further engineering education and/or employment in the engineering field through the use of Computer-Aided Drafting (CAD) programs. Emphasis is placed on interpretation of industrial prints, ability to use handbooks along with other resource materials, and adherence to established standards of drafting. The application of drafting principles to typical engineering drawing and design problems is emphasized through CAD projects. This course is recommended for all students, especially those interested in pursuing an engineering design career or major. This course is dual enrolled with PVCC as DR 140 Technical Drawing. DR 140 enhances the principles learned that are related directly to the field of drafting and design. Gives a more in-depth exposure to detail and working drawings, dimensioning, tolerancing, and conventional drafting practices. Teaches CAD modeling, may include parametric modeling. Students will earn 3 college credits that will transfer to the two year Associate's Degree at PVCC. These credits will not transfer to the four year college/university.
Industry Certification/Credentialing Exam is required at the end of this course.
To be a CTE Completer and fulfill your sequential elective requirement (2 credits), a student may take Technical Drawing, Architectural Drawing, Architecture II, or Engineering Drawing.
Fee: $20

GEOSPATIAL TECHNOLOGY
I and II
Prerequisites: Successful completion of Algebra I
Grades 10-12 1 Credit
Offered at WAHS
The Geospatial Technology program introduces students to Geographic Information Systems (GIS) and Global Positioning Systems (GPS) technology. Students learn to integrate these technologies to collect, analyze and display a variety of data to solve real life and authentic problems. Students are trained in the latest ESRI ArcMap software in a variety of scenarios that are applicable to professions in Business, Community Planning and Real Estate, Environmental and Natural Resource Management, Disaster Management, and Crime Analysis.
Classes have the opportunity to partner with James Madison University, allowing students to earn transferable college credit from JMU through its “Geospatial Semester” program. In these classes there is a focus on learning and applying the software through a variety of local projects that are connected with the community. Industry Certification/Credentialing Exam may be required at the end of this course.
To be a CTE Completer and fulfill your sequential elective requirement (2 credits), a student must also take Geospatial Technology II or Digital Imaging Technology.
I ........................................... 8430
II ........................................... 8412

GRAPHIC COMMUNICATIONS
Grades 9-12 .5 Credit
Offered at: AHS, WAHS
Graphic Communications deals with printed images such as newspaper, books, printed T-shirts, signs, photographs, and stationery. The course includes design/layout composition, electronic publishing, and computer graphics. Students use a variety of processes and equipment to produce visual projects in printed graphics, similar to those produced by the graphic arts industry.
Fee: $10

MANUFACTURING TECHNOLOGY I
Prerequisite: Materials and Processes Technology
Grades 10-12 1 Credit
Offered at WAHS
Manufacturing technology is an advanced level class for students interested in construction and materials processes. Students design, build, and evaluate all aspects of the final product. Students work with projects that help them gain advanced skills required by the construction industry. Industry Certification/Credentialing Exam may be required at the end of this course.
To be a CTE Completer and fulfill your sequential elective requirement (2 credits), a student may take Materials Processes Technology, Construction Technology or Manufacturing Technology I and II.
Fee: $30

Indicates PVCC Dual Enrollment
MANUFACTURING TECHNOLOGY II
Prerequisite: Materials and Processes Technology, Manufacturing Technology I
Grades 11-12 1 Credit
Offered at WAHS
Advanced Manufacturing is designed for the student wanting to be more independent with the use of equipment and design of projects. They will build a chair or rocking chair. The self-paced curriculum allows the student the opportunity to use problem-solving skills in order to complete projects. Students gain hands on experience in a fun and challenging course as well as learn about a manufacturing system and how a company works.

Industry Certification/Credentialing Exam is required at the end of this course.

To be a CTE Completer and fulfill your sequential elective requirement (2 credits), a student may take Materials Processes Technology, Construction Technology or Manufacturing Technology I.

Fee: $10 plus any additional projects; goggle fee

8433

MATERIALS AND PROCESSES TECHNOLOGY
Grades 9-11 1 Credit
Offered at: MoHS, WAHS
Students focus on industrial/technical materials and processes as they fabricate usable products and conduct experiments. Learning experiences include career analysis, the use of tools and equipment related to analysis, testing and processing of metals, plastics, woods, ceramics, and composite materials. This laboratory course is recommended for students interested in technical careers and others wishing to improve their consumer knowledge and technological literacy.

To be a CTE Completer and fulfill your sequential elective requirement (2 credits), a student may take Construction Technology and/or Manufacturing Technology or Advanced Manufacturing Technology I and II.

Fee: $10

8433

Do you like working with tools, machinery, and computers?
Do you enjoy seeing the concrete result of your work?
Do you enjoy designing and problem solving?

<table>
<thead>
<tr>
<th>Diploma with some training</th>
<th>Certification or Associate degree</th>
<th>College degree plus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forklift Operator</td>
<td>Laser technician</td>
<td>Industrial Production Manager</td>
</tr>
<tr>
<td>Welder</td>
<td>Production Planner</td>
<td>Quality Assurance Specialist</td>
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<tr>
<td>Quality Control Technician</td>
<td>Electronics Technician</td>
<td>Environmental Engineer</td>
</tr>
</tbody>
</table>

AUTO BODY TECHNOLOGY I & II
2 Year Program
Prerequisites: Successful completion of Algebra I, good eye-hand coordination, manual dexterity, and physical strength and stamina.
Grades: 10-12 Offered at CATEC
I 2-3 Elective Credits*
II 2-3 Elective Credits*

Students in this program are prepared for careers in this field through the use of the latest technologies and state of the art equipment. Throughout the program students gain knowledge of classroom and shop experience by working on vehicles. Each student will become familiar with the latest finishes, from single-stage to multi-stage finishes. Selected students may be eligible for work experiences at local repair facilities. Successful completion of the two-year Auto Body program can reduce the two years of experience required for Automotive Service Excellence (ASE) certification by one year.

This course is not recommended for individuals with respiratory or allergy problems.

Certifications: Auto Body Assessment (NOCTI)
Verified Credits: 1-2 (certification, completer)
College Credits: NA
Fees: $106 for tools and workbook. $29 for SkillsUSA dues (optional).
* 2 elective credits if taken in conjunction with a CATEC English class.
I 8679
II 8680

AUTOMOTIVE SERVICE TECHNOLOGY I & II
2 Year Program
I & II 2-3 Elective Credits*
Prerequisites: Algebra I recommended and the ability to read and understand highly technical information, use sophisticated equipment, and work independently and in groups.
Grades: 11, 12 Offered at CATEC
Automotive Service Technology is a two-year program for students who wish to become automotive technicians. The program is dual enrolled with J. Sargeant Reynolds Community College and Universal Technical Institute. The program is industry-certified through NATEF and Automotive Youth Educational System (AYES) program. The program includes the study of engine repair, engine performance, electricity/electronics, brakes, steering, and suspension. The program is designed to provide an in-depth study of the automobile and its operation systems. In the classroom students will study automotive theory and put the theory into practical use in the auto lab. Automotive manufacturers and local dealerships sponsor the Automotive Youth Education System (AYES) at CATEC. This program offers employment opportunities with dealerships for students who qualify and are selected during the spring semester of the first year. The program prepares graduates to pursue the Virginia State Inspector’s License.

Certifications: ASE, AYES
Verified Credits: 1-2 (certification, completer)
College Credits: Students earning a B average will earn 20 dual enrollment college credits at J. Sargeant Reynolds Community College
Fees: $120.00 for uniform and goggles. $29 for SkillsUSA dues.
* 2 elective credits if taken in conjunction with a CATEC English class.
I 8506
II 8507
Many CTE Courses charge a materials/project fee.

A Career and Technical Education Completer (CTE Completer) is a student who completes a CTE concentration. A concentration is a coherent sequence of courses (courses totaling 2 credits) completed by a student in a specific career area or specialization and meets all high school graduation or GED requirements.

**BASIC PHOTOGRAPHY**
Grades 9-12 1 Credit
Offered at MoHS
Students enrolled in this program will learn photographic skills such as using multiple camera formats to set up, shoot, process and present photographic images; creating images using digital technology and preparing a professional portfolio to prepare for a career in the field of photography. To be a CTE Completer and fulfill your sequential elective requirement (2 credits), a student must take two years of Commercial Photography.
Fee: $35

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**COMMERCIAL PHOTOGRAPHY I, II, III**
Grades 10-12 1 Credit
Offered at MoHS
Students learn to shoot images using a digital camera, input digital images, produce and correct digital images, control digital output, operate air brushes, cameras, meters, and other photographic digital equipment. Instructional topics include composition and color dynamics, contact printing, enlarging and developing film, and processing microfilm. To be a CTE Completer and fulfill your sequential elective requirement (2 credits), a student may take Commercial Photography II and/or III.
To be a CTE Completer and fulfill your sequential elective requirement (2 credits), a student must take Commercial Photography II or III.
Fee: $35

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**BUILDING TRADES I & II**
2 Year Program
Prerequisites: Students must be 16 years of age or older and be able to read a ruler in increments of sixteenths.
Grades: 10-12 Offered at CATEC
I 2-3 Elective Credits*
II 2-3 Elective Credits*
This course will teach you all the basic skills of the following trade areas: carpentry, residential wiring, residential plumbing, and masonry. The safe use of hand and power tools will be emphasized with more emphasis on power equipment. Blueprint reading and drawing are introduced at the beginning of the course. The latter part of the course will focus on carpentry, from framing to the finishing trim, and roofing. Plumbing is introduced as it relates to the other trades during the year; for example, drain waste, and vent work are taught as it relates to bathroom and kitchen plumbing. Residential wiring emphasizes the basics of wiring a house and the National Electrical Code. All aspects of residential construction, from project planning, purchasing material, to code compliance are taught. Emphasis will be placed on proper employability skills and attitude throughout both years of the course.
Certifications: Home Builders Residential Construction Academy Assessments
College Credits: One-year of credit toward the Carpentry Apprenticeship Program (upon successful completion of the certification exam)
Verified Credits: 1-2 (certification, completer)
Fees: $60 for tools and safety gear. $29 for Skills USA (optional).
*2 elective credits if taken in conjunction with a CATEC English class.

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**MASONRY I & II**
2 Year Program
Prerequisites: Students with allergies (dust, etc.) should consult a physician prior to enrollment.
Grades: 10-12 Offered at CATEC
Masonry I: 2-3 Elective Credits*
Masonry II: 2-3 Elective Credits*
Students in Masonry will work with brick, concrete, glass block, tiles, terra cotta, and stone. Work can be as simple as laying a wall, or as complex as building a fireplace. The work is very physical, involving the use of hand tools, power tools, and other materials. Brick and block are laid by hand, requiring the skill of a craftsman. Students will learn to read blueprints, understand building codes, and be knowledgeable of industry safety requirements and guidelines for handling hazardous materials.
Certifications: Masonry Assessment (Home Builders Residential Construction Academy)
College Credits: One-year of credit toward the CATEC Apprenticeship Program (upon successful completion of the certification exam)
Verified Credits: 1-2 (certification, completer)
*2 elective credits taken in conjunction with a CATEC English class.
Barbering I & II
2 Year Program
Prerequisites: C or better in Biology, Chemistry or Anatomy
Grades: 11, 12  Offered at CATEC
Barbering I  2-3 Elective Credits*
Barbering II  2-3 Elective Credits*
Students in this program are prepared to take the Virginia Barber examination in order to become licensed practitioners. Students gain daily practical experience working on other students and manikins. During the second year, students have the opportunity to provide services to patrons in a clinical setting; this lab is open to the public by appointment. Students also have the opportunity to do internships in local barbershops. Good reading skills and a strong science background are recommended. Must be able to work independently.
Fees: $260.00 for a supply kit. $29 for SkillsUSA dues (optional). Additional supplies may be needed for 2nd year.
Certifications: State Board License
Verified Credits: 1-2 (certification, completer)  College Credits: NA
*2 elective credits taken in conjunction with a CATEC English class
I  .......................... 8747
II  .......................... 8748

Cosmetology I and II
2 Year Program
Prerequisites: C or better in Biology
Grades: 11, 12  Offered at CATEC
Cosmetology I:  2-3 Elective Credits*
Cosmetology II:  2-3 Elective Credits*
Students in this program are eligible to take their State Board examination after successfully completing the two-year course. Students will gain theory and practical knowledge through instruction and lab participation. First-year students will participate in a job shadowing program and second-year students during their second semester will participate in an internship two days a week.
Certifications: State Board of Cosmetology License
Verified Credits: 1-2 (certification, completer)  College Credits: NA
Fees: Year 1: $260 for supply kit, and workbook. $29 for SkillsUSA dues (optional). Year 2: $60 for supply kit. $29 for SkillsUSA dues (optional).
*2 elective credits taken in conjunction with a CATEC English class
I  .......................... 8527
II  .......................... 8528

Television Production I
Grades 9-12  1 Credit
Students develop a basic understanding of the television industry, with an emphasis on video production. Working individually and in teams, students produce various video projects both in and outside the studio setting. Students develop skills in equipment handling, filming techniques, lighting, editing, script writing, studio operations, and other skills related to video production. Students receive basic instruction in electronics to gain a working knowledge of studio equipment.
Industry Certification/Credentialing Exam may be required at the end of this course.
To be a CTE Completer and fulfill your sequential elective requirement (2 credits), a student must also take TV Production II or III.

Television Production II
Prerequisite: Television Production I
Grades 10-12  1 Credit
Students learn advanced skills in equipment operations. Learning activities include the study and operation of a character generator, telecine, audio-mixing console, audio-video patch panels, and a videotape editor/backspacer. Students learn to produce graphics, and credits for TV programs. They practice skills related to production, direction, and scripting of programs. The editing of videotape is practiced. Students study control room procedures and responsibilities.
Industry Certification/Credentialing Exam is required at the end of this course.
To be a CTE Completer and fulfill your sequential elective requirement (2 credits), a student must also take TV Production I or III.

Television Production III
Prerequisite: Television Production I & II
Grades 11-12  1 Credit
This course covers the post-production process and includes understanding audio and video values and standards, editing in various formats, edit logging and dubbing. Students learn how to integrate graphics, and to incorporate music voiceover and sound effects into the editing process. Methods of transition and continuity and A-B editing are explored. Students learn the elements of sound design and reinforcement for variety of production medias.
Industry Certification/Credentialing Exam is required at the end of this course.
To be a CTE Completer and fulfill your sequential elective requirement (2 credits), a student must also take TV Production I or II.

These courses fulfill Fine Art/Career Technical Education graduation requirement. Unless otherwise indicated, all courses are offered at all high schools.
Effective writing and reading skills are as important for effective communication as speaking and listening skills. They are not just a set of basic skills people are taught at school. Writing and reading are an integral part of each educated individual’s life since they are the basis of written communication. Written communication, in its turn, is another tool for people to express their ideas, and learn about those of others.

The Importance of Effective Reading Skills

Reading skills serve as a foundation for writing. Developed and mastered, effective reading gives people the opportunity to learn new information about the world, people, events, and places. Reading enriches their vocabularies and improves their writing skills.

- Reading enriches the inner world of a person and improves grammar and spelling.
- Through reading, people learn to understand different ways of thinking and feelings of other people and become more flexible and open-minded.
- Avid readers not only read and write better than those who read less, but also process information faster. The research presented by the Journal of Abnormal Child Psychology proves that poor readers have poorer short-memory functions.
- As a result, avid readers have a broader outlook, are quicker to analyze facts, and find connections between seemingly unrelated ideas.
- A reader has better skills for comprehending, analyzing, understanding, responding, and, finally, learning from what he or she reads.
- As a result, it is easier for good readers to get used to new and unfamiliar circumstances or ideas. They are easier to communicate with, and have higher chances to succeed in both professional and personal life.

The Importance of Effective Writing Skills

- Application essays, resumes, cover letters, and even e-mails often have to represent an individual. In such cases the person’s writing is to form the reader’s opinion about the individual’s personality and abilities.
- Excellent writing is sure to earn respect. Poor writing will, on the contrary, be difficult to understand, and will leave a bad impression about the individual.
- Writing structures and crystallizes one’s thoughts, improving learning.
- Writing improves the effectiveness of the person’s word usage in both written and oral speech.
- A survey conducted among 64 American companies revealed that half of them pay attention to writing when considering a person for employment or promotion.
- According to Roger Howe, a former chairman and CEO of U.S. Precision Lens, the majority of the successful people are clear and persuasive in their writing.
- Developed reading skills lead to the development and improvement of writing skills. Regular readers’ comprehension skills (ability to compare and contrast, evaluate and summarize, identify specific features and genres, make analogies) serve as a basis for good writing.

Adapted from “The Importance of Reading and Writing Skills” by Alla Kondrat, Suite101.com, February 21, 2009

ENGLISH 9

1 Credit

English 9 is a comparative study of genres and world literature in the ancient and classical worlds. Through five interdisciplinary concepts (systems, change and continuity, communication, aesthetics, and universality) and the correlating language arts concepts, students explore eastern and western literature and seek to answer critical questions about the language arts: Why do literary eras matter? How do cultural changes affect style of literature and art? What determines whether a belief (system) will be timeless or trendy? Ninth-grade students read extensively in a variety of genres and practice comparative analysis skills. Continued emphasis is placed on the components of writing, such as organizational structures and written expression.

Standard . . . . . . . . . . . . . . . . . . . . . 1132
Academic/Advanced . . . . . . . . . . . . . . . . . . 1138
Honors . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1136

ENGLISH 10

Prerequisite: English 9

1 Credit

English 10 is a comparative study of genres and world literature from medieval to modern times. Through five interdisciplinary concepts (systems, change and continuity, communication, aesthetics, and universality) and the correlating language arts concepts, students explore eastern and western literature and seek to answer critical questions about the language arts: Why do literary eras matter? How do cultural changes affect style of literature and art? What determines whether a belief (system) will be timeless or trendy? As such, tenth-grade students read extensively in a variety of genres and practice comparative analysis skills. Students write and speak for a variety of audiences and purposes, applying and refining written and oral communication using a range of literary and persuasive techniques.

Standard . . . . . . . . . . . . . . . . . . . . . 1142
Academic/Advanced . . . . . . . . . . . . . . . . . . 1148
Honors . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1146
All courses are offered at all three high schools unless otherwise indicated.

The listings for courses include the following information (where applicable):
- Course title
- Course level
- Course number
- Prerequisite(s) (courses that must be passed before taking this course)
- Grade level (9, 10, 11, 12)
- Credit (unless otherwise noted, .5 credit is awarded at the end of each semester)

Indicates Standards of Learning Test (SOL)
Indicates PVCC Dual Enrollment
ENGLISH 12
Prerequisite: English 11  1 Credit
English 12 is a study of the evolution of the English language through British and world literature. Students continue to hone their analytical and critical thinking skills. What factors affect the evolution of language? What allows a piece of literature to endure the vagaries of culture and time? What does it mean to think through language and literature? Students demonstrate understanding of language and literature through polished compositions, literary analysis, and speaking. Additional emphasis is placed on the development of a personal, sophisticated style of communication that reflects creative, critical thinking.
Standard ........................................ 1162
Academic/ Advanced  .................. 1168

ENGLISH 12
Advanced Placement
Prerequisite: See School Counselor
Grade 12  1 Credit
Advanced Placement English is for twelfth-grade students who want an intensive, college-level English course that prepares them to take one or both of the AP English Exams. The course is conducted much like a college seminar, and, therefore requires high-quality work in and out of class. Students read works of literature analytically and critically, and they respond with increasing sensitivity and discrimination of language. Essays focus on literary analysis but students have some opportunity to practice creative writing. Students are expected to take an AP exam. The exam fee is approximately $87 per test.
Advanced Placement  .................. 1195

ENGLISH 111
College Composition I
Prerequisite: Satisfactory scores on COMPASS and complete PVCC application.
Grade 12  .5 Credit (3 College Credits)
A college-level course, English 111 develops students’ abilities to write and read effectively for study, work, and pleasure. Students compose essays, letters, abstracts, annotations, and other nonfiction prose for a variety of purposes and audiences. Emphasis is placed on short narrative works. Students work extensively in each area of the writing process and learn to employ writing conventions while developing individual voice and style. Students are expected to integrate skills of reading, writing, critical thinking, listening, and speaking.
Note: The student is responsible for purchasing the college textbook associated with this course.
............................................. 1320

ENGLISH 112
College Composition II
Prerequisite: English 111 or division approval. Satisfactory scores on COMPASS and complete PVCC application.
Grade 12  .5 Credit (3 College Credits)
A college-level course, English 112 develops students’ abilities to write and read effectively for study, work and pleasure. Students read prose, fiction, drama, and poetry. Students write extensively, with emphasis on response to literature and writing for a variety of audiences and purposes. Through these writing experiences, students synthesize information, develop individual voice and style, and better understand literary technique.
Note: The student is responsible for purchasing the college textbook associated with this course.
Exam Option: Students completing English 111 and English 112 may elect to take the AP exam for AP English Language and Composition. The exam fee is approximately $87 per test. Students who do well on this test receive college credit or superior placement at participating colleges.
............................................. 1321

ENGLISH FOR SPEAKERS OF OTHER LANGUAGES (ESOL)
For Newcomers
Prerequisite: Teacher recommendation and assessment
Grade 9-12  3 Credits
(English 9 and/or 10, World Language, CATEC Exploratory and/or Elective Credit)
Offered for all high schools but housed at CATEC
The Newcomer Program is designed specifically for beginning English language learners who are new to US schools and may have experienced interrupted schooling in their home language(s). Students attend a half-day ESOL program at the Charlottesville/Albemarle Technical Education Center (CATEC) that may include a CATEC exploratory rotation. The program is designed to foster rapid language learning through targeted instruction in critical skills needed to succeed in school as well as cross-cultural communication and social adjustment skills. Students take electives during the second half of their day in their home high schools.
............................................. 5723
ESOL courses may be counted for English 9 and/or English 10 credit. They may also be counted for World Language Credit or as an elective credit. Credit for a single ESOL class may be given only once. If a student receives World Language credit for and ESOL course, then he or she may not receive credit for the same course in the area of English or electives.

Decisions about how to distribute ESOL credits should be collaborative and involve the ESOL Coordinator or designee, school counselor, parent, and student.

### ENGLISH FOR SPEAKERS OF OTHER LANGUAGES (ESOL)

**Prerequisite:** Teacher recommendation and assessment

**Grade 9-12** 1 Credit

(English 9 and/or 10, World Language, or Elective Credit)

ESOL courses are designed for students whose primary language is not English. The courses provide students with targeted language instruction designed to prepare students to meet the same rigorous standards as all students are expected to meet. Levels I and II students work to develop the basic reading, writing, speaking and listening skills through the content areas of social studies, science, math, and language arts. Students are expected to draw upon previous experience and background and receive support with cultural adjustment and cross-cultural communication skills. Level III and Level IV students continue to hone their language skills and receive targeted content area support with a focus on reading, and writing and development of academic vocabulary.

- I ........................................ 5724
- II ....................................... 5729
- III ..................................... 5732
- IV ...................................... 5733

### ESOL STUDY / ORGANIZATIONAL SKILLS

**Grades 9-12** 1 Elective Credit

This ESOL course is designed as a writing-intensive resource class to support English Language Learners (ELL) who are taking a mainstream-level course load. The ESOL teacher works closely with content area teachers to design enrichment lessons that teach content curriculum with an emphasis on comprehension and academic vocabulary. Students also receive support in test-taking and study skills, organizational skills, SOL preparation and effective reading strategies.

- I ........................................ 5725
- II ....................................... 5726
- III ..................................... 5727
- IV ...................................... 5728

### SKILLS DEVELOPMENT

**READING/WRITING**

**Prerequisite:** Teacher Recommendation

**Grades 9-12** 1 Credit

This course is offered for students whose reading comprehension levels are significantly below grade level. It is designed to develop and enhance fundamental reading and writing skills. Course content includes skills development through decoding and encoding, vocabulary development, comprehension practice and exposure to various reading strategies. Course content in writing includes instruction in the areas of composition, written expression, usage and mechanics.

- I ........................................ 1112
- II ....................................... 1113
- III ..................................... 1114

### AFRICAN-AMERICAN LITERATURE

**Grades 9-12** .5 Credit

**Offered at MoHS**

Students in this survey course explore the literature and language of African-Americans. By examining various influences on the literature over time, students develop an understanding of the progress and successes of African-American culture. This analysis informs the critical writing, thinking, and discussion of the literature that takes place. Students analyze poetry, short stories, novels, and non-fiction pieces. Students write for a variety of purposes and audiences.

- ........................................ 2369

### SAT PREP/SUCCESSFUL STRATEGIES FOR COLLEGE

**Grades 10, 12** .5 Credit

**Offered at MoHS, WAHS**

This class prepares students to take the SAT. Students learn and practice with a variety of reading strategies necessary to effectively interact with college-level text. They also gain experience with writing on demand, thus preparing them for timed writing situations. The development of study skills and habits essential for success in college are stressed.

- ........................................ 9915

### WOMEN IN ART AND LITERATURE

**Grades 10-12** .5 or 1 Credit

**Offered at WAHS**

Students study a selection of female authors, poets, and artists from various cultures and time periods. They analyze the development of common themes and study the ways women revolutionized particular genres within their historical context. The class will be an open forum for discussion and interpretation. Students write informal and formal pieces in response to text.

- ........................................ 1495
- ........................................ 1495
Courses offered at all schools. Additional courses may be offered at individual schools.

**Concert Band**

**Prerequisite:** One year minimum previous instrumental training or permission of the instructor.

**Grades 9-12** 1 Credit

(Students may earn credit each year the course is taken.)

Concert Band I is an entry-level large ensemble and is required for all 9th grade band members, except with special permission of the director. The Concert Band rehearses and performs Band Repertoire in the 3-4 level of difficulty range. Concert band members perform at the regular concerts, some district events, and are eligible to audition for district and regional honors and Albemarle County Honors Band.

Fees: $30 (uniform maintenance); $75 (instrument rental); $25 (percussion fee)

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**Concert Strings**

**Prerequisite:** By audition only.

**Grades 9-12** 1 Credit  Offered at AHS

String Ensemble: standard violin, viola, cello, bass instrumentation. This group studies and performs more advanced works for string orchestra from the Baroque through the Modern.

Student must provide own instrument. Large instruments may be rented from the school.

Fees: $30 (uniform maintenance); $75 (instrument rental)

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**Jazz Band**

**Prerequisite:** Previous instrumental training, approval of Band Director, audition.

**Grades 9-12** 1 Credit

The Jazz Band is an audition-only group that focuses on the performance, theory, and practice of jazz and popular music including style, articulations, phrasing, improvisation, and ensemble playing. The Jazz Band performs throughout the year in the community, in school concerts, and at jazz festivals. Some performances are on evenings and weekends. Jazz Band members are eligible to audition for district and regional honors and for the Albemarle County Honors Band.

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<td>9299</td>
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</table>
FINE & PERFORMING ARTS

MARCHING BAND
Prerequisite: Recommendation of band director
Grades 9-12 .5 Credit
Offered at MoHS, AHS
The Marching Band is a competition-quality field show ensemble. The Marching Band performs at marching band competitions, parades, and home football games. Band members are required to attend band camp in the summer. The Albemarle Band rehearses at zero period and some Tuesday afternoons. The Monticello Band will meet during the school day and on Friday afternoons of home football games.
Fee: $30 (uniform maintenance)

MUSIC THEORY 111
Prerequisite: Students should be able to read music and perform on an instrument
Grades 10 – 12 1 Credit (4 College Credits)
Offered at WAHS
This is a dual enrollment course receiving both WAHS and PVCC credit. The course includes instruction in the fundamentals of music including pitch, notation, key signatures, scales, modes, intervals, chords, chord progression, inversions, melodic organization, voice learning, rhythmic patterns, meters and basic analysis. It is the foundation course for study of all areas of music. Students achieve skills in keyboarding, sight singing, and ear training. The student is responsible for the college textbook associated with this course.
Fee: $15 (theory workbook)

PERCUSSION ENSEMBLE
Prerequisite: One year minimum previous instrumental training
Grades 9-12 1 Credit Students may earn credit each year the course is taken.
Offered at MoHS & WAHS
This class is offered for students interested in percussion, keyboard, guitar, bass, and theory. It places emphasis on continued development of skills as well as proper rehearsal and performance techniques. It also includes instruction in theory, ear-training, and music history. The Percussion Ensemble performs winter and spring concerts and at other times at the discretion of the director.
Fees: $30 (uniform maintenance);
$25 (percussion fee)

STAGE BAND
Prerequisite: One year of previous instrumental training
Grades 9-12 1 Credit
Offered at MoHS
This class meets every Wednesday and Friday morning from 7:30 to 8:45. The group will practice and perform various styles of music, including jazz, pop, and rock. Students may also participate in competitions during the school year, as well as several concerts. No audition is required and all instruments are welcome.
Fee: $5

Participation in any of these courses fulfills the Fine Arts requirement.

Some Fine and Performing Arts Courses may charge a materials/project fee.

Indicates PVCC Dual Enrollment
See Introduction for more information
STRING ENSEMBLE
Prerequisite: Minimum two years of private instruction
Grades 9-12 1 Credit
String Ensemble: standard violin, viola, cello, bass instrumentation. This group studies and performs works for string orchestra from the Baroque through the Modern period. Student must provide own instrument. Large instruments may be rented from the school.
Fees: $30 (uniform maintenance); $75 (instrument rental)

SYMPHONIC BAND
Prerequisite: Two years previous instrumental training and/or approval of the band director. An audition is required.
Grades 9-12 1 Credit Students may earn credit each year the course is taken.
The Symphonic Band I is an intermediate large ensemble and requires the recommendation of the director to become a member. The Symphonic Band also functions as the Marching Band at WAHS. Time commitments and events vary by the individual school. Please consult with the school’s band director for more information.
Fees: $30 (uniform maintenance); $75 (instrument rental); $25 (percussion fee)

WIND ENSEMBLE
Prerequisite: Previous instrumental training, teacher recommendation, and audition
Grades 9-12 1 Credit
Offered at AHS, MoHS
The Wind Ensemble is the most advanced large ensemble and serves as a primary performing ensemble at the school. The Wind Ensemble rehearses and performs repertoire in the 5 – 6 level of difficulty. Ensemble members perform at regular concerts and are eligible to audition for district and regional honors and for the Albemarle County Honors Band. Ensemble members practice daily, develop skills on ear training and dictation, and may compose music.
Fees: $30 (uniform maintenance); $75 (instrument rental); $25 (percussion fee); $15 (theory workbook)

CREATIVE WRITING I
Grades 9-12 .5 - 1 Credit
Students may earn credit each semester the course is taken.
Offered at AHS, MoHS
This course is designed for students with special interest in writing original poetry, short stories, essays, scripts, and novels. Strategies and techniques used by successful authors are studied. The course requires independent study, teacher-student conferences, group discussions, and sharing of work. Emphasis is on writing style and techniques.

CREATIVE WRITING II
Prerequisite: Teacher recommendation
Grades 10-12 1 Credit
Offered at AHS, MoHS
Students are already proficient writers with a deep interest in writing creatively. Strategies and techniques used by successful authors are studied. The course requires independent study, teacher-student conference, group discussions, and sharing of work. Emphasis is on writing style and techniques. Students write poetry, fiction, plays, essays, and non-fiction. Students in this class publish the school literary/art magazine. In previous years, students in this class have won local and state-wide creative writing contests.
Fee: $10 (supplies)

PUBLISHING
Publishing Sequence of Courses

<table>
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<tr>
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<th>Journalism I</th>
<th>Yearbook I</th>
<th>Film Studies/Filmmaking</th>
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<tbody>
<tr>
<td>Creative Writing II</td>
<td>Journalism II</td>
<td>Yearbook II</td>
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<tr>
<td>Creative Writing III</td>
<td>Journalism III</td>
<td>Yearbook III</td>
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<tr>
<td>Creative Writing IV</td>
<td>Journalism IV</td>
<td>Yearbook IV</td>
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</tbody>
</table>

CREATIVE WRITING III
Grades 10-12 1 Credit
Offered at AHS, MoHS
Students are already proficient writers with a deep interest in writing creatively. Strategies and techniques used by successful authors are studied. The course requires independent study, teacher-student conference, group discussions, and sharing of work. Emphasis is on writing style and techniques. Students publish the school literary/art magazine. In previous years, students in this class have won local and state-wide creative writing contests.
Fee: $10 (supplies)

CREATIVE WRITING IV
Grades 10-12 1 Credit
Offered at AHS, MoHS
Students are already proficient writers with a deep interest in writing creatively. Strategies and techniques used by successful authors are studied. The course requires independent study, teacher-student conference, group discussions, and sharing of work. Emphasis is on writing style and techniques. Students write poetry, fiction, plays, essays, and non-fiction. Students in this class publish the school literary/art magazine. In previous years, students in this class have won local and state-wide creative writing contests.
Fee: $10 (supplies)

CREATIVE WRITING V
Grades 10-12 1 Credit
Offered at AHS, MoHS
Students are already proficient writers with a deep interest in writing creatively. Strategies and techniques used by successful authors are studied. The course requires independent study, teacher-student conference, group discussions, and sharing of work. Emphasis is on writing style and techniques. Students write poetry, fiction, plays, essays, and non-fiction. Students in this class publish the school literary/art magazine. In previous years, students in this class have won local and state-wide creative writing contests.
Fee: $10 (supplies)
CREATIVE WRITING/ LITERARY MAGAZINE
Grades 10-12 .5 Credit
Offered at MoHS, WAHS
Students may earn credit each semester the course is taken.
This course is designed for students with special interest in writing original poetry, short stories, essays, scripts, and novels. Strategies and techniques used by successful authors are studied. Students read and discuss all submissions and select and edit the works to be included. The magazine is laid out by students, using available computer technology that includes various word processing and desktop publishing programs, scanners and the digital camera. This course requires some independent work, a good deal of group interaction and discussion, and the ability to be sensitive to submitting writers and artists.

FILM STUDIES / FILMMAKING
Grades 10-12 1 Credit at WAHS and MoHS .5 Credit at AHS
This course is very similar to a college film studies class. Students should have a serious interest in film. Students view, discuss, and analyze acclaimed classic and contemporary films to discover how great filmmakers produce their work. They study foreign films, art and documentary films, filmmaking techniques, and particular directors. Students produce their own film projects using digital video cameras and iMovie editing equipment.

HUMANITIES
Grades 9-12 1 Credit
Offered at AHS, MoHS
This is an interdisciplinary course about the relationships among music, art, literature, history, philosophy, and science. Personalized projects, trips to cultural centers, and individually designed research and reading programs supplement a traditional presentation of the products of human beings from Aristotle to Zola, from Avogadro to Zappa. Participants should have a wide range of interests or be willing to widen their range.

I ........................................... 1515
II ........................................... 1516
III ......................................... 1518

JOURNALISM
Grades 9-12 1 Credit
This course is a prerequisite for the newspaper staff. The class focuses on news reporting, writing, and photography as well as word processing and desktop publishing computer skills. Assignments in writing and photography require a significant portion of work outside of class. For photography assignments, students need a digital or a 35mm automatic or manual camera. The focus of photography study is on the content of good news photos.
I ........................................... 1200
II ........................................... 1210
III ......................................... 1211
IV .......................................... 1212

YEARBOOK
Grades 9-12 1 Credit
This course is a prerequisite for the yearbook staff. The class focuses on feature writing and photography as well as word processing and desktop publishing computer skills. Assignments in writing and photography require a significant portion of work outside of class. For photography assignments, students need a digital or a 35mm automatic or manual camera. The focus of photography study is on the content of good news photos.
I ........................................... 1470
II ........................................... 1221
III ......................................... 1222
IV .......................................... 1223

Sequential Electives
Students qualifying for a Standard Diploma or a Modified Standard Diploma must successfully complete two elective courses that are sequential (courses that provide a foundation for further education, training, or preparation for employment). A course may satisfy the requirement for Fine Art or Career/Technical Education credit and for sequential electives. Sequential elective courses may be taken in consecutive years or any two semester/year of high school.
Theatre Courses

BASICS OF TECH THEATER
Grade 9-12 1 Credit
Offered at MoHS
Basics of Technical Theater is an introductory course covering theater and stage history, aspects of stage management, lighting for the stage, audio and sound for stage, basic set design and scenery construction, and safety issues as they relate to each of these areas. Students in this course will be involved in the technical aspects of various productions and events throughout the school year.

DEBATE I
Prerequisite: Instructor’s recommendation
Grades 9-12 .5 Credit
Offered at AHS, MoHS
Debate teaches students how to coordinate the written and oral communication process through a study of logical thinking and research techniques culminating in written and oral presentations. A study of the national debate topic, leading to participation in interscholastic debate competition, is one strategy for accomplishing this goal. Students may take this course four years and receive four credits toward graduation.

SPEECH AND COMMUNICATION
Grades 9-12 .5 Credit
Students learn:
1) the basic principles of public speaking,
2) to evaluate their own and others’ speeches,
3) to use technology to produce a computer-generated slide show,
4) to become critical listeners, and
5) to analyze important speeches from history and current events.

DRAMA I
Grades 9-12 1 Credit
This course explores the fundamentals of the theater and theater history and prepares students for extracurricular participation in dramatic productions (although not required). Students gain a better understanding of the many activities involved in the production of a play and have actual production experience.

DRAMA II
Prerequisite: Drama I or teacher recommendation
Grades 10-12 1 Credit
This course is an in-depth study of theater production techniques for those students seriously interested in theater as an extracurricular activity or career.

DRAMA III
Prerequisite: Drama II or teacher recommendation
Grades 11-12 1 Credit
This is an advanced course in theater production and dramatic techniques. It includes an introduction to writing for dramatic performance.

DRAMA IV
Prerequisite: Previous drama courses and teacher recommendation
Grade 12 1 Credit
This is a very advanced performance class for experienced, mature actors. Students form a repertory company responsible for performing one-act plays for high school theater competitions held throughout the year.
**ART I**

**Prerequisite:** None; for 2nd semester enrollment, the student must have completed the 1st semester.

**Grades 9-12** 1 Credit

This course introduces students to the foundational elements and principles of design to be used as a basis for the development of a common language both visual and verbal. It provides an overview of many aspects of art through a variety of experiences in drawing, painting, printmaking, and sculpture. The course stimulates creative thinking and problem solving, imparts technical knowledge, and develops expressive skills.

Fee - $25 per year

------------------------- 9120

**ART II**

**Prerequisite:** Teacher recommendation; Art I

**Grades 10-12** 1 Credit

This course provides students with the opportunity to build on the skills developed in Art I in the areas of drawing, painting, printmaking, and sculpture. An in-depth exploration of a variety of media allows students to develop a personal style and compile a portfolio.

Fee - $25 per year

------------------------- 9130

**ART III**

**Prerequisite:** Teacher recommendation; Art II

**Grades 11-12** 1 Credit

Students continue the development of artistic and aesthetic skills learned in the first two years of art at a more advanced level with increased emphasis on personal expression and on the use of a wider range of media in the areas of drawing, painting, printmaking, and sculpture. Students continue to develop their portfolios.

Fee $25 per year

------------------------- 9140

**ART IV**

**Prerequisite:** Teacher recommendation; Art III

**Grade 12** 1 Credit

This advanced course is designed for students who have a serious interest in art and have demonstrated a high level of proficiency. Students will be guided to work more independently with special emphasis on individual growth. This course provides the opportunity for the mature student to develop a portfolio and apply art knowledge and techniques for personal expression.

Fee $25 per year

------------------------- 9154

**ART HISTORY, Advanced Placement**

**Grade 11-12** 1 Credit

**Offered at AHS, WAHS**

Building on a strong foundation in world history, students explore western and non-western traditions in art and architecture from the prehistoric-era to the present. This course integrates studies of aesthetics, production, and criticism with the history of art in preparation for the AP Art History test. Course expectations include independent reading of a college-level text and writing critically about art. Students are expected to take the AP test.

Fee: $15 and AP test fee approximately $87 per test

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Visual Arts Sequence of Courses

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<th>Multi-media Crafts I</th>
<th>Photography I</th>
<th>Digital Imaging I</th>
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<tbody>
<tr>
<td>Art II</td>
<td>Ceramics II</td>
<td>Multi-media Crafts II</td>
<td>Photography II</td>
<td>Digital Imaging II</td>
</tr>
<tr>
<td>Art III</td>
<td>Ceramics III</td>
<td>Multi-media Crafts III</td>
<td>Photography III</td>
<td>Digital Imaging III</td>
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<tr>
<td>Art IV</td>
<td>Ceramics IV</td>
<td>Multi-media Crafts IV</td>
<td>Photography IV</td>
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<tr>
<td>Studio Art AP</td>
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<td>Photographic Explorations</td>
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Some Fine and Performing Arts Courses may charge a materials or project fee.
CERAMICS I
Prerequisite: Teacher recommendation – not recommended for those with manicured nails; short fingernails are required.
Grades 9-12 1 Credit
This course is designed for students who want to concentrate on hand-building, wheel thrown pottery and clay construction. Specific ceramic techniques are used to make pots and sculptures. Emphasis is on form, design, and craftsmanship.
Fee: $25

CERAMICS II
Prerequisite: Ceramics I
Grade 10-12 1 Credit
This advanced course is designed for the serious ceramics student. Emphasis on the development of skills, both in hand-building and wheel-throwing is of primary importance. Personal and artistic style is stressed through advanced projects and techniques.
Fee: $25

CERAMICS III
Prerequisite: Ceramics II
Grade 11-12 1 Credit
This course is similar in design and scope to Ceramics II with an emphasis on the development of personal and artistic style. Advanced techniques in glazing and decoration are introduced.
Fee $25

CERAMICS IV
Prerequisite: Ceramics III
Grade 12 1 Credit
Offered at AHS, MoHS
This advanced course is for the serious ceramist, as it continues the exploration of, and craftsmanship in, both hand-building and wheel-throwing. Students work at a highly independent level to utilize these skills in the creation of both functional and non-functional ceramic pieces. Glazing and decorative experimentation are pursued in-depth.
Fee: $25

DIGITAL IMAGING I
Grade 9-12 1 Credit
Offered at WAHS
This is a full year course. Students will work on images from digital cameras or from film photographs. These images will be manipulated through Photoshop. The emphasis will be on creating altered images that could be used for fine art, advertising, or publications. The Internet will serve as a resource for tutorials, artistic examples and research.
Fee: $30 for the year

DIGITAL IMAGING II
Prerequisite: Digital Imaging I
Grade: 10-12 1 Credit
Offered at WAHS
This is a full year course continuing the study of digital imaging. An emphasis will be placed on using Photoshop to study design and digital production. Students will learn more advanced skills within Photoshop.
Fee: $30 for the year

DIGITAL IMAGING III
Prerequisite: Digital Imaging I & II
Grade: 11-12 1 Credit
Offered at WAHS
This is a full year course designed for students who want an in-depth knowledge of design, digital photography, and Photoshop. Emphasis will be placed on creating a digital portfolio. Students will assist in designing their own projects and setting goals for learning.
Fee: $30 for the year

Sequential Electives
Students qualifying for a Standard Diploma or a Modified Standard Diploma must successfully complete two elective courses that are sequential (courses that provide a foundation for further education, training, or preparation for employment). A course may satisfy the requirement for Fine Art or Career/Technical Education credit and for sequential electives. Sequential elective courses may be taken in consecutive years or any two semester/year of high school.
MULTIMEDIA CRAFTS I
Grades 9-12 1 Credit Offered at MoHS, WAHS
This is a beginning level course that emphasizes the exploration and history of various crafts. Topics may include weaving, mosaics, batik, papermaking, macramé, mixed media designs, and many different types of baskets. Both the functional aspects of crafts and the nontraditional creative approach is stressed.
Fee $30

MULTIMEDIA CRAFTS II
Prerequisite: Teacher recommendation; Multimedia Crafts I
Grades 10-12 1 Credit Offered at MoHS, WAHS
This course is designed for the more experienced student who is continuing his/her education in crafts. Students research and study the history of specific crafts along with the adaptation of certain craft objects to contemporary use. The student works with a variety of media and techniques such as textile and fiber arts, ceramics, basketry, batik, jewelry making, papermaking, mixed media design, bookmaking, and collage.
Fee $30

MULTIMEDIA CRAFTS III
Prerequisite: Teacher recommendation; Multimedia Crafts II
Grades 11-12 1 Credit Offered at MoHS, WAHS
This is an advanced crafts course designed for students who are highly skilled in this discipline and have a special interest in Fine Arts. Students work more independently to enhance the previous knowledge of the materials and techniques taught in Multimedia Crafts II. Emphasis is on individual artistic and aesthetic growth and development.
Fee $30

MULTIMEDIA CRAFTS IV
Prerequisite: Teacher recommendation; Three years of Multimedia Crafts
Grades 11-12 1 Credit Offered at MoHS, WAHS
This course is designed for students who can work independently to enhance their knowledge of the materials and techniques taught in previous Multimedia Crafts classes. Emphasis is on individual artistic and aesthetic growth and development.
Fee $30

PHOTOGRAPHY I
Grades 9-12 (10 – 12 at WAHS) 1 Credit
This beginning course in black-and-white photography introduces to photographic equipment, materials, processes, and ideas. The emphasis is on basic 35mm camera techniques and darkroom skills, including developing negatives and making enlargements. Students also prepare work for exhibits throughout the year. Considerable outside time is required to complete projects.
Fee: $35 per semester (The additional cost to the student for supplies and materials may be approximately $100 per semester) Limited financial assistance may be available.
Required Equipment: A digital or a manual 35 mm camera (single lens reflex (SLR) is preferable) with a built-in light meter. A limited number of school-owned cameras may be available for loan.

PHOTOGRAPHY II
Prerequisite: Teacher recommendation; Photography I
Grades 10-12 1 Credit
Photography II students build on skills and processes learned in Photography I and explore alternative processes such as cyanotype, hand coloring, color toning, multiple negative printing, solarization, or photo collage.
Fee: $35 per semester (The additional cost to the student for supplies and materials may be approximately $100 per semester)
Required Equipment: A digital or a manual 35 mm camera (single lens reflex (SLR) is preferable) with a built-in light meter. A limited number of school-owned cameras may be available for loan.

PHOTOGRAPHY III
Prerequisite: Teacher recommendation; Photography I and II; portfolio
Grades 11-12 1 Credit
Students produce quality prints for inclusion in a portfolio for college application. Students are asked to make a final presentation to the class with a written statement about their work.
Fee: $35 per semester (The materials and supplies may cost approximately $100 per semester.)
Required Equipment: A digital or a manual 35 mm camera (single lens reflex (SLR) is preferable) with a built-in light meter. A limited number of school-owned cameras may be available for loan.

PHOTOGRAPHIC EXPLORATIONS
Prerequisite: Teacher recommendation
Grades 9-12 .5 Credit Offered at AHS
This course is designed for students who wish to learn the lifelong skill of photography. Students work with digital or point and shoot film cameras to record their community, school, friends, and family. Students also work with computer software to manipulate images and to design photo journals.
Fee: $15 supplies
STUDIO ART, Advanced Placement

Prerequisite: Teacher recommendation; two years of art

Grade 11-12 1 Credit

The emphasis of the AP Studio Art course is for the students to produce 24 high quality, original pieces of art that meet the Advanced Placement Art Portfolio guidelines. Students choose one of the following three portfolios: Drawing, 2-D Design, or 3-D Design. In early May, work is digitally submitted to the AP Review Board, along with a written statement. In addition, five matted or mounted works are sent to the AP Review Board to complete the portfolio. This work is returned during the summer. Creating art outside the classroom setting is required. Students are expected to submit portfolios to the AP Review Board. One-half to three quarters of the work for this class is done outside the classroom setting.

Fee $25 and AP test fee (fee does not include matting, film or film processing for slides.)

Fine Arts courses stimulate creativity, develop critical thinking skills, impart technical knowledge, and expand expressive skills. An academic curriculum coupled with creative assignments and authentic production and performance opportunities are the foundation of fine arts electives.

Participation in any of these courses fulfills the Fine Arts requirement.
### CHORUS
**Prerequisite:** None; Middle School chorus recommended

**Grades 9-12**  
1 Credit  
This class is available to students with an interest in developing singing ability. Students learn note reading, part singing (soprano, alto, tenor, bass), rhythm, and how to be a participating member of a group.

Fee: $30 (uniform maintenance)

| I  | 9285 |
| II | 9286 |
| III | 9287 |
| IV | 9288 |

### MEN’S ENSEMBLE
**Grades 9-12**  
1 Credit  
Offered at AHS, WAHS  
Students concentrate on all genres of men’s music. Students perform three major concerts, with the possibility of several smaller performances. Students have the opportunity to participate in District Choir, District Choral Festival, and the Spring Competition.

Fee: $30 (uniform maintenance)

| I  | 9277 |
| II | 9271 |

### CONCERT CHOIR
**Prerequisite:** Chorus I and/or teacher recommendation

**Grades 10-12**  
1 Credit  
The concert choir is a mixed group and provides our most advanced choral students opportunities to develop their singing abilities to the greatest possible extent. Advanced chorus performs in public; all members must participate in all functions. The most advanced students audition for Regional Chorus (10-12), All State Chorus (11-12), and State Honors Chorus (12).

Fee: $30 (uniform maintenance)

| I  | 9285 |
| II | 9286 |
| III | 9287 |

### SHOW CHOIR
**Prerequisite:** One year of Chorus, Vocal and Choreography audition

**Grades 9-12 (Girls only)**  
1 Credit  
Offered at AHS, MoHS

Students concentrate on show choir techniques: blocking, choreography, staging, and microphone techniques. Students demonstrate an advanced knowledge of basic singing skills: pitch-matching, tonal memory, sight reading, theory, and harmony. Students perform three major concerts, with the possibility of several smaller performances. Students have the opportunity to participate in District Choir, District Choral Festival, and a spring competition.

Fee: $30 (uniform maintenance)

| I  | 9272 |
| II | 9273 |
| III | 9274 |
| IV | 9275 |

### VOCAL JAZZ
**Prerequisite:** Teacher recommendation and vocal audition

**Grade 9-12**  
1 Credit  
Offered at AHS, MoHS

Students perform standard and contemporary vocal jazz repertoire, with an emphasis on jazz technique. Students demonstrate an advanced knowledge of basic singing skills: pitch-matching, tonal memory, sight reading, theory, and harmony. Students perform three major concerts with the possibility of several smaller performances. Students have the opportunity to participate in District Choir, All-State Chorus, District Choral Festival, and the Spring Competition.

Fee: $30 (uniform maintenance)

| I  | 9270 |
| II | 9271 |
| III | 9272 |
| IV | 9273 |

### WOMEN’S ENSEMBLE
**Prerequisite:** Vocal audition and knowledge of music reading

**Grades 9-12**  
1 Credit  
Offered at AHS

Students concentrate on all genres of treble music. Students must demonstrate an advanced knowledge of basic singing skills: pitch-matching, tonal memory, sight reading, theory, and harmony. Students perform three major concerts, with the possibility of several smaller performances. Students have the opportunity to participate in District Choir, All-State Chorus, District Choral Festival, and the Spring Competition.

Fee: $30 (uniform maintenance)

| I  | 9270 |
| II | 9271 |
| III | 9272 |
| IV | 9273 |

### WOMEN’S ENSEMBLE—ADVANCED
**Prerequisite:** Teacher recommendation and audition

**Grades 9-12**  
1 Credit  
Students can earn credit each year the course is taken.

Offered at MoHS

This ensemble is composed of the most advanced singers performing a variety of musical styles and singing with choreographed movement.

Fee: $30 (uniform maintenance)

| I  | 9270 |
Physical education plays a vital role in the student’s development and growth. Here are some good reasons for active engagement with your health and physical education classes.

1. Health and PE are linked to good health. The value of physical fitness can never be overstated. In physical educational classrooms, students learn the value of taking care of themselves through proper grooming, healthy eating and regular exercise.

2. Health and PE are a preventive measure against disease. Physical education in school is a preventive measure to teach students the value of regular exercise and healthy eating habits.

3. Health and PE are programs for muscle strength and fitness. Physical education develops the student’s motor skills and hand-eye coordination.

4. Health and PE promote academic learning. Physical health allows students to function even better in classrooms. A good cardiovascular system developed from regular exercise promotes excellent blood and oxygen circulation. This means more nutrients circulate throughout the body, which includes the brain. This circulation produces longer attention span during classes.

5. Health and PE build self-esteem. Students, who are active in physical activities like basketball, volleyball, and running, to name a few, are more confident with themselves, according to most social school studies. In school, the physical education program introduces these sport activities to students allowing them to make choices in which sport areas they want to get involved.

6. Health and PE develop cooperation, teamwork and sportsmanship skills. Most physical education programs are holistic. The program allows students to interact together toward a common goal.

7. Health and PE promote a physically active lifestyle. The purpose of physical education is to instill in students, at an early age, the value of self-preservation and choosing a lifestyle that is good for both the mind and body.

Adapted from the position statement of the National Association for Sport and Physical Education.
Unless otherwise indicated, all courses are offered at all high schools. Classes are scheduled by semester so that the health and the physical education components occur and are graded separately. Students may elect to complete the required semesters of health and physical education in the same year or in any of the four years of high school.

**PHYSICAL EDUCATION I**
Grades 9-12 .5 Credit
Required for Graduation
Physical Education I builds on the fundamental skills and skill combinations learned in previous years. Students are given the opportunity to self-select wellness activities, demonstrate a depth of understanding of physical activity and show competence in lifetime physical activities. Students are responsible for skill mastery in four content areas: team sports, individual sports, leisure, and rhythmic activities. They analyze and apply biomechanical principles to skilled movement and physiological principles to achieve/improve physical fitness. Through record keeping, students are accountable for evaluating the benefits of physical activity. Students use appropriate social interactions and decision-making skills and demonstrate respect for differences in culture and abilities. Students understand and follow a physically active lifestyle that promotes good health and wellness for a lifetime.

**HEALTH EDUCATION I**
Grades 9-12 .5 Credit
Required for Graduation
The goal of health education is to help students acquire an understanding of health concepts and skills and apply them in making healthy decisions to improve, sustain, and promote personal, family, and community health. Health Education I focuses on knowledge, examines attitudes, and formulates lifestyle behaviors. Students integrate a variety of health concepts, skills, and behaviors to plan their personal health goals. Potential areas of study include wellness, injury prevention and first aid, body systems, disease prevention and hygiene, and family life education.

**PHYSICAL EDUCATION II**
Grades 9-12 .5 Credit
Required for Graduation
Physical Education II builds on the fundamental skills and skill combinations learned in previous years. Students are responsible for skill mastery in two content areas, reflecting student interest. They analyze and apply biomechanical principles to skilled movement and physiological principles to achieve/improve physical fitness. Students regularly evaluate and adjust goals that promote a lifetime of physical activity. Students use appropriate social interactions and decision-making skills and demonstrate respect for differences in culture and abilities. Students understand and follow a physically active lifestyle that promotes good health and wellness for a lifetime.

**HEALTH EDUCATION II**
Grades 10-12 .5 Credit
Prerequisite: Prior approval by High School Counseling Director is required for 9th graders to enroll. Students should see the high school counselor for information.
Required for Graduation
The goal of health education is to help students acquire an understanding of health concepts and skills and apply them in making healthy decisions to improve, sustain, and promote personal, family, and community health. Health Education II continues to build on the knowledge, attitudes, and lifestyle behaviors examined in Health I. Students integrate a variety of health concepts, skills, and behaviors to plan their personal health goals. Potential areas of study include substance abuse, gang and violence intervention, consumer health, community health and family life education.

Health Education II includes the classroom portion of Driver’s Education.

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Health Education II includes the classroom portion of Driver’s Education.

**Health Education II includes the classroom portion of Driver’s Education.**
AFRICAN CULTURE, MUSIC & DANCE
Grades 10-12 .5 Credit
Offered at WAHS
This course is for students interested in learning about the culture of West Africa through music and dance. Previous dance experience is not required. Students study dance styles and rhythms indigenous to various ethnic groups from Senegal, Gambia, Ghana, Guinea, and Mali as well as some Caribbean rhythms which have a West African influence. They also choreograph dances, design costumes based on traditional dress, build props, and perform for the school community.
Note: This course may not be substituted for PE I or PE II.
Fee: $10 for materials and supplies

FITNESS/YOGA
Prerequisite: Approval of instructor; PE I and/or PE II
Grades 11-12 .5 Credit
Offered at AHS
Fitness Yoga is an elective course for upperclassmen that have completed PE I and PE II. Students interested in Fitness Yoga must obtain instructor’s approval prior to the beginning of the semester. This class involves instruction in physical postures with the incorporation of breath control and conscious relaxation (known as Hatha Yoga). There is an emphasis on stress management, increased vitality, and physical well-being.
Note: This course may not substitute for PE I or PE II as a graduation requirement. Students who have not previously received credit for Weight Training will be given scheduling priority.

NUTRITION / EXERCISE / WELLNESS / FITNESS
Grades 9-12 .5 Credit
Offered at WAHS
This course is designed for students with an active interest in nutrition, exercise, wellness and personal fitness. Using the Healthy Eating Pyramid, the five components of Fitness and the 6 Aspects of Wellness along with their own personal goals, students learn and then create their personal fitness and wellness plan. Each block class consists of two parts: a short lecture and Physical Activity. The first part of the class is a lecture on materials combining nutrition, exercise methodology and wellness components. Students then utilize what they have learned and do a fitness assessment/evaluation. The 18-week result is a student-created year-long personal wellness plan based on their strengths, weaknesses and sport specific goals. The Monday classes are always a fitness circuit utilizing different exercises and equipment to give the students ideas for planning their own program.
Note: This course may not substitute for PE I or PE II as a graduation requirement. Students who have not previously received credit for Weight Training will be given scheduling priority.
No fee will be charged but appropriate attire for class is required.
INTRODUCTION TO SPORTS MEDICINE

**Prerequisite:** Teacher recommendation; Biology I

**Grades 11-12** 1 Credit

**Offered at MoHS**

This course offers an introduction to students interested in learning about careers in sports medicine such as: athletic training, physical therapy, medical doctor, exercise physiology, and nutrition. The course introduces students to the theory of prevention, care, and rehabilitation of athletic injuries. Areas to be covered include: human anatomy and physiology, assessment and evaluation of athletic injuries, prevention of injuries, treatment and rehabilitation of injuries, therapeutic modalities, conditioning principles, and nutrition. Students gain useful experience by learning taping and evaluative techniques and by assisting in the training room after school.

**Note:** This course may not substitute for PE I or PE II as a graduation requirement.

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FITNESS / WEIGHT TRAINING I

**Prerequisite:** PE I and/or PE II; Approval of instructor

**Grades 11-12** .5 Credit

This is a weightlifting class designed to teach weightlifting theory and technique in combination with personal fitness training. Students establish personal weightlifting goals and design and implement individual weightlifting programs. Student progress is monitored through self, peer, and instructor evaluation. A change of clothes is required for class.

**Note:** This course may not substitute for PE I or PE II as a graduation requirement. Students who have not previously received credit for Weight Training will be given scheduling priority.

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FITNESS / WEIGHT TRAINING II-IV

**Prerequisite:** PE I and PE II; Completion of Fitness/Weight Training I and teacher recommendation

**Grades 11-12** .5 Credit per semester

This course is designed as a continuation of the previously taken Fitness/Weight Training class. Students are required to demonstrate maximum lifts, keep a journal, lift independently and write a personal program.

**Note:** This course may not substitute for PE I or PE II as a graduation requirement. Students who have not previously received credit for Weight Training will be given scheduling priority.

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DRIVER’S EDUCATION

**Part I Classroom** (See Health II on p. 51)

During the student’s sophomore year, the 36-hour driver’s education classroom instruction component is provided as a part of the Health II curriculum. Students are cautioned not to be absent during this 6-week period, as excuses from parents and doctors do not exempt one from the DMV requirement for classroom instruction. Students may get a learner’s permit from DMV at 15½ years of age. Students should be scheduled for Behind-the-Wheel at around 16 years of age. Students may not get their license until they have had their permit for 9 months, and they are at least 16 years and 3 months old.

**Part II Behind-the-Wheel**

Tuition is charged for this portion of the class. Students must have completed or at least begun the 36-hour classroom portion before beginning Behind-the-Wheel training. Driver’s Education Behind-the-Wheel will be offered at the three comprehensive high schools in the morning before school and in the afternoon after school throughout the school year. Please call one of the three comprehensive high schools to take Behind-the-Wheel.

Effective July 1, 2007 Temporary Driver Licenses are issued for 180 days.

Parental Requirements and Driver’s Education

All parents must participate in a FREE Parent Seminar for Driver Education prior to your child taking the “Behind-the-Wheel” portion of driver’s education. The seminar is a requirement for families with students pursuing a driver’s license. Any student registering for Behind-the-Wheel training must provide the certificate of attendance for the Parent Seminar to participate. The seminars will be offered once a month at all three comprehensive high schools in the county. Register online at www.opendoors1.org, select class number 5001, or call (434) 975 9451 or (434) 975 9450.
“History Is Useful in the World of Work”
—Peter Sterns, American Historical Association

History is useful for work. Its study helps create good business people, professionals, and political leaders. The number of explicit professional jobs for historians is considerable, but most people who study history do not become professional historians.

Professional historians teach at various levels, work in museums and media centers, do historical research for businesses or public agencies, or participate in the growing number of historical consultancies. These categories are important—indeed vital—to keep the basic enterprise of history going, but most people who study history use their training for broader professional purposes.

Students of history find their experience directly relevant to jobs in a variety of careers as well as to further study in fields like law and public administration. Employers often deliberately seek students with the kinds of skills historical study promotes. The reasons are not hard to identify: students of history acquire, by studying different phases of the past and different societies in the past, a broad perspective that gives them the range and flexibility required in many work situations. They develop research skills, the ability to find and evaluate sources of information, and the means to identify and evaluate diverse interpretations.

Work in history also improves basic writing and speaking skills. It is directly relevant to many of the analytical requirements in the public and private sectors, where the capacity to identify, assess, and explain trends is essential. Historical study is unquestionably an asset for a variety of work and professional situations, even though it does not, for most students, lead as directly to a particular job slot, as do some technical fields. But history particularly prepares students for the long haul in their careers, its qualities helping adaptation and advancement beyond entry-level employment.

There is no denying that in our society many people who are drawn to historical study worry about relevance. In our changing economy, there is concern about job futures in most fields. Historical training is not, however, an indulgence; it applies directly to many careers and can clearly help us in our working lives.

Adapted from “History is Useful in the World of Work” by Peter Sterns at www.AmericanHistoricalAssociation.com

<table>
<thead>
<tr>
<th>Grade Level</th>
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<td>US History I</td>
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<td>US History II</td>
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<td>Civics and Economics</td>
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<td>World History I</td>
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<td>World History II</td>
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<td>AP European History (WAHS, MoHS)</td>
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<td>AP World History</td>
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<td>11</td>
<td>US History</td>
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<td>Dual Enrollment US History</td>
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<td>Government</td>
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<td>AP US Government</td>
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<td>Dual Enrollment Government</td>
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AFRICAN-AMERICAN STUDIES
Grades 10-12 .5 Credit
Offered at AHS, MoHS
This course focuses on the history, culture, arts and literature of Africans and African-Americans. The major goal of the course is to begin to develop an appreciation for the diversity of intellectual and artistic forms as a prelude to interdisciplinary multi-cultural activities.

AMERICAN STUDIES/VIRGINIA AND UNITED STATES HISTORY, Advanced Placement
Grade 11 1 Credit
American Studies is an integrated course designed to help students develop a comprehensive view of American literature, history, and culture. This course is highly rigorous and prepares students to take AP exams. Students concentrate on reading and analyzing historical material, weighing historical evidence and interpretation, reading and analyzing works of literature, and synthesizing and evaluating information in analytical writing.

AMERICAN STUDIES/VIRGINIA AND UNITED STATES HISTORY
Grade 11 1 Credit
American Studies is an integrated course designed to help students develop a comprehensive view of American literature, history, and culture. In gathering together the many threads of American culture, students leave this course with a better understanding of who they are and what it means to be an American. Through a variety of learning experiences, students discover relevant connections among movements in American art, literature, music, economics, and politics. This course integrated standards from English 11 and Virginia and United States History, thus preparing students for End-of-Course tests in each subject. Students may take these courses at different levels.

EUROPEAN HISTORY, Advanced Placement
Prerequisite: See School Counselor
Grades 10-12 1 Credit Offered at MoHS
AP European History is designed to challenge the highly motivated student who wants to experience college level work while still in high school. Students will study European History in global context from c. 1450 (high Renaissance) to the Contemporary Age. The goals of this course are to develop an understanding of some of the principal themes in modern European history and an ability to analyze historical evidence and to review the basic factual narrative. Students are expected to take the AP exam. The exam fee is approximately $87 per test. Students who do well on this test receive college credit or superior placement at participating colleges.

Note: Students may elect to take the Standards of Learning End-of-Course tests for Virginia and United States History and English 11. A score of 2 or better on the AP exam earns a verified credit.

Fee: $20-60 for reader.

Standards of Learning Test required. (SOL)
determine issues of concern to students, conduct meetings to elicit student opinions, write policy proposals, and represent student opinions to faculty and principals. They also plan and put on various student activities such as Spirit Week, The Multicultural Fair, Black History Month, and Community Service.

I .............................. 8288
II .............................. 8287
III .............................. 8289
IV .............................. 8290

MODEL UNITED NATIONS

Grades 10-12 1 Credit
Offered at MoHS

Model United Nations (MUN) is a simulation of the UN General Assembly and other multilateral bodies. In Model UN, students step into the shoes of ambassadors from UN member states to debate current issues on the organization's agenda. While playing their roles as ambassadors, student “delegates” make speeches, prepare draft resolutions, negotiate with allies and adversaries, resolve conflicts, and navigate the Model UN conference rules of procedure—all in the interest of mobilizing “international cooperation” to resolve problems that affect countries all over the world. Students are expected to attend a MUN conference but it is not mandatory. Those students attending a MUN conference are responsible for the registration fee.

.............................. 2825

PHILOSOPHY

Grades 10-12 1 Credit
Offered at MoHS, WAHS

This class explores western philosophy from the Greeks to the present. Students explore ethics, epistemology, civitas, religion, freedom and responsibility as central ideas or “themes.” Individual readings are required and activities include group discussions, problem solving and several short writing assignments.

.............................. 2950

LEADERSHIP

.5 or 1 Credit

Students improve their own personal leadership abilities by taking on responsibility for planning and implementing student government proposals and activities throughout the year. Students work with homeroom representatives and class officers in fulfilling the tasks of student government. They

.............................. 2900

Indicates PVCC Dual Enrollment

Dual Enrollment offers the student credit through Piedmont Virginia Community College (PVCC), as well as high school credit, for courses offered during the regular school day at the high school. Dual Enrollment/Credit courses are weighted as college/dual enrollment courses. See your school counselor for more information.
**PSYCHOLOGY**  
**Advanced Placement**  
**Prerequisite:** See School Counselor  
Grade 12  
This course provides an introduction to the psychological topics and principles taught in an introductory psychology class at the college level. Specific topics addressed are: the biological bases of behavior; sensation and perception; states of consciousness; learning, memory, and intelligence; language development; motivation and emotion; human development; personality theory; social psychology; abnormal psychology and methods of therapy; current issues and applications of the discipline. Emphasis will be placed on reading and writing, evaluating and conducting research and completing independent projects.  
Students are expected to take the AP exam. The exam fee is approximately $87 per test.

**SOCIOLOGY**  
Grades 10-12  
.5 Credit  
Offered at AHS, WAHS  
The study of sociology is designed to examine the ways people interact with one another. Sociology involves learning about relationships within groups, such as the social class; relationships within social institutions, such as the family; and the organization of societies. Additionally, sociology deals with varied and vital issues and social problems of society. The subject matter of sociology, therefore, is a study of man and his relationship to human groups and institutions.

**VIRGINIA AND UNITED STATES GOVERNMENT**  
Grade 12  
1 Credit  
Subject matter covers the rationale, foundations and operations of U.S. government. The interrelationships among the national, state, and local levels of government are presented. Economic systems are compared and other forms of government are studied.

**WORLD HISTORY to 1500**  
1 Credit  
This is a broad survey course designed to provide each student with a historical overview of the major political, social and economic events of the world. Students trace the major patterns of world history from the prehistoric period through the European Middle Ages. Through their studies, students learn to identify and analyze significant events, people and ideas throughout the course of history. Concepts, historical trends, and cycles are emphasized.

**WORLD HISTORY from 1500 to PRESENT**  
1 Credit  
This is a broad survey course designed to provide each student with a historical overview of the major political, social and economic events of the world. Students trace the major patterns of world history from about 1500 CE (Middle Ages) through current times. Through their studies, students learn to identify and analyze significant events, people and ideas throughout the course of history. Concepts, historical trends, and cycles are emphasized.

**WORLD HISTORY, Advanced Placement**  
**Prerequisite:** World History to 1500; See School Counselor  
Grades 10-12  
1 Credit  
Offered at AHS  
This course is an extensive and intensive examination of global societies, social structure, and the themes and processes that have shaped our world since the Middle Ages. The students learn the analytical and writing proficiencies necessary to succeed on the Advanced Placement World History exam.  
Students are expected to take the AP exam. The exam fee is approximately $87 per test. Students who do well on this test receive college credit or superior placement at participating colleges.

**Note:** This course may be taken in place of World History from 1500 to Present. Students electing this course either take the Standards of Learning test for World History from 1500 to Present or earn an AP score of 2 or better to earn a verified credit.
Who commonly uses math?
Everybody uses math whether they realize it or not. Shoppers use math to calculate change, tax, and sales prices. Cooks use math to modify the amount a recipe will make. Vacationers use math to find time of arrivals and departures to plan their trips. Homeowners use math to determine the cost of materials when doing projects.

Can I get a good job without learning a lot of math?
In all honesty, anything is possible. However, fewer labor-intensive jobs are available in today’s economy. Workers in those fields are being replaced by machinery and robotics. Even when those jobs are available, the pay is usually substandard. In order to gain successful employment, technical skills must be learned. Someone has to fix all of those machines and robots.

What are employers looking for?
Employers are looking for three basic traits. They want their employees to be able to reason, work with technical equipment, and communicate their thoughts with other employees. It is clear that math deals with developing reason and working with technical equipment. It is not so clear how math affects communication. Successfully using math can improve the ability to speak and write more clearly. Language, at least the type needed for work, tends to be extremely structured and mathematical ability helps deal with that structure.

Which professions use math?
Here is a small list of math-oriented careers:

- **Accountants** assist businesses by working on their taxes and planning for upcoming years. They work with tax codes and forms, use formulas for measuring interest, and spend a considerable amount of energy organizing paperwork.
- **Agriculturists** determine the proper amounts of fertilizers, pesticides, and water to produce bountiful foods. They must be familiar with mixture problems.
- **Architects** design buildings for structural integrity and beauty. They must know how to calculate loads for finding acceptable materials in design.
- **Biologists** use proportions to count animals as well as use statistics/probability.
- **Chemists** find ways to use chemicals to assist us which entails purifying water, dealing with waste management, researching superconductors, analyzing crime scenes, making food products. Mathematical equations are used often.
- **Computer Programmers** create complicated sets of instructions called programs/software to help us use computers to solve problems. They must have strong logic skills.
- **Engineers** (Chemical, Civil, Electrical, Industrial, Material) build products/structures/systems like automobiles, buildings, computers, machines, and planes–to name just a few examples. They cannot escape the frequent use of calculus!
- **Geologists** use mathematical models to find oil and study earthquakes.
- **Lawyers** argue cases using complicated lines of reason. That skill is nurtured by high level math courses. The also spend a lot of time researching cases.
- **Managers** maintain schedules, regulate worker performance, and analyze productivity.
- **Medical Doctors** must understand the dynamic systems of the human body. They research illnesses, carefully administer the proper amounts of medicine, read charts/tables, and organize their workload.
- **Meteorologists** forecast the weather for agriculturists, pilots, vacationers, and those who are marine dependent.
- **Military Personnel** carry out a variety of tasks ranging from aircraft maintenance to following detailed procedures.
- **Nurses** carry out the detailed instructions doctors give them. They adjust intravenous drip rates, take vitals, dispense medicine, and even assist in operations.
- **Politicians** help solve the social problems of our time by making complicated decisions.
- **Technicians** repair and maintain the technical gadgets we depend on like computers, TV’s, cars, refrigerators... They are always reading measuring devices, referring to manuals, and diagnosing system problems.
- **Tradesmen** (carpenters, electricians, mechanics, and plumbers) estimate job costs and use technical math skills specific to their field. They deal with slopes, areas, volumes, distances and must have an excellent foundation in math.

A true story from an AHS math teacher:
“When will I ever use this?” asked a student.
“Whenever you want to,” another student replied.

Adapted from “Why must I learn math?” by Mark Karadimos www.mathguide.com, October 28, 2009
### Mathematics Course Sequence

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<th>12th</th>
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<td>Math 6 Honors</td>
<td>Algebra 1 Honors</td>
<td>Geometry Honors</td>
<td>Algebra II Honors/Advanced</td>
<td>Math Analysis Honors</td>
<td>AP Calculus AB</td>
<td>AP Calculus BC</td>
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<td>Math 6 Advanced/Honors</td>
<td>Math 7 Advanced/Honors</td>
<td>Algebra I Honors</td>
<td>Geometry Advanced/Honors</td>
<td>Algebra II</td>
<td>College Alg/Trig Advanced</td>
<td>AP Statistics (MoHS, AHS)</td>
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<td>AFDA (MoHS)</td>
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<td>Geometry</td>
<td>Discrete Math (WAHS)</td>
<td>Applied Calc, PVCC Dual Enrollment</td>
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<td>Algebra II</td>
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<td>Math Analysis Honors</td>
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<td>AFDA Standard (MoHS, AHS)</td>
<td>College Alg/Trig Advanced</td>
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</table>

- **Mathematics**

- **Math 6 Honors**
- **Math 7 Advanced/Honors**
- **Math 6 Standard**
- **Math 7 Standard**

**Additional Courses**
- **Discrete Math (WAHS)**
- **AP Calculus AB**
- **Discrete Math (WAHS)**
- **AP Calculus BC**
- **AP Statistics**
- **AP Calculus AB**
- **AP Statistics**

**Advanced Placement Options**
- **AP Calculus AB**
- **AP Calculus BC**
- **AP Statistics**

**Specialized Courses**
- **AFDA Standard (MoHS, AHS)**
- **AFDA (MoHS)**
- **Algebra II**
- **Geometry**
- **Geometry (MoHS)**
ALGEBRA I
Prerequisites: Standard: 8th grade Math and teacher recommendation; Advanced: Teacher recommendation
Grades 9-12 1 Credit

Algebra I develops the properties and structure of the real-number system. Content includes linear equations, functions, inequalities, polynomials, special products, graphs, and quadratic equations. Graphing calculators are used and problem-solving techniques are stressed. A student can earn one math credit and one verified mathematics credit upon successful completion of the course and the SOL test.
Standard ................. 3130
Advanced .................. 3136
9th ......................... 3136

ALGEBRA I PART II
Grades 10-12 1 Credit

Part II is the second-year course for students who took Algebra I Part I. Students will explore topics from Algebra I Part 1 as well as systems of equations; linear, exponential, and quadratic functions; polynomials; factoring. A student can earn one math credit and one verified mathematics credit upon successful completion of the course and the SOL test for Algebra I.
Note: Students are required to take both Algebra I, Part I, and Algebra I, Part II, to satisfy the Algebra I graduation requirement.
Standard .................. 3132

ALGEBRA II
Prerequisites: Teacher recommendation; Algebra I
Grades 9-12 1 Credit

The development of the topics of Algebra I is continued in greater depth in Algebra II. There is a more in-depth examination of relations and functions including linear, quadratic, polynomial, radical, exponential, and logarithmic functions, conic sections, and matrices. The course also includes irrational numbers, properties of radicals, systems of linear equations and linear inequalities. There is extensive use of technology, including the graphing calculator, and emphasis is placed on problem solving. A student can earn one math credit and one verified mathematics credit upon successful completion of the course and the SOL test.
Most students need a “B or better” average in previous math courses to be successful in the following higher-level mathematics courses.
Standard .................. 3135
Advanced ................ 3102
Honors .................... 3104

ALGEBRA, FUNCTIONS, AND DATA ANALYSIS (AFDA)
Prerequisite: Algebra I
Grades 9-12 1 Math Credit

This course may be used to fulfill the requirements of Advanced Studies, Standard, and Modified Standard Diplomas.
Within the context of mathematical modeling and data analysis, students will study functions and their behaviors, systems of inequalities, probability, experimental design and implementation, and analysis of data. Data will be generated by authentic applications arising from science, business, and finance. Students will solve problems that require the formulation of linear, quadratic, exponential, or logarithmic equations, or a system of equations. The infusion of technology (graphing calculator and/or computer software) in this course will assist in modeling and investigating a transformational approach to functions and data analysis.

COLLEGE ALGEBRA AND TRIGONOMETRY
Prerequisites: Teacher recommendation; Algebra II and Geometry
Grades 11-12 1 Credit
Offered Standard at AHS & MoHS

The emphasis is on functions and their graphs, including the six trigonometric functions and their applications. After a review of functions and fundamental concepts of the real-number system, quadratic, polynomial, rational, exponential, and logarithmic functions are studied and graphed. The conics are studied in detail. Other topics studied include finding real and complex roots to polynomial equations, theory and application of logarithms, and partial fractions. The course emphasizes problem solving and the use of technology, including the graphing calculator, the CBL, and appropriate software.
Standard .................. 3171
Advanced .................. 3164

NOTE: In mathematics the county curriculum is the same regardless of level. Classes are to complete the same objectives each semester whether standard, advanced, or honors. It is the depth of theory and sophistication in the teaching and assignments that differentiates the levels of instruction. Due to the sequential nature of math courses, it is important that students have solid foundations in the algebra courses.

Unless otherwise indicated, all courses are offered at all high schools.

Standards of Learning Test required.
GEOMETRY
Prerequisites: Teacher recommendation; Algebra I
Grades 9-12 1 Credit
The properties of plane and three-dimensional figures are studied in this course. Specifically, students learn constructions; logical and deductive reasoning; angle relationships; parallel and perpendicular line relationships; congruence and similarity of polygons; triangle relationships and inequalities; and attributes and properties of quadrilaterals. Also included are properties and attributes of polygons; right triangle theorems and relationships; applications and practical problems involving circles and chords; tangents, secants; area, volume, and surface area of three dimensional objects; drawing two dimensional figures from three dimensional objects; perspective and scale drawings; coordinate geometry; symmetry, rotation, and reflection of an object. Technology is used to reinforce geometric concepts throughout the course. The Geometry SOL test is given upon completion of this course. A student can earn one math credit and one verified mathematics credit upon successful completion of the course and the SOL test.
Standard ................. 3143
Advanced .................. 3145
Honors ...................... 3147

MATH ANALYSIS (Pre-Calculus)
Prerequisite: Teacher recommendation; Algebra II or College Algebra and Trigonometry
Grades 11-12 1 Credit
This course covers many of the topics previously introduced in the algebra courses but in much greater depth and with more emphasis on derivation and analysis of function. The course includes a review of the properties of the real and rational number systems, the conic sections and their properties, and various functions and their properties. Students are introduced to several other types of functions including polynomial, logarithmic and exponential, and circular and trigonometric. Students work with complex numbers and with the polar coordinate system. The concept of the limit is introduced through analysis of sequence and series. Limits of functions are introduced and applied to the development of the derivative. Basic differential calculus and its applications are introduced as well. The course emphasizes problem solving and analysis by integrating the use of technology, including the graphing calculator.
Honors ...................... 3162

MATHEMATICAL INFERENCE AND APPLICATIONS (Discrete Math)
Prerequisite: Teacher recommendation and Geometry and Algebra II
Grades 12 1 Credit Offered at WAHS
Discrete mathematics is the mathematics of decision making. Connections between contemporary mathematics and modern society will be presented. There will be an emphasis on statistics as well as applications to business and management, social choices and decision making, information codes, patterns in growth, and patterns in art.
Standard ................... 3119
Advanced ................... 3120

CALCULUS Advanced Placement AB
Prerequisite: Teacher recommendation; Math Analysis
Grade 12 1 Credit
This course is concerned with developing the student’s understanding of the concepts of calculus and providing experience with its methods and application. It emphasizes a multi-representational approach to calculus, with concepts, results, and problems being expressed geometrically, numerically, analytically, and verbally. Technology, especially graphing calculators, is used regularly by students to reinforce the relationships among the multiple representations of functions, to confirm written work, to implement experimentation, and to assist in interpreting results. The topics studied in this course include functions, graphs, limits, asymptotic and unbounded behavior, continuity, concept and definition of derivative, derivative as a function, computation and applications of derivatives, slope fields, Riemann sums, interpretations and properties of definite integrals, applications of integrals, Fundamental Theorem of Calculus, and techniques of anti-differentiation.
The course prepares students to take the Advanced Placement AB Calculus exam given by ETS. Students are expected to take the AP exam. The AP exam fee is approximately $87 per test.

CALCULUS Advanced Placement BC
Prerequisite: Teacher recommendation-Math Analysis
Grade 12 1 Credit
Calculus BC will include a quick review of all topics covered in AB Calculus and sequentially will cover the additional topics not covered in the year long AB Course (parametric equations, polar curves, infinite series, L’Hopital’s Rule, and vectors). The course will also explore the rudiments of multivariable calculus and differential equations (sequential courses to BC Calculus). Similar to AB Calculus, BC is also concerned with developing the students’ understanding of the concepts of calculus and providing experience with its methods and application. This course emphasizes a multi-representational approach to calculus, with concepts, results, and problems being expressed graphically, numerically, analytically, and verbally.
Students are expected to take the BC AP exam. The exam fee is approximately $87 per test.

Pathways to Your Future—Guide to High School Credit Courses
Indicates PVCC Dual Enrollment
Dual Enrollment offers the student credit through Piedmont Virginia Community College (PVCC), as well as high school credit, for courses offered during the regular school day at the high school. Dual Enrollment/Credit courses are weighted as college/dual enrollment courses. See your school counselor for more information.

**CALCULUS, HONORS**
Prerequisite: Honors Math Analysis
Grade 12  1 Credit
Offered at MoHS
This course is concerned with developing the student's understanding of the concepts of calculus and providing experience with its methods and application. It emphasizes a multi-representational approach to calculus, with concepts, results, and problems being expressed geometrically, numerically, analytically, and verbally. Technology, especially graphing calculators, is used regularly by students to reinforce the relationships among the multiple representations of functions, to confirm written work, to implement experimentation, and to assist in interpreting results. The topics studied in this course include functions, graphs, limits, asymptotic and unbounded behavior, continuity, concept and definition of derivative, derivative as a function, computation and applications of derivatives, slope fields, Riemann sums, interpretations and properties of definite integrals, applications of integrals, Fundamental Theorem of Calculus, and techniques of anti-differentiation.

Students who are extremely successful in this course are expected either to take the AP Exam or to enroll in AP Calculus AB the following year.

**MTH 163 PRECALCULUS I**
Prerequisite: either a) MTH 04, b) a score of at least 50 on the College Algebra portion of the COMPASS Placement test, or c) a score of at least 520 on the Math II/SAT II
.5 Credit (3 College Credits)
Offered at AHS, MoHS
This course covers topics in algebra, such as equations and inequalities, graphing and functions, exponents and logarithms, systems of equations, inequalities, linear programming, and matrices. This course prepares students for MTH 271. The student is responsible for purchasing the college textbook associated with this course. The student is responsible for purchasing the college textbook associated with this course.

**MTH 164 PRECALCULUS II**
Prerequisite: either a) MTH 163, b) a score of at least 51 on the College Algebra portion of the COMPASS Placement test, or c) a score of at least 680 on the Math II/SAT II
.5 Credit (3 College Credits)
Offered at AHS, MoHS
This course presents trigonometry, analytical geometry, and sequences and series.

**COMPUTER SCIENCE A, Advanced Placement**
Prerequisite: Algebra II or programming
Grades 10-12  1 Credit
Offered at AHS, MoHS
This course covers a large subset of the “object-bases” approach to programming, emphasizing data abstraction and encapsulation in JAVA. AP Computer Science includes a more formal and a more in-depth study of algorithms and data structures (e.g. binary trees). The use of recursive data structures and dynamically allocated structures is fundamental to AP Computer Science.

Students are expected to take the AP exam. The exam fee is approximately $87 per test.

**MTH 173 CALCULUS WITH ANALYTIC GEOMETRY I**
Prerequisite: Honors Math Analysis, and either a) a score of at least 51 on the College Algebra portion and at least 50 on the Trigonometry portion of the COMPASS Placement Test, or b) a score of at least 680 on the Math II/SAT II
1 credit (5 college credits)
Offered at MoHS
This course presents analytic geometry and the calculus of algebraic and transcendental functions, including the study of limits, derivatives, differentials, and introduction to integration, along with their applications. It is designed for mathematical, physical, and engineering science programs.

The student is responsible for purchasing the college textbook associated with this course.
**MATH 174: CALCULUS II**

**Prerequisites:** MATH 173 or 3 or more in AP Calculus AB or BC

**Frequency:** Every semester

.5 Credit (4 College Credits)

**Offered at MoHS**

The course continues the study of analytic geometry and calculus of algebraic and transcendental functions including rectangular, polar, and parametric graphing, indefinite and definite integrals, methods of integration, and power series along with applications. Designed for mathematical, physical, and engineering science programs.

The student is responsible for purchasing the college textbook associated with this course.

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**MTH 271 APPLIED CALCULUS**

**Prerequisite:** Appropriate placement score or MTH 163 (or MTH 166).

.5 Credit (3 College Credits)

**Offered at AHS, MoHS**

This course covers topics in applied calculus for business, life sciences, and social sciences. Includes description and application of functions, limits, derivatives, graphing, and integrals.

The student is responsible for purchasing the college textbook associated with this course.

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**PROBABILITY AND STATISTICS**

**Prerequisite:** Teacher recommendation; Algebra II Grades 12

**Offered at AHS, WAHS**

The course presents topics in displaying and analyzing data using different statistical measurements and testing techniques. The topics in probability include methods of counting, distribution curves, and elementary probability. Quantitative literacy is incorporated and emphasized within the course. The topics in probability and statistics are at the concrete level using manipulatives and simulations.

Standard .................. 3190

Advanced .................. 3193

**SKILLS DEVELOPMENT MATH**

**Grade 9** .5 or 1 Elective Credit

An individualized and comprehensive review of the concepts and skills necessary to be successful in any standard level Algebra I course. Enrollment is limited.

Entrance into this course will be based on multiple criteria from among the following:

- enrollment Standard Level Algebra I
- failure on the 8th grade SOL in math
- scores obtained on the Iowa Algebra Aptitude Test (IAAT) at the fifth stanine and below
- completion of teacher recommendation form.

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II .......................... 3302

**MATH 277: CALCULUS III**

**Prerequisites:** MATH 174 or 4 or better AP BC calculus

.5 Credit (4 College Credits)

**Offered at AHS, MoHS**

This course presents vector valued functions, partial derivatives, multiple integrals, matrices, vector spaces, determinants, solutions of systems of linear equations, basis and dimension, eigen values, and eigen vectors. It is designed for mathematical, physical, and engineering science programs.

The student is responsible for purchasing the college expenses associated with this course.

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**STATISTICS, Advanced Placement**

**Prerequisite:** Teacher recommendation; Algebra II Grades 11-12

**Offered at AHS, MoHS**

Topics for the course are grouped around four themes—exploratory analysis, planning a study, and probability and statistical inference. Within each theme, the topics stress statistical thinking and use of technology, primarily the graphing calculator and computers with appropriate software. This course prepares students to take the Advanced Placement Statistics exam.

Students are expected to take the AP exam. The exam fee is approximately $87 per test.

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The introductory science courses do not have to be taken in the order below. However, science teachers do recommend the following sequence. A student who starts the science sequence with Earth Science has the possibility of earning a verified credit for the course and needs only one additional verified science credit. By starting with Biology, the science sequence must include Chemistry and Physics.

9th grade - Earth Science
10th grade – Biology
11th grade - Chemistry
12th grade - Physics

The math prerequisite for Biology I (Algebra I) allows the student to continue in the chemistry/physics sequence. Due to the mathematical nature of chemistry and physics, there are math prerequisites for these courses. Students have either completed or are taking Algebra II for enrollment in Chemistry. Students who elect to take Biology in the 9th grade must have teacher recommendation, Algebra I and are only eligible for Honors Biology.

NOTE: The county science curriculum is the same regardless of level. Classes are to complete the same basic objectives each semester regardless of level. It is the depth of theory and sophistication in the teaching and assignments that differentiates the levels of instruction.

Why study science?

Should gifted and talented students be the only students to receive a dose of science? What value does science have for all other students? Although not voiced in newspapers, these questions exist in almost every community we have traveled to. Science is a necessity because it makes our lives more comfortable, yet many still don’t see why most students need to learn science.

Science is a method, process, procedure, and system used to study the physical world. If you can see, feel, hear, taste, smell or measure something, science will investigate. Science will not take a stand on an issue, but will present facts. Scientists ask questions about how the world works, then gather data to answer the question. They should not attempt to find an answer to support any one person or group’s viewpoint because this clouds their perspective. Good science can only happen when an answer to a question is backed up by the data from many scientists. The Scientific Method and problem-solving behind scientific investigations is extremely important to students. The increasing reliance on computers and robots to minimize physical labor in the workplace will place more students in problem solving jobs, which science is well-suited for. Science courses teach students how to think.

A critical place for science knowledge is the process of “discernment.” From the young to the old, people constantly examine information and discover its truth. The ability to accomplish this with accuracy using science can make an individual successful. The internet is a great example. Anyone can put false information on the internet and make it look truthful. You need to be able to discern the difference between truth and fiction. Another example are those who twist facts creating misleading stories to make a sale. The better prepared students are with a knowledge of science, the more capable they are at distinguishing fact from fancy.

Sports are usually seen as a part of an education that leads to improved dexterity and physical skill. This is true for large motor skills, but science experiments can fine tune small motor skills, like using an eye dropper, pouring small amounts of liquid, or increased ability to measure. Finally, science is fun, exciting, and interesting. We live in an age where society has set very high standards for children’s behavior. Keeping kids busy in science activities will keep kids engaged many hours. Help your children in the discovery of science and it will bring great rewards to them as adults. Learn physics and they will drive safer; chemistry and they will cook better; biology and they will live healthier.

Adapted from “Why Learn Science?” on www.Wonderama.com
Students are required to take three courses from two different science disciplines for a Standard Diploma and four courses from three different science disciplines for an Advanced Studies Diploma. The disciplines are:

- Earth Science
- Biology
- Chemistry
- and Physics

Unless otherwise indicated, all courses are offered at all high schools.
ANATOMY AND PHYSIOLOGY
Prerequisites: Teacher recommendation; Biology; strong laboratory skills
Grades 10-12 1 Credit
Offered at AHS, MoHS
Anatomy and Physiology is offered to students who are interested in furthering their understanding of how an organism's tissues, organs, and systems function. Units to be covered include the brain and nervous system, respiration, the circulatory system, the actions of hormones, and mechanisms of disease. Topics are explored through discussion, numerous dissections and other laboratory experiments, and research.
Successful completion of this course fulfills the graduation requirements for science courses.
Fee: $25

ASTRONOMY
Prerequisite: College Algebra and Trigonometry recommended (may be taken concurrently); Advanced/Honors Physics recommended
Grades 10-12 1 Credit (8 College Credits)
Offered at WAHS, AHS
First Semester: Solar System Astronomy
The first semester topics include the history of astronomy from Aristotle to the present, types of telescopes, the scientific method in astronomy, formation of the solar system, planets, comets, asteroids and meteors. Laboratories for the first semester include Kepler's Law of Planetary Motion, Newton's Law of Universal Gravitation, The Moons of Jupiter, Electromagnetic Spectrum and others.
Second Semester:
Stellar Astronomy and Cosmology
The second semester topics include solar astronomy, sunspots and sunspot cycles, spectroscopy and element abundance in stars, stellar classification and types of stars, distance indicators, binary stars, stellar evolution, white dwarfs, neutron stars, black holes, history of cosmology, the big bang theory and the origin of the universe, cosmic microwave background, the expanding universe, fate of the universe. Laboratories for the second semester include Hubble's Law, Stellar Spectroscopy, Cepheid Variables, Orbits of Binary Stars, Hertzsprung-Russell Diagram and others.
The student is responsible for purchasing the college textbook associated with this course.

BIO 101 GENERAL BIOLOGY
Prerequisites: See your school counselor
1 Credit (4 College Credits)
Offered at MoHS
This course explores fundamental characteristics of living matter from the molecular level to the ecological community with emphasis on general biological principles. It introduces the student to the diversity of living organisms, their structure, function, and evolution. Lecture and lab must be taken concurrently.
The student is responsible for purchasing the college textbook associated with this course.

BIOLOGY I
Prerequisites Honors: Algebra I,
Advanced/Honors level: Geometry taken concurrently; teacher recommendation; only level available to incoming 9th graders
Grades 9-12: (Grade 9 with strong teacher recommendation) 1 Credit

This course increases the student's awareness of the living world. Major concepts such as cell structure and organization, metabolism, growth, reproduction, biochemistry, genetics, taxonomy, evolution, and ecology are emphasized. Laboratory experiments are used to teach conceptual themes.

Standard ........................................ 4312
Academic/Advanced .......................... 4318
Honors ........................................... 4316

BIOLOGY II—ENVIRONMENTAL SCIENCE, Advanced Placement
Prerequisite: Biology I, Algebra I, and teacher recommendation
Grades 10-12 1 Credit
Offered at AHS, MoHS
Advanced Placement (AP) Environmental Science is offered to students who are interested in taking the AP Environmental Science exam for college credit. The AP content outline is closely followed in this course. This outline is available from the College Board. Topics covered in the course include: interrelationships with the natural world, global changes and their consequences, human population dynamics, renewable and nonrenewable resources, and environmental ethics. Students are expected to take the AP exam. The exam fee is approximately $87 per test.

Note: Most students need a “B or better” average in math and science courses to be successful in this course.

BIOLOGY II—ANIMAL STUDIES
Prerequisite: Biology I
Grades 11-12 1 Credit
Offered at MoHS
This course is an introduction to the world of Zoology designed for 11th and 12th grade students. Students will survey the animal world from protists through chordates. Using a comparative approach, the study of each group will emphasize diversity, anatomy, evolutionary relationships, functional adaptations and environmental relationships. Extensive lab work, including dissections, will be an integral part of the course.
Successful completion of this course fulfills the graduation requirements for science courses.

Academic ........................................ 4325

Students in science classes would benefit from having their own calculator. Calculators are required in chemistry and physics classes.
CHEMISTRY I  
Prerequisites: Teacher Recommendation; Algebra, Functions, and Data Analysis or Algebra II taken concurrently.
Advanced or Honors: Teacher recommendation; Algebra II taken concurrently

Grades 10-12  1 Credit

Students are introduced to basic chemical concepts including composition of matter, atomic structure, periodic table, chemical bonding, formulas and equations, reacting quantities, gas laws, and acid base theory. The investigative skills used by practicing scientists are emphasized.

Standard .................. 4410
Advanced .................. 4412
Honors .................. 4414

CHEMISTRY II  
Advanced Placement  
Prerequisite: Teacher recommendation; Chemistry I and College Algebra and Trigonometry (or other higher math) taken concurrently

Grades 11-12  1 Credit

This advanced placement course is the equivalent of a non-calculus-based college freshman course. Theory is developed in the first part of the course. Descriptive chemistry and applied chemistry are developed in the second part. Principles and concepts are developed as interpretations of well-known compounds. Laboratory work is an integral part of the study.

Students are expected to take the AP exam. The exam fee is approximately $87 per test.

Note: Most students need a “B or better” average in math and science courses to be successful in this course.

.......................... 4440

EARTH SCIENCE  
Grades 9-12  1 Credit

This course stresses the major concepts of geology, oceanography, astronomy, and meteorology. The primary objectives are to enhance the student’s understanding and appreciation of earth’s systems and through this knowledge encourage students to become responsible citizens. Laboratory experiments are used to teach conceptual themes.

Standard .................. 4212
Academic/Advanced .......... 4215
Honors .................. 4216

ECOLOGY  
Prerequisite: Biology
Grades 10-12  1 Credit

Ecology is a laboratory science, from the biology discipline, dealing with the interrelationships of living things and their environments. Major topics include energy flow, bio-geochemical cycles, and biotic and abiotic influences on communities of living things, population dynamics, and an in-depth study of aquatic and terrestrial ecosystem pollution.

Successful completion of this course fulfills the graduation requirements for science courses.

Standard .................. 4102
Advanced .................. 4106

ENVIRONMENTAL SCIENCE: BIO 107  
Prerequisite: Biology
Grades 10-12  1 Credit (4 College Credits)

Offered at MoHS

This course presents the basic concepts of environmental science through a topical approach. It includes the scientific method, population growth and migration, use of natural resources and waste management, ecosystem interactions, recovery, evolution, biogeochemical cycles, photosynthesis and global warming, geological formations, atmosphere and climate, and ozone depletion. The student is responsible for purchasing the college textbook associated with this course.

.......................... 4112

PHY 201 GENERAL COLLEGE PHYSICS  
Prerequisites: See your school counselor
1 Credit (4 College Credits)
Offered at MoHS

This course teaches fundamental principles of physics. It covers mechanics, thermodynamics, wave phenomena, electricity and magnetism, and selected topics in modern physics.

The student is responsible for purchasing the college textbook associated with this course.

.......................... 4541

PHYSICS I  
Prerequisites: Standard; Teacher recommendation; Algebra, Functions, and Data Analysis or Algebra II taken concurrently

Advanced or Honors: Teacher recommendation; Algebra and Trigonometry or higher, taken concurrently; and Chemistry recommended

Grades 10-12  1 Credit

This course focuses on the forces and energy relationships in the physical world. Topics include measurement, motion, work, gravity, molecular kinetic theory, waves, light, electricity, and circuitry. General principles are stated in mathematical terms and students are expected to use the principles to solve problems. The investigative skills used by practicing scientists are emphasized.

Standard .................. 4510
Advanced .................. 4512
Honors .................. 4514

PHYSICS II, Advanced Placement  
Prerequisite: Teacher recommendation; Math Analysis, Physics I
Grades 11-12  1 Credit

This course is the equivalent of a non-calculus college course in physics. The course provides a foundation in physics for students in the life sciences, pre-medicine, and some applied sciences, as well as other fields not directly related to science. Utilizing a problem-solving approach, students study classical as well as modern physics.

Students are expected to take an AP exam. The exam fee is approximately $87 per test.

.......................... 4540
Course Descriptions

World Language Study is Brain Exercise
When we speak our native languages, we know where to place our verbs and adjectives without even thinking about it. When we study a world language, however, we have to really think about what we're doing.

World language study forces us to think about the structure and role of language in a whole new way. This deliberate examination of language gives your brain a workout. Many students find that their native language skills improve greatly after they've learned a world language.

World Language Fluency Will Improve Your College Application
Want to really stand out to college officials? Find a way to flaunt your world language skills.

It's true that most students take a world language in high school, so taking classes alone won't do the trick. But learning a world language and really putting it to work—that will make you stand out.

For example, you can volunteer to answer phones in your church or local community or you can assist second language students in a nearby pre-school or medical office.

If you don't like to work with the public, you can translate written work in your spare time. You can definitely use this to impress college officials.

Adapted from “Foreign Language Study: What’s the Point?” by Laura Fleming on www.About.com

BEGINNING RUSSIAN
Prerequisite: Teacher recommendation
.5 Credit per semester  Offered at MoHS
The Beginning Russian course emphasizes the essential skills of reading, speaking, and writing Russian. Mischa Fayer’s text “Basic Russian” and teacher-prepared handouts are used. This course is taught as independent study and may be offered during the zero period.

FRENCH I
Prerequisite: Teacher Recommendation
Grades 9-12  1 Credit
Strong emphasis is given to speaking, listening, reading and writing the language, as well as to studying the national culture. Basic vocabulary and essential grammar are taught to enable students to communicate in simple sentences in directed activities and survival settings. Students demonstrate understanding of words and expressions in varied contexts. They read for functional purposes and write paragraphs. The culture surrounding the language is studied and the students gain insight into the way of life of other people.

Workbook: $15-$35
Note: Most students need a “C or better” average in English/Language Arts courses to be successful in this course.

FRENCH II
Prerequisite: Teacher recommendation
Grades 9-12  1 Credit
This course continues to build on skills learned in the first year of the language. Students continue to work towards proficiency in all five-language skills: listening, reading, writing, studying culture, and a special emphasis on speaking.

Workbook: $15-$35
Note: Most students need a “C or better” average in French I (Advanced) to be successful in this course.

FRENCH III
Prerequisite: Teacher recommendation
Grades 9-12  1 Credit
Conducted almost entirely in the target language, this course refines speaking, reading, and writing skills as it emphasizes vocabulary building. There is also intense grammar work in preparation for the standardized tests that are encountered in the upper levels of the target language. Culture, geography, and history are included.

Workbook: $15-$35
Note: Most students need a “C or better” average in French II (Advanced) to be successful in this course.

FRENCH IV, HONORS
Prerequisite: Teacher recommendation
Grades 9-12  1 Credit
This class is conducted exclusively in the target language. As an honors course, it places great responsibility for progress on the student. Students are expected to engage in self-instruction, independent work, readings, projects, and research. Emphasis is on communication skills and competency in the language. Literature and culture are studied and grammar is reviewed.

Students are prepared for the SAT II Test.

Workbook: $15-$35
Note: Most students need a “B or better” average in French III (Advanced) to be successful in this course.

FRENCH V
Advanced Placement
Prerequisite: Teacher recommendation
Grade 12  1 Credit
The purpose of this class is to prepare students to take the Advanced Placement test for college credit. The emphasis is on listening to native speakers, reading literature intended for native speakers, writing compositions several paragraphs in length, and orally communicating facts and ideas. A thorough review of grammar is an integral part of this course.

Students are expected to take the AP exam. The exam fee is approximately $87 per test.

Workbook: $15-$35
Note: Most students need a “B or better” average in the French IV (Honors) to be successful in this course.

CHINESE
Prerequisite: Teacher Recommendation
Grades 9-12  1 Credit  Offered at MoHS
Strong emphasis is given to reading, writing and speaking Mandarin Chinese. Teng Ssu Yu’s “Conversational Chinese” and teacher-prepared handouts are used during the course.

Workbook: $15-$35
Note: Most students need a “C or better” average in English/Language Arts courses to be successful in this course.

I ................................. 5810
II ............................... 5820
III .............................. 5830
WORLD LANGUAGES

**GERMAN I**
Prerequisite: Teacher recommendation
Grades 9-12  1 Credit
Strong emphasis is given to speaking, listening, reading and writing the language, as well as to studying the national culture. Basic vocabulary and essential grammar are taught to enable students to communicate in simple sentences in directed activities and survival settings. Students demonstrate understanding of words and expressions in varied contexts. They read for functional purposes and write paragraphs. The culture surrounding the language is studied and the students gain insight into the way of life of other people.

Workbook: $15-$35

*Note:* Most students need a “C or better” average in English/Language Arts courses to be successful in this course.

..........................  5210

**GERMAN II**
Prerequisite: Teacher recommendation
Grades 9-12  1 Credit
This course continues to build on skills learned in the first year of the language. Students continue to work towards proficiency in all five-language skills: listening, reading, writing, studying culture, and a special emphasis on speaking.

Workbook: $15-$17

*Note:* Most students need a “C or better” average in German I (Advanced) to be successful in this course.

..........................  5220

**GERMAN III**
Prerequisite: Teacher recommendation
Grades 10-12  1 Credit
Conducted entirely in the target language, this course refines speaking, reading, and writing skills as it emphasizes vocabulary building. There is also intense grammar work in preparation for the standardized tests that are encountered in the upper levels of the target language. Culture, geography, and history are included.

Workbook: $15-$35

*Note:* Most students need a “C or better” average in German II (Advanced) to be successful in this course.

..........................  5230

**GERMAN IV, HONORS**
Prerequisite: Teacher recommendation
Grades 11-12  1 Credit
This class is conducted exclusively in the target language. As an honors course, it places great responsibility for progress on the student. Students are expected to engage in self-instruction, independent work, readings, projects, and research. Emphasis is on communication skills and competency in the language. Literature and culture are studied and grammar is reviewed. Students are prepared for the SAT II Test. German IV has an AP option. The exam fee is approximately $87 per test.

Workbook: $15-$35

*Note:* Most students need a “B or better” average in German IV (Honors) to be successful in this course.

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**GERMAN V**
Advanced Placement
Prerequisite: Teacher recommendation, German IV
Grades 11-12  1 Credit
The purpose of this class is to prepare students to take the Advanced Placement test for college credit. The emphasis is on listening to native speakers, reading literature intended for native speakers, writing compositions several paragraphs in length, and orally communicating facts and ideas. A thorough review of grammar is an integral part of this course. Students are expected to take the AP exam. The exam fee is approximately $87 per test.

*Note:* Most students need a “B or better” average in German IV (Honors) to be successful in this course.

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*Increase Your Career Opportunities With World Language Skills*

There’s no doubt about it: world language skills are becoming more and more important in today’s society.

In the United States, Spanish language skills are becoming essential in the workplace. In Canada, French skills are important. If you think about it, world language skills are important in most occupations these days, such as the following:

- **Academic World:** Professors often travel to foreign countries to attend conferences and share research.
- **Business:** Global communication is essential in business today.
- **Education:** Just think—you could teach anywhere in the world. Think big!

- **Communication and Media:** Your skills will be so valuable to any organization when you can increase communication. You may be interested in translating documents or working on TV or Radio.
- **Government Services:** Some studies show that 80 percent of government jobs require world language skills.
- **Travel Industry:** Do you love to travel? With an exciting career in the travel industry you can work and play at the same time!
- **Intelligence/Law Enforcement:** Ever dreamed of becoming an international spy? You can—if you study world language.

As you can see, world language skills will open your eyes to new sights, opportunities, and experiences around the world. The possibilities are endless!

Adapted from “Foreign Language Study: What’s the Point?” by Laura Fleming on www.About.com
JAPANESE I
Prerequisite: Teacher Recommendation
Grades 9-12 1 Credit
Strong emphasis is given to speaking, listening, reading and writing the language, as well as to studying the national culture. Basic vocabulary and essential grammar are taught to enable students to communicate in simple sentences in directed activities and survival settings. Students demonstrate understanding of words and expressions in varied contexts. They read for functional purposes and write paragraphs. The culture surrounding the language is studied, and the students gain insight into the way of life of other people.
Workbook: $15-$35
Note: Most students need a “C or better” average in English courses to be successful in this course.
Note: This course is offered as Independent Study through DOE Satellite program at MoHS.

JAPANESE II
Prerequisite: Teacher Recommendation
Grades 9-12 1 Credit
Continued emphasis is given to speaking, listening, reading and writing the language, as well as to studying the national culture. Vocabulary and essential grammar are taught to enable students to communicate in simple sentences in directed activities and survival settings. Students demonstrate understanding of words and expressions in varied contexts. They read for functional purposes and write paragraphs. The culture surrounding the language is studied, and the students gain insight into the way of life of other people.
Workbook: $15-$35
Note: Most students need a “C or better” average in Japanese II (Advanced) to be successful in this course.
Note: This course is offered as Independent Study through DOE Satellite program at MoHS.

JAPANESE III
Prerequisite: Teacher Recommendation
Grades 9-12 1 Credit
Offered at WAHS
Continued emphasis is given to speaking, listening, reading and writing the language, as well as to studying the national culture. Vocabulary and essential grammar are taught to enable students to communicate in simple sentences in directed activities and survival settings. Students demonstrate understanding of words and expressions in varied contexts. They read for functional purposes and write paragraphs. The culture surrounding the language is studied, and the students gain insight into the way of life of other people.
Workbook: $15-$35
Note: Most students need a “C or better” average in Japanese II (Advanced) to be successful in this course.

JAPANESE IV, HONORS
Prerequisite: Teacher Recommendation
Grades 9-12 1 Credit Offered at WAHS
This course will provide a learning community to further improve student's proficiency in Japanese, reading and listening comprehension, and writing and speaking skills. It especially focuses on speaking skills on various topics.

LATIN I
Prerequisite: A good knowledge of English grammar
Grades 9-12 1 Credit
Through elementary readings and sentences, students learn how the Latin language operates and how English grammar and vocabulary stem from it. Students learn the inflections, rules of syntax, and vocabulary needed for the comprehension and translation of simple Latin stories. Other activities include English to Latin translation, both oral and written; word study (derivatives and formation of words); and discussion of Roman civilization and mythology.
Note: Most students need a “C or better” average in English/Language Arts courses to be successful in this course.

LATIN II
Prerequisite: Teacher Recommendation
Grades 9-12 1 Credit
In the first half of Latin II, students review Latin I (if needed), including mastery of constructions necessary to comprehend and translate various Latin texts. Stories about Roman life and customs are translated in the second half of Latin II. Emphasis on vocabulary and word study is continued as well as the ability to translate English to Latin and an understanding and appreciation of the history and civilization of Rome through various readings.
Note: Most students need a “C or better” average in Latin I (Advanced) to be successful in this course.

LATIN III, HONORS
Prerequisite: Teacher recommendation
Grades 9-12 1 Credit
Students will read selections from various texts, including Pliny, Aulus Gellius, Apuleius and/or passages in Medieval Latin. Emphasis is placed on acquiring an understanding of Roman culture and an appreciation of Roman literature and on developing an increased English vocabulary through observing derivations. Studies in rhetoric and classical philosophy provide students with a valuable background for collegiate scholarship.
Note: Most students need a “B or better” average in Latin II (Advanced) to be successful in this course.
LATIN IV, HONORS

**Prerequisite:** Teacher Recommendation

**Grades 9-12**  
**1 Credit**

This course provides an in-depth study of the poetry of Virgil, Ovid, Catullus, Horace, and/or Martial. Mythology, Roman history, poetic devices, and linguistic forms peculiar to poetry are studied.

This course may be offered in alternate years

**Note:** Most students need a “B or better” average in Latin III (Advanced) to be successful in this course.

LATIN V Advanced Placement

**Prerequisite:** Teacher recommendation: Latin IV

**1 Credit**  
Offered at MoHS, WAHS

The purpose of this class is to prepare students to take the Advanced Placement test for college credit.

Students are expected to take the AP exam. The exam fee is approximately $87 per test.

**Note:** Most students need a “B or better” average in Latin IV (Honors) to be successful in this course.

SPANISH I

**Prerequisite:** Teacher Recommendation

**Grades 9-12**  
**1 Credit**

Strong emphasis is given to speaking, listening, reading and writing the language, as well as to studying the national culture. Basic vocabulary and essential grammar are taught to enable students to communicate in simple sentences in directed activities and survival settings. Students demonstrate understanding of words and expressions in varied contexts. They read for functional purposes and write paragraphs. The culture surrounding the language is studied, and the students gain insight into the way of life of other people.

Workbook: $15-$35

**Note:** Most students need a “C or better” average in English/Language Arts courses to be successful in this course.

SPANISH II

**Prerequisite:** Teacher Recommendation

**Grades 9-12**  
**1 Credit**

This course continues to build on skills learned in the first year of the language. Students continue to work towards proficiency in all five-language skills: listening, reading, writing, studying culture, and a special emphasis on speaking.

Workbook: $15-$35

**Note:** Most students need a “C or better” average in Spanish I (Advanced) to be successful in this course.

SPANISH III

**Prerequisite:** Teacher Recommendation

**Grades 9-12**  
**1 Credit**

Conducted almost entirely in the target language, this course refines speaking, reading, and writing skills as it emphasizes vocabulary building. There is also intense grammar work in preparation for the standardized tests that are encountered in the upper levels of the target language. Culture, geography, and history are included.

Workbook: $15-$35

**Note:** Most students need a “C or better” average in Spanish II (Advanced) to be successful in this course.

SPANISH IV, HONORS

**Prerequisite:** Teacher Recommendation

**Grades 9-12**  
**1 Credit**

This class is conducted exclusively in the target language. As an honors course, it places great responsibility for progress on the student. Students are expected to engage in self-instruction, independent work, readings, projects, and research. Emphasis is on communication skills and competency in the language. Literature and culture are studied and grammar is reviewed. Students are prepared for the SAT II Test.

Workbook: $15-$35

**Note:** Most students need a “B or better” average in Spanish III (Advanced) to be successful in this course.

SPANISH V:

**SPANISH LANGUAGE AP**

**Prerequisite:** Teacher Recommendation

**1 Credit**

The purpose of this class is to prepare students to take the Advanced Placement test for college credit. The emphasis is on listening to native speakers, reading literature intended for native speakers, writing compositions several paragraphs in length, and orally communicating facts and ideas. A thorough review of grammar is an integral part of this course.

Students are expected to take the AP exam. The exam fee is approximately $87 per test

**Note:** Most students need a “B or better” average in Spanish IV (Honors) to be successful in this course.

SPANISH LITERATURE AP

**Prerequisite:** Teacher Recommendation

**1 Credit**  
Offered at WAHS

An AP Spanish Literature course is comparable to a third-year college introduction to Hispanic literature course. It is based on a required reading list. The works on the list are of literary significance and represent various historical periods, literary movements, genres, geographic areas, and population groups within the Spanish-speaking world. The objective of the course is to help you interpret and analyze literature in Spanish.

Students are expected to take the AP exam. The exam fee is approximately $87 per test

**Note:** Most students need a “B or better” average in Spanish IV (Honors) to be successful in this course.
### General Information

## Graduation Requirements

### For students entering the 9th Grade prior to 2010

The requirements for a student to earn a diploma are those in effect when the student enters ninth grade for the first time. The Standards of Accreditation require that students take Standards of Learning end-of-course tests, or approved substitute tests, in specified courses in English, mathematics, science, and history/social sciences.

Courses requiring a Standards of Learning test are identified in the course description section.

#### Standard Diploma

For students entering the 9th grade prior to 2010

<table>
<thead>
<tr>
<th>Discipline Area</th>
<th>Standard Units of Credit Required</th>
<th>Verified Credits Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Mathematics</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Laboratory Science</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>World History I &amp; II / World Geography</td>
<td>1</td>
<td>1 of any of these</td>
</tr>
<tr>
<td>US/VA History</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>US/VA Government</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Health and Physical Education</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Fine Arts or Career Technical Education</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Electives</td>
<td>6</td>
<td>(2 credits must be sequential)</td>
</tr>
<tr>
<td>Student Selected Test</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

**Total Credits**: 22

**6**

#### Notes

1. At least two math courses from Algebra I, Geometry, Algebra II, or other mathematics courses above the level of algebra and geometry.
2. Science courses from at least two science disciplines—Earth Science, Biology, Chemistry or Physics.
3. This requirement must include at least 2 sequential elective courses that shall provide a foundation for further education or training or preparation for employment.
4. A student may utilize additional tests for earning verified credit in computer science, technology, and career and technical education.
5. Students who complete a career and technical education (CTE) program sequence and pass an examination or occupational competency assessment or credential or acquires a professional license in a CTE field, from the Commonwealth of Virginia, may substitute the certification, 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.

#### Advanced Studies Diploma

Entering the 9th grade prior to 2010

<table>
<thead>
<tr>
<th>Discipline Area</th>
<th>Standard Units of Credit Required</th>
<th>Verified Credits Required</th>
</tr>
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<tbody>
<tr>
<td>English</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Mathematics</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Laboratory Science</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>World History I &amp; II / World Geography</td>
<td>2</td>
<td>2 of any of these</td>
</tr>
<tr>
<td>US/VA History</td>
<td>1</td>
<td></td>
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<tr>
<td>US/VA Government</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>World Language</td>
<td>3 or 4</td>
<td></td>
</tr>
<tr>
<td>Health and Physical Education</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Fine Arts or Career and Technical Education</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Electives</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Student Selected Test</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

**Total Credits**: 24

**9**

#### Notes

1. Courses shall be at or above the level of algebra and shall include at least three different course selections from among: Algebra I, Geometry, Algebra II, or others above the level of Algebra II.
2. Science courses from at least three science disciplines—Earth Science, Biology, Chemistry or Physics.
3. A student may utilize additional tests for earning verified credits in computer science, technology, and career and technical education.
### GRADUATION REQUIREMENTS

#### for students entering the 9th grade in 2010 and beyond

The requirements for a student to earn a diploma are those in effect when the student enters ninth grade for the first time. The Standards of Accreditation require that students take Standards of Learning end-of-course tests, or approved substitute tests, in specified courses in English, mathematics, science, and history/social sciences.

Courses requiring a Standards of Learning test are identified in the course description section.

Verified credits are earned by passing both the course and the end of course Standards of Learning (SOL) test.

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#### Standard Diploma

For students entering the 9th grade in 2010 or beyond

<table>
<thead>
<tr>
<th>Discipline Area</th>
<th>Standard Units of Credit Required</th>
<th>Verified Credits Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>4</td>
<td>2</td>
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<tr>
<td>Mathematics 1</td>
<td>3</td>
<td>1</td>
</tr>
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<td>Laboratory Science 2, 3</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>World History I &amp; II / World Geography 6</td>
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<td>1 of any of these</td>
</tr>
<tr>
<td>US/VA History</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>US/VA Government</td>
<td>1</td>
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<td>Health and Physical Education</td>
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</tr>
<tr>
<td>Fine Arts or Career and Technical Education</td>
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<td></td>
</tr>
<tr>
<td>Economics or Personal Finance</td>
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<td></td>
</tr>
<tr>
<td>World Language, Fine Arts, or Career and Technical Education</td>
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<td></td>
</tr>
<tr>
<td>Electives 1</td>
<td>4</td>
<td>(2 credits must be sequential)</td>
</tr>
<tr>
<td>Student Selected Test 2</td>
<td>1</td>
<td></td>
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</tbody>
</table>

**Total Credits**: 22

**Notes**

1. Courses shall include at least three different course selections from among: Algebra I, Geometry, Algebra II, or others above the level of Algebra II.
2. Science courses from at least three science disciplines—Earth Science, Biology, Chemistry or Physics.
3. This requirement must include at least 2 sequential elective courses that shall provide a foundation for further education or training or preparation for employment.
4. A student may utilize additional tests for earning verified credits in computer science, technology, and career and technical education, economics, or other areas prescribed by the board.
5. Students who complete a career and technical education (CTE) program sequence and pass an examination or occupational competency assessment or credential or acquire a professional license in a CTE field, from the Commonwealth of Virginia, may substitute the certification, 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.

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#### Advanced Studies Diploma

Entering the 9th grade in 2010 or beyond

<table>
<thead>
<tr>
<th>Discipline Area</th>
<th>Standard Units of Credit Required</th>
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<tbody>
<tr>
<td>English</td>
<td>4</td>
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<tr>
<td>Mathematics 1</td>
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<td>2</td>
</tr>
<tr>
<td>Laboratory Science 2</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>World History I &amp; II / World Geography 6</td>
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<td>2 of any of these</td>
</tr>
<tr>
<td>US/VA History</td>
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<td></td>
</tr>
<tr>
<td>US/VA Government</td>
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<td></td>
</tr>
<tr>
<td>World Language (3 years of 1 language or 2 years each of 2 languages)</td>
<td>3 or 4</td>
<td></td>
</tr>
<tr>
<td>Health and Physical Education</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Fine Arts or Career and Technical Education</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Economics or Personal Finance</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Electives</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Student Selected Test 2</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

**Total Credits**: 26

**Notes**

1. Courses shall include at least three different course selections from among: Algebra I, Geometry, Algebra II, or others above the level of Algebra II.
2. Science courses from at least three science disciplines—Earth Science, Biology, Chemistry or Physics.
3. A student may utilize additional tests for earning verified credits in computer science, technology, and career and technical education, economics, or other areas prescribed by the board.
<table>
<thead>
<tr>
<th>Discipline Area</th>
<th>Standard Units of Credit Required</th>
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</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Mathematics &lt;sup&gt;1&lt;/sup&gt;</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Laboratory Science &lt;sup&gt;2&lt;/sup&gt;</td>
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<td>1</td>
</tr>
<tr>
<td>World History I &amp; II / World Geography</td>
<td>1</td>
<td>1 of any of these</td>
</tr>
<tr>
<td>US/VA History</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>US/VA Government</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Health and Physical Education</td>
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<td></td>
</tr>
<tr>
<td>Fine Arts or World Language</td>
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<td></td>
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<tr>
<td>Economics or Personal Finance</td>
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<td></td>
</tr>
<tr>
<td>Career and Technical Education &lt;sup&gt;3&lt;/sup&gt;</td>
<td>4</td>
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</tr>
<tr>
<td>Electives</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Student Selected Test &lt;sup&gt;4&lt;/sup&gt;</td>
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</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>22</strong></td>
<td><strong>6</strong></td>
</tr>
</tbody>
</table>

**NOTES**

1 At least two math courses from Algebra I, Geometry, Algebra, Functions and Data Analysis, Algebra II, or other mathematics courses above the level of Algebra II.
2 Science courses from at least three science disciplines – Earth Science, Biology, Chemistry or Physics, or completion of the sequence of science courses required for the International Baccalaureate Diploma.
3 Courses must include a career concentration as approved by the board. For concentrations that require less than four courses students must complete additional courses that are related to the student’s career concentration. Students who complete a career and technical education program sequence and pass an examination or occupational competency assessment or credential or acquires a professional license in a CTE field, from the Commonwealth of Virginia, may substitute the certification, 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. The examination or occupational competency assessment must be approved by the board. If a career concentration includes a specific assessment approved by the board, then the student must take this assessment.
4 A student may utilize additional tests for earning verified credit in computer science, technology, and career and technical education, economics, or other areas prescribed by the board.

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<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Laboratory Science &lt;sup&gt;2&lt;/sup&gt;</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>World History I &amp; II / World Geography</td>
<td>2</td>
<td>2 of any of these</td>
</tr>
<tr>
<td>US/VA History</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>US/VA Government</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>World Language &lt;sup&gt;3&lt;/sup&gt; (3 years of 1 language or 2 years each of 2 languages)</td>
<td>3 or 4</td>
<td></td>
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<tr>
<td>Health and Physical Education</td>
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<tr>
<td>Fine Arts or Economics</td>
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<td></td>
</tr>
<tr>
<td>Career and Technical Education &lt;sup&gt;4&lt;/sup&gt;</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Student Selected Test &lt;sup&gt;4&lt;/sup&gt;</td>
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<td>1</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>26</strong></td>
<td><strong>9</strong></td>
</tr>
</tbody>
</table>

<sup>*</sup>Any student who meets the requirements for both the Advanced Studies and the Advanced Technical Diploma may choose between the two diplomas.

**NOTES**

1 Courses shall be at or above the level of algebra and shall include at least three different course selections from among: Algebra I, Geometry, Algebra II, or others above the level of Algebra II.
2 Science courses from at least three science disciplines – Earth Science, Biology, Chemistry or Physics, or completion of the sequence of science courses required for the International Baccalaureate Diploma.
3 Courses must include a career concentration as approved by the board. For concentrations that require less than four courses students must complete additional courses that are related to the student’s career concentration. If a career concentration includes a specific assessment approved by the board, then the student must take this assessment.
4 A student may utilize additional tests for earning verified credits in computer science, technology, and career and technical education, economics or other areas as prescribed by the board.
MODIFIED STANDARD DIPLOMA

The Modified Standard Diploma program is intended for certain students at the secondary level who have a disability and are unlikely to meet the credit requirements for a Standard Diploma. Eligibility and participation in the Modified Standard Diploma program is determined by the student’s Individualized Education Program (IEP) team including the student, where appropriate, at any point after the student’s eighth grade year. The school must secure the informed written consent of the parent/guardian and the student to choose this diploma program after review of the student’s academic history and the full disclosure of the student’s options. The student who chooses to pursue a Modified Standard Diploma shall also be allowed to pursue the Standard or Advanced Studies Diploma at any time throughout that student’s high school career. Students pursuing the Modified Standard Diploma must pass the 8th grade Standards of Learning tests in reading and mathematics. The student shall not be excluded from courses and tests required to earn a Standard or Advanced Studies Diploma.

<table>
<thead>
<tr>
<th>Discipline Area</th>
<th>Standard Units of Credit Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>4</td>
</tr>
<tr>
<td>Mathematics 1</td>
<td>3</td>
</tr>
<tr>
<td>Science 2</td>
<td>2</td>
</tr>
<tr>
<td>History and Social Sciences 3</td>
<td>2</td>
</tr>
<tr>
<td>Health and Physical Education</td>
<td>2</td>
</tr>
<tr>
<td>Fine Arts or Career and Technical Education</td>
<td>1</td>
</tr>
<tr>
<td>Electives 4</td>
<td>6</td>
</tr>
</tbody>
</table>

**Total Credits** 20

**Notes**
1 Must include content from among applications of algebra, geometry, personal finance, and statistics.
2 Must include content from at least two of the following: applications of Earth Science, Biology, Chemistry or Physics.
3 Must include one unit of credit in U.S. and Virginia History and one credit in U.S. and Virginia Government.
4 Courses to satisfy this requirement shall include at least 2 sequential electives that shall provide a foundation for further education or training or preparation for employment.

SPECIAL DIPLOMA

A special diploma (called IEP or Individualized Education Program Diploma) is awarded to identified students with disabilities who require special education services and have completed the requirements of the Individualized Educational Program.

CERTIFICATE OF PROGRAM COMPLETION

In accordance with the requirements of the Standards of Quality, students who complete coursework defined by the local school board but have not earned the required verified credits for diplomas are awarded Certificates of Program Completion.

INDIVIDUALIZED STUDENT ALTERNATIVE EDUCATION PROGRAM (ISAEP)

An ISAEP provides an educational experience for students at-risk of dropping out of school that can prepare them for continued learning, successful employment, and responsible citizenship. A referral to ISAEP may be made by the student’s base school when a student demonstrates substantial need for an alternative program. The ISAEP recognizes that standard educational schedules and methods are not successful for all students. An ISAEP offers the opportunity of successful closure to one’s high school experience, and opens the possibility for continuing education.

In order to be considered for an ISAEP, students must:
- be currently enrolled in an Albemarle County High School
- be at least 16 and 1 year (6 or more credits) behind their entering class in credits earned
- achieve minimum entry test scores (a minimum of 410 on each of the 5 sections of the General Educational Development (GED) Practice Test and a minimum score of 7.5 on the Tests of Adult Basic Education (TABE) Reading Test.
- complete a visit to the program
- meet with their parent/guardian, school counselor and ISAEP Coordinator prior to enrollment in ISAEP
- complete a career-aptitude assessment

Each ISAEP has three components:
1 academic preparation for the GED exam,
2 career guidance and exploration, (demonstrate proficiency in Virginia’s Workplace Readiness Skills—13) and
3 occupational experience and/or training.

The program is located on the campus of Murray High School. Students who pursue an ISAEP follow a class and career/technical schedule based on their individual situation. See your school counselor for more information.

SEQUENTIAL ELECTIVES

Students qualifying for a Standard Diploma or a Modified Standard Diploma must successfully complete two sequential electives chosen from a concentration of courses that provide a foundation for further education, training, or preparation for employment. A course may satisfy the requirement for 1 credit in a fine art or career and technical education course and for sequential electives. Sequential elective courses may be taken in consecutive years or any two years of high school.
DIPLOMA SEALS

Students who demonstrate academic excellence and/or outstanding achievement may be eligible for one (or more) of the following awards:

Governor’s Seal for Advanced Studies Diploma
To receive the Governor’s Seal on an advanced studies diploma, students must complete the following:
• All requirements for an Advanced Studies Diploma with an average grade of “B” or better
• Successfully complete college-level coursework that will earn the student at least 9 transferable college credits in Advanced Placement (AP), International Baccalaureate (IB), Cambridge, or dual enrollment courses.

Virginia Board of Education Seal
Students who complete the requirements for a Standard Diploma or Advanced Studies Diploma with an average grade of “A” shall receive a Board of Education Seal on the diploma.

Virginia Board of Education’s Seal for Career and Technical Education
The Board of Education’s Seal for Career and Technical Education is awarded to students who complete the following:
• Requirements for a Standard or Advanced Studies Diploma
• Complete a prescribed sequence of courses in a career and technical education concentration or specialization
• And either 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.

Virginia Board of Education’s Seal of Advanced Mathematics and Technology
The Board of Education’s Seal of Advanced Mathematics and Technology is awarded to students who complete the following:
• Requirements for either a Standard or Advanced Studies Diploma
• 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; acquire 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.

Virginia Board of Education’s Seal for Excellence in Civics Education
The Board of Education’s Seal for Excellence in Civics Education is awarded to students who complete the following:
• Requirements for either a Standard or Advanced Studies Diploma
• Complete Virginia and United States History and Virginia and United States Government courses with a grade of “B” or higher
• Have good attendance and no disciplinary infractions as determined by local school board policies
• Complete 50 hours of voluntary participation in community service or extracurricular activities.*

* Activities that would satisfy the requirements of clause (iii) of this subdivision include: (a) volunteering for a charitable or religious organization that provides services to the poor, sick or less fortunate; (b) participating in Boy Scouts, Girl Scouts, or similar youth organizations; (c) participating in JROTC; (d) participating in political campaigns or government internships; or Boys State, Girls State, or Model General Assembly; or (e) 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.
VERIFIED CREDITS

- Verified credits are earned by passing both the course and the end of course Standards of Learning tests.
- The Board of Education has approved substitute tests for verified credit. See your school counselor for more information about these tests.
- Students who have not been successful on the Standards of Learning tests are offered remediation opportunities and/or tutorial programs in preparation for the Standards of Learning tests.

Locally Verified Credits for Standard Diploma Only

The Virginia Department of Education has adopted a policy that allows local school divisions to award locally verified credits in science and history/social science to students pursuing a Standard Diploma. To be eligible a student must have passed the high school course and not passed the related Standards of Learning test. Students must have taken the SOL test two times scoring within 375-399 on one administration of the test. Locally verified credits cannot be applied to an advanced diploma.

Students transferring into Albemarle County Schools

Students transferring into Albemarle County Public Schools from a home-school or private school environment, and wish to receive Carnegie unit credit for courses taken, shall be awarded credit if one of the following conditions is met:

- Courses taken through an accredited correspondence/on-line high school program that generates a student transcript that records the grade and credit for the course.

**Number of Verified Credits Required for Transfer Students**

<table>
<thead>
<tr>
<th>Discipline</th>
<th>Entering* during 9th or at the beginning** of 10th grade</th>
<th>Entering* during 10th or at the beginning** of 11th grade</th>
<th>Entering* during 11th or at the beginning** of 12th grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Math</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Science</td>
<td>1</td>
<td>2</td>
<td>***1</td>
</tr>
<tr>
<td>Social Studies</td>
<td>1</td>
<td>2</td>
<td>***1</td>
</tr>
<tr>
<td>Student Choice</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Diploma Type</td>
<td>STD ADV</td>
<td>STD ADV</td>
<td>STD ADV</td>
</tr>
<tr>
<td>Total</td>
<td>6</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>4</td>
<td>9</td>
</tr>
</tbody>
</table>

STD: Standard  ADV: Advanced
* “During” the school year—enters on or after the 27th school day.
** “Beginning” – before the 27th school day.
*** Students who complete a CTE program sequence and pass an exam or occupational competency assessment may substitute the certification, competency credential, or license for (1) the student selected verified credit and (2) either a science or history/social science verified credit when the credential confers more than one verified credit.

- A student portfolio that supports sufficient mastery of the content of a course for which credit is sought must be submitted to the Director of Secondary Education for review.
- The student will further be required to pass the SOL Exam if one is associated with the course.
- The student may additionally be required to pass a comprehensive exam for any course for which credit is sought. Credit granted on this basis will be recorded as “Pass” on the student transcript.

CORE COURSES / LEVELS

Levels have been identified for courses in English, mathematics, science, social studies, and world languages. Elective courses are not leveled but may require prerequisites. Teachers make recommendations for both course selection and placement based on student interest and performance. Students are urged to read course descriptions carefully and select the level that best suits their ability and needs and challenges them in each subject area. The decision should be reached through consultation with parents, school counselors, and teachers. Competitive colleges expect student transcripts to show enrollment in advanced offerings in each content area. The Albemarle County curricula are designed to allow students to complete the Standards of Learning as defined by the State of Virginia.

Levels in Courses

1. The Division offers the following levels of core courses (in addition to AP and dual enrollment): Standard, Academic, Advanced, and Honors. Individual high schools will use school improvement planning to determine course levels that may be effectively combined to increase opportunities for students to participate in higher course levels. Currently, the Academic level represents a combined level typically serving students enrolled in Standard and Advanced level courses.

2. This recommendation is intended to provide schools, through the school improvement process, the flexibility to combine levels of classes. The Academic level combines Advanced and Standard levels. Other options might be pursued through the school improvement process with the goal of ensuring opportunity and access to high-level curriculum and instruction for all students.

3. Elective courses will remain unlevelled.

The **Standard level** is offered as a college preparatory/school-to-work program. This level provides a broad base of knowledge and emphasizes realistic application of concepts.

The **Academic level** is offered as a college preparatory/school-to-work program. Students in Academic classes are engaged in a rigorous curriculum designed to stimulate and encourage academic growth and performance.

The **Advanced level** is offered as a college preparatory/school-to-work program. Students in Advanced classes are engaged in a rigorous curriculum designed to stimulate and encourage academic growth and performance.

The **Honors level** is designed for students demonstrating exceptional aptitude and achievement in the discipline, and a desire to pursue the curriculum beyond the Academic /Advanced level of study. Honors students are expected to be self-motivated, independent learners able to engage in self-instruction through independent reading, projects, and research.
STUDENT COURSE LOAD
All students through grade 12 shall maintain a full-day schedule of classes unless:

- A waiver is granted by the Superintendent/Designee.
- A recommendation of the principal and acceptance by a college or university has qualified a student to be released during school hours to take college or university courses. Tuition and transportation for these courses are the responsibility of the student.
- Students are taking college courses for dual credit according to the Virginia accreditation standards.

PROMOTION TO GRADE LEVELS
A student’s class standing in grades 9, 10, 11, and 12 is determined by the number of credits he/she has earned. (The credits assigned are included with each course description.)

Grade classifications for students are as follows:

**Grade 10:** 6 credits
**Grade 11:** 12 credits
**Grade 12:** minimum of 15 credits and enrolled in all required classes for graduation.

Note: According to Virginia State Law, students must attend school until their eighteenth (18th) birthday. However, students, who have not reached twenty years of age, on or before August 1st of the school year, have the right to a free public education. If English is a second language for the student, then the student may remain in school through the age of 21.

RANK IN CLASS, WEIGHTED GRADES, AND GRADE POINT AVERAGE
Grade Point Average (GPA)
GPA is determined by dividing the total grade points received by the total number of credits attempted in earning the points. The points are 4 for A, 3 for B, 2 for C, 1 for D, and 0 for F. The highest possible unweighted GPA is 4.0.

Weighted Grades/Rank in Class—current high school students entering grade 12 in 2010-11
Class rank is computed using the following weighted course system
- Standard level = no differential
- Advanced level = + .5
- Honors/Advanced Placement = + 1.0
- Classes are weighted only for the purpose of determining class rank

Students ranked in the top 10% of the school’s graduating class, on the basis of the un-weighted and weighted GPA, are recognized as “honor graduates.”

Weighted Grades for the entering 9-11th grade classes.
- Students entering the 9th grade in 2008-09, and beyond, will use the following weighted scale:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Standard / Academic / Advanced</th>
<th>Honors / AP Dual Credit / Dual Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>B</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>C</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>D</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>F</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

- Students ranked in the top 10% of the school’s graduating class, on the basis of the un-weighted and weighted GPA, are recognized as “honor graduates.”
- GPA will be calculated by dividing the total grade points received by the total number of credits attempted. Rank in class will be calculated using the weighted scale and reported by decile until February of the senior year when final class rank is determined.
ENRICHING YOUR HIGH SCHOOL EXPERIENCE

To encourage students to enrich their high school educational experience and to increase the rigor of the high school program the following choices are available:

The Advanced Placement (AP) program, offered by the College Board, enables students to pursue college-level studies while still in high school. AP offers students the opportunity to participate in a rigorous curriculum that exposes students to high academic intensity and quality. Based on their performance on AP Examinations, students may earn college credit. Advanced Placement courses are offered in these areas: English, mathematics, science, history, government, psychology, art history, art portfolio, and world languages. Based on the amount of work required outside of the classroom, students who want to enroll in more than three Honors and/or AP level classes per semester should carefully consider their academic, personal, and extracurricular activities. For more information, students should consult with their school counselor. Students are expected to take the AP exam. The exam fee is approximately $87 per test. Financial assistance is available for economically disadvantaged students. See a school counselor for more information.

Dual Credit may be earned for courses taken on the college campus. Credit appears on both the high school and college transcript. Students who pursue this option do so in order to add an enriching and rigorous course to their high school program of study that is not available at the high school. Students must obtain permission from the school principal/designee, prior to enrollment, to ensure appropriate high school credit for the college course. The student is responsible for the expenses associated with any course.

Distance Learning/Online Courses may also be taken to enrich and add rigor to the high school program. Courses pursued through this method are courses that are not generally offered at the high school. Students who pursue this option to repeat a course may do so at the Standard level. Students must obtain permission from the principal/designee prior to enrolling in a correspondence or online course to ensure the proper awarding of credit. All tests are administered under the supervision of the base high school during regular school hours. The student is responsible for all expenses associated with any course.

Note: At the present time, Health II includes instruction in Driver's Education and Health Standards of Learning. This is a graduation requirement and students must participate in the entire course. Students who have already completed Driver's Education and/or hold a driver's license are still required to participate in the entire Health II course.

Virtual Virginia School is a regular high school facilitated by the Virginia Department of Education. This virtual school offers a variety of Advanced Placement courses and non-AP courses, enabling students to earn college credit (through AP exams), regardless of their high school’s ability to offer college-level courses. Courses are available through satellite and Internet video streaming or online. There is a tuition charge for some courses. If a student drops a Virtual Virginia Course, there is a $75 fee. Courses pursued through this method are those courses that are not offered at the high school. Information on specific course offerings can be found at www.virtualvirginia.org.

Governor's Senior Year Plus: Early College Scholars Agreement is intended to allow and encourage eligible high school seniors to complete requirements for a high school diploma and concurrently earn at least 15 hours of transferable credits toward a college degree. This results in a more productive senior year and reduces the amount of college tuition for families. See your school counselor for more information.

Commonwealth Scholars Program is a national program that partners with businesses to motivate students to complete a rigorous course of study in high school. Course requirements for this program include the following: 4 English Courses, 3 mathematics courses (Algebra I, II and Geometry), 3 laboratory science courses (Biology, Chemistry and Physics) 3.5 history and social science courses (World History I, US/VA History, US/VA Government, World History II, AP European, Economics) and 2 years of a world language.

Commonwealth College Course Collaborative supports students earning college credit during the high school years. Most of Virginia's public colleges and universities now allow students to earn college credit, and fully transfer as requirements and degree credits, AP psychology and dual credit/enrollment classes in biology and U.S. History. More information can be found at: www.virginiamentor.org/planning/ccccc.asp

Senior/Junior Internship Program is designed to support long-range education and career goals. It is strongly recommended that all students consider an internship as part of their high school plan of study. This program provides the opportunity to experience “first-hand” a particular career or career field by interning with professionals in the community. Students who participate in an internship will earn .5 credit for each semester. See your school counselor for additional details.
ATHLETIC ELIGIBILITY/ NCAA INFORMATION

To be eligible for participation on athletic teams, the Virginia High School League (VHSL) requires that students be enrolled in five (5) credits (in progress) and have passed five (5) classes (earned credits for 5 classes) the previous semester. Repeating a course for which a passing grade was received does not count toward the required five courses for athletic eligibility.

First semester 9th graders are eligible on the basis of their promotion from the 8th grade the previous semester. See Athletic Handbook for details.

NCAA Division I — Academic Eligibility Requirements

If you are planning to enter a Division I College, in order to be classified as a “qualifier,” you are required to complete the following:

- Graduate from High School
- Successfully complete a core curriculum of at least 13 academic courses as follows:
  - English—4 years
  - Mathematics—2 years (at or above the level of Algebra I)
  - Natural or Physical Science—2 years (including at least one laboratory science)
  - English, Mathematics, Natural or Physical Science—1 additional year
  - Additional academic courses in any of the above areas or foreign language, computer science, philosophy, or non-doctrinal religion—2 years

- Have a core-course grade point average (based on a maximum of 4.0) and combined score on the SAT verbal and math sections or a sum score on the ACT based on the qualifier index scale. Please refer to the NCAA Guide for additional information on Division I, II, and III, and for partial qualifier requirements. Below is a partial list of the Division I qualifier index.

<table>
<thead>
<tr>
<th>Core GPA</th>
<th>ACT</th>
<th>SAT</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.5 and above</td>
<td>68</td>
<td>820</td>
</tr>
<tr>
<td>2.25</td>
<td>77</td>
<td>920</td>
</tr>
<tr>
<td>2.0</td>
<td>86</td>
<td>1010</td>
</tr>
</tbody>
</table>

See your counselor or www.eligibilitycenter.org for details.
ADD/DROP PROCEDURES

Course selection for the upcoming year is an opportunity for each student to think carefully about interests, achievement, educational and career goals. Give very serious consideration to this registration process. Research indicates that college success is strongly related to the level of difficulty of high school courses.

Teacher recommendations for course selection and placement are based on students' interests, ability and performance. School counselors use these recommendations to assist each student in planning a program of study and selection of courses for the next school year.

The Recommendation/Registration Forms are brought home for parental review and signature, and returned to the school counselor within three days of the planning conference. After the submission of the registration form, all requests for schedule changes must be made prior to the end of the current school year.

It may not be possible to accommodate requests for changes. Credits cannot be earned for courses entered after ten (10) school days have passed.

Other considerations:

- Due to budget and staffing guidelines, course selections are finalized by the end of the preceding school year.
- Selected courses may be offered during zero period, which meets before school. Students who register for these courses must provide their own transportation.
- A course is offered only if enough student requests support that course.
- Many courses list prerequisites for enrollment.
- Electives: alternate choices are made, as the school reserves the right to assign students the alternate choice if necessary or if scheduling conflicts occur.

- Corrections to student schedules must take place on or before the 10th day of each semester, without penalty or notation on the student’s transcript.
- Added Classes: Classes may only be added under extenuating circumstances and must take place on or before the 10th school day of each semester.
- Dropped Classes: Classes dropped after the 10th day of the semester, but before the 2nd week after the 1st interim period, will have a “W” (withdraw) noted on the transcript. The “W” is not factored into the GPA. Permission of the Director of School Counseling is required.
- Under extenuating circumstances, exceptions may be considered by the Director of School Counseling, with principal/designee approval, for a class to be dropped after the above dates. A withdrawn failure (WF) is recorded on the student’s transcript. The withdrawn failure (WF) is included in the GPA calculation.
- An appeal of this policy may be considered by the High School Counseling Director with principal/designee approval for the student to receive a Withdrawn (W) on their transcript and not have the course included in the GPA calculation.
- Dual Enrollment/College courses follow the college add/drop policy and deadlines.

Repeating a Course

All courses taken and grades earned are recorded on the transcript, including courses retaken. However, only the highest grade is calculated in the GPA.
**Career Planning**

All Albemarle County high school students will graduate with a Career Plan. With the support of school counselors and career specialists, students will develop and refine their career plan through the 4-year planning process. The plan allows students to:

- Establish short term and long term education/career goals;
- Assess personal interests as they relate to career decisions;
- Formulate thoughtful education plans that reflect rigorous academics in students’ chosen career directions;
- Participate in electives, extra-curricular activities, and community service projects supporting students’ career directions;
- Include internships or cooperative work experiences during the 11th or 12th grades.

---

**Career planning activities:**

As students mature, change, and develop new skills, they may modify their career plan to reflect their new interests and goals. The career interest inventories and activities the students complete during high school utilize the sixteen career clusters from the State Department of Education (see opposite page).

<table>
<thead>
<tr>
<th>Grade</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>9th grade</td>
<td>personal goal setting, career pathways survey (registration), curriculum expo, career plan update, year-end review</td>
</tr>
<tr>
<td>10th grade</td>
<td>personal goal setting, career pathways survey (registration), curriculum expo, career plan update, interest inventory, career fair, year-end review</td>
</tr>
<tr>
<td>11th grade</td>
<td>personal goal setting, internship/ CTE co-op experience, resume workshop, curriculum expo, career plan update, college and career prep workshop, year-end review</td>
</tr>
<tr>
<td>12th grade</td>
<td>personal goal review, internship/ CTE co-op experience, finalize college and career plans workshop, finalize resume, career plan update, exit survey</td>
</tr>
<tr>
<td>All Grades</td>
<td>outside learning experiences: clubs, sports, job shadowing, community service, part-time/summer job, student government, internship, teacher cadet</td>
</tr>
</tbody>
</table>
**VIRGINIA’S 16 CAREER CLUSTERS AND ALBEMARLE COUNTY’S 6 CAREER PATHWAYS**

Career clusters are broad groupings of occupations and broad industries based on commonalities among job responsibilities. They provide an organizing tool for students to investigate their career pathways. Career pathways help students identify a focused direction for planning a course schedule. The chart below shows how Virginia’s 16 Career Clusters relate to Albemarle County’s 6 Career Pathways.

<table>
<thead>
<tr>
<th>VIRGINIA’S 16 Career Clusters</th>
<th>ALBEMARLE COUNTY’S 6 Career Pathways</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Arts, AV, Technology &amp; Communications</td>
<td>1 Arts, AV, Communications &amp; Humanities</td>
</tr>
<tr>
<td>2 Health Science</td>
<td>2 Health Services</td>
</tr>
<tr>
<td>3 Hospitality &amp; Tourism</td>
<td>3 Hospitality &amp; Tourism Services</td>
</tr>
<tr>
<td>4 Education &amp; Training</td>
<td>4 Legal, Protective, Education, &amp; Human Services</td>
</tr>
<tr>
<td>5 Human Services</td>
<td>5 Business, Finance, Marketing &amp; Information Technology</td>
</tr>
<tr>
<td>6 Law, Public Safety, Corrections &amp; Security</td>
<td>6 Engineering, Technology, Science &amp; Natural Resources</td>
</tr>
<tr>
<td>7 Government &amp; Public Administration</td>
<td></td>
</tr>
<tr>
<td>8 Business Management &amp; Administration</td>
<td></td>
</tr>
<tr>
<td>9 Finance</td>
<td></td>
</tr>
<tr>
<td>10 Information Technology</td>
<td></td>
</tr>
<tr>
<td>11 Marketing, Sales, &amp; Service</td>
<td></td>
</tr>
<tr>
<td>12 Agriculture, Food &amp; Natural Resources</td>
<td></td>
</tr>
<tr>
<td>13 Architecture &amp; Construction</td>
<td></td>
</tr>
<tr>
<td>14 Transportation, Distribution &amp; Logistics</td>
<td></td>
</tr>
<tr>
<td>15 Manufacturing</td>
<td></td>
</tr>
<tr>
<td>16 Science, Technology, Engineering &amp; Mathematics</td>
<td></td>
</tr>
</tbody>
</table>

**How Can Career Pathways Help?**

Students will:
- have a clearer picture of their careers of interest
- select classes that match their career interests
- choose outside learning experiences that enrich career understanding
- develop foundational knowledge and career skills.
1. Arts, Audio/Visual Technology and Communication

Do you enjoy creative activities such as music, writing, entertainment and art?
Do you like to communicate ideas?
Are you a creative thinker?
Do you like to be in the spotlight?

<table>
<thead>
<tr>
<th>Diploma with some training</th>
<th>Certification or Associate degree</th>
<th>College degree plus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Printing Press Operator</td>
<td>Desktop Publisher, Stylist, Graphic Artist, Illustrator</td>
<td></td>
</tr>
<tr>
<td>Live Sound Engineer</td>
<td>TV/Broadcast Technician, Reporter, Newscaster</td>
<td></td>
</tr>
<tr>
<td>Actor, Dancer, Musician</td>
<td>Photographer, Film Editor, Director, Producer</td>
<td></td>
</tr>
</tbody>
</table>

2. Health Science

Do you like to care for sick people or help them stay well?
Are you interested in diseases and how the body works?
Do you like to provide a service to people?
Do you like science and lab experiments?

<table>
<thead>
<tr>
<th>Diploma with some training</th>
<th>Certification or Associate degree</th>
<th>College degree plus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dental Assistant</td>
<td>Dental Hygienist</td>
<td>Dentist</td>
</tr>
<tr>
<td>Home Health Aide, Nurse Aide</td>
<td>LPN, Registered Nurse, EMT</td>
<td>Physician</td>
</tr>
<tr>
<td>(Most careers in Health Science require certification or college degrees)</td>
<td>Surgical Technician, Biotechnology Technician</td>
<td>Radiation Therapist</td>
</tr>
<tr>
<td>Fitnes Trainer, Physical/Occupational Therapy Assistant</td>
<td>Physical/Occupational Therapist, Athletic Trainer</td>
<td></td>
</tr>
</tbody>
</table>

3. Hospitality and Tourism

Do you like to be with people?
Do you enjoy playing or teaching sports?
Do you like to travel or work at a resort?
Do you like to prepare meals?

<table>
<thead>
<tr>
<th>Diploma with some training</th>
<th>Certification or Associate degree</th>
<th>College degree plus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tour Guide</td>
<td>Travel Agent</td>
<td>Meeting/Event Planner</td>
</tr>
<tr>
<td>Guest Service Representative</td>
<td>Hotel Manager, Flight Attendant</td>
<td>Resort Manager, Marketing Manager</td>
</tr>
<tr>
<td>Cook, Caterer</td>
<td>Chef, Food Service Manager, Coach, Athletic Trainer</td>
<td></td>
</tr>
</tbody>
</table>

4. Education and Training

Are you friendly, outgoing, understanding?
Are you good at explaining things?
Do you enjoy helping others meet their goals?
Do you like working with adults or children?

<table>
<thead>
<tr>
<th>Diploma with some training</th>
<th>Certification or Associate degree</th>
<th>College degree plus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child Care Worker</td>
<td>Teacher's Aide, Preschool Teacher, Fitness Instructor</td>
<td>Teacher</td>
</tr>
<tr>
<td>Library Assistant</td>
<td>Most careers in this field require 4+ years of college.</td>
<td>School Counselor, Career Counselor, School Psychologist</td>
</tr>
</tbody>
</table>

5. Human Services

Do you like to help people solve problems or reach goals?
Do you enjoy providing a service to others?
Is it important to you to do something that helps others?
Are you friendly, outgoing, a good listener, and understanding?

<table>
<thead>
<tr>
<th>Diploma with some training</th>
<th>Certification or Associate degree</th>
<th>College degree plus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Care Aide, Hair Stylist</td>
<td>Welfare Eligibility Worker &amp; Interviewer</td>
<td>Psychologist</td>
</tr>
<tr>
<td>Customer Service</td>
<td>Social &amp; Human Services Assistant</td>
<td>Social worker</td>
</tr>
<tr>
<td>Recreation Worker</td>
<td>Residential Counselor</td>
<td>Counselor</td>
</tr>
</tbody>
</table>

6. Law, Public Safety, Corrections and Security

Are you good at dealing with people in stressful situations?
Are you good at controlling your own emotions to help others?
Are you a good role model?

<table>
<thead>
<tr>
<th>Diploma with some training</th>
<th>Certification or Associate degree</th>
<th>College degree plus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Security Guard</td>
<td>Police Officer</td>
<td>Lawyer</td>
</tr>
<tr>
<td>Emergency Dispatcher</td>
<td>Paralegal</td>
<td>Federal Investigator</td>
</tr>
<tr>
<td>Firefighter</td>
<td>Private Investigator</td>
<td>Probation Officer</td>
</tr>
</tbody>
</table>

Most careers in this field require 4+ years of college.
7. Government and Public Administration

- Are you interested in politics?
- Do you like to help the public?
- Do you want to get involved in local issues?

<table>
<thead>
<tr>
<th>Diploma with some training</th>
<th>Certification or Associate degree</th>
<th>College degree plus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Postal clerk</td>
<td>Eligibility worker</td>
<td>County Manager</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Urban/Regional Planner</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Legislative Staffer</td>
</tr>
</tbody>
</table>

The range of government jobs is enormous. Workers can obtain a job in an assortment of career paths.

8. Business, Management and Administration

- Have you ever thought of starting your own business?
- Do you like working in an office and using computers?
- Do you enjoy dealing with the public?
- Do you communicate effectively?

<table>
<thead>
<tr>
<th>Diploma with some training</th>
<th>Certification or Associate degree</th>
<th>College degree plus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer Service Representative</td>
<td>Office Manager</td>
<td>Human Resources Specialist</td>
</tr>
<tr>
<td>Bookkeeper, Fiscal Tech.</td>
<td>Property Manager</td>
<td>Management Analyst</td>
</tr>
<tr>
<td>Medical Administrative Specialist</td>
<td>Administrative Assistant, Secretary</td>
<td>Chief Executive Officer (CEO)</td>
</tr>
</tbody>
</table>

9. Finance

- Do you like working with numbers?
- Do you have excellent attention to detail?
- Do you enjoy tracking financial information?

<table>
<thead>
<tr>
<th>Diploma with some training</th>
<th>Certification or Associate degree</th>
<th>College degree plus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bank Teller</td>
<td>Securities Sales Assistant</td>
<td>Accountant, Loan Officer</td>
</tr>
<tr>
<td>Customer Service Representative</td>
<td>Tax preparer</td>
<td>Stock Broker, Bank Manager</td>
</tr>
<tr>
<td>Insurance Clerk</td>
<td>Insurance Sales Agent</td>
<td>Insurance Adjuster, Underwriter</td>
</tr>
</tbody>
</table>

10. Information Technology

- Are you patient, precise, and attend to detail?
- Do you like working with people to solve their computer problems?
- Are you curious about how computer games and programs work?
- Are you a logical and analytical thinker?

<table>
<thead>
<tr>
<th>Diploma with some training</th>
<th>Certification or Associate degree</th>
<th>College degree plus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Operator</td>
<td>Computer Technical Support Specialist</td>
<td>Computer Software Engineer, Geographic Information Systems Specialist (GIS)</td>
</tr>
<tr>
<td>Computer Service Technician</td>
<td>Computer Network Support Technician</td>
<td>Computer Game Developer, Web Developer</td>
</tr>
</tbody>
</table>

11. Marketing, Sales and Service

- Do you enjoy providing a service to others?
- Can you write a good advertisement?
- Do you like helping people find solutions to their problems?
- Are you good at persuading people to make purchases and convincing people to do things?
- Are you a creative person?

<table>
<thead>
<tr>
<th>Diploma with some training</th>
<th>Certification or Associate degree</th>
<th>College degree plus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicle Sales</td>
<td>Real Estate Sales Agent</td>
<td>Sales Engineer, Buyer</td>
</tr>
<tr>
<td>Sales Associate/Asst. Manager</td>
<td>Sales Representative, Store/Regional Manager</td>
<td>Marketing Manager, Public Relations Representative</td>
</tr>
<tr>
<td>Telemarketer</td>
<td>Auctioneer, Merchandise Display Artist</td>
<td>Market Research Analyst</td>
</tr>
</tbody>
</table>

Career clusters are broad groupings of occupations and broad industries based on commonalities among job responsibilities. They provide an organizing tool for students to investigate their career pathways. Career pathways help students identify a focused direction for planning a course schedule.
12. Agriculture, Food and Natural Resources

Do you have a green thumb?
Do you love working with animals?
Is protecting the environment one of your passions?

<table>
<thead>
<tr>
<th>Diploma with some training</th>
<th>Certification or Associate degree</th>
<th>College degree plus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vet Assistant, Dog Groomer</td>
<td>Veterinary Technician</td>
<td>Veterinarian, Zookeeper</td>
</tr>
<tr>
<td>Arborist, Logger</td>
<td>Environmental Technician, Water Treatment Plant Operator</td>
<td>Agricultural Scientist, Environmental Scientist</td>
</tr>
<tr>
<td>Groundskeeper, Florist</td>
<td>Farm Manager, Fish/Game Warden</td>
<td>Forester, Park Ranger</td>
</tr>
</tbody>
</table>

13. Architecture and Construction

Do you like reading blueprints and drawing building structures?
Do you appreciate the pride of building something that will stay?
Do you like working with tools?
Are you willing to work outside?

<table>
<thead>
<tr>
<th>Diploma with some training</th>
<th>Certification or Associate degree</th>
<th>College degree plus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architectural Drafter</td>
<td>Architectural Technician</td>
<td>Architect</td>
</tr>
<tr>
<td>Floor Layer, Construction Helper</td>
<td>Electrician, Plumber, Carpenter</td>
<td>Construction Manager</td>
</tr>
<tr>
<td>Surveying Assistant</td>
<td>Civil Engineering Tech., Surveyor Technician</td>
<td>Civil Engineer</td>
</tr>
</tbody>
</table>

14. Transportation, Distribution & Logistics

Do you like working on or operating cars, trucks, or airplanes?
Do you understand how things work?
Do you like moving or handling material, products, or people?

<table>
<thead>
<tr>
<th>Diploma with some training</th>
<th>Certification or Associate degree</th>
<th>College degree plus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dispatcher</td>
<td>Flight Attendant</td>
<td>Pilot</td>
</tr>
<tr>
<td>Auto Detailer, Tire Repairer/Changer</td>
<td>Automobile or Auto Body Technician, Aircraft Mechanic</td>
<td>Air Traffic Controller</td>
</tr>
<tr>
<td>Shipping and Receiving Clerk</td>
<td>Flight Attendant</td>
<td>Manager: Airport, Fleet</td>
</tr>
</tbody>
</table>

15. Manufacturing

Do you like working with tools, machinery, and computers?
Do you enjoy seeing the concrete result of your work?
Do you enjoy designing and problem solving?

<table>
<thead>
<tr>
<th>Diploma with some training</th>
<th>Certification or Associate degree</th>
<th>College degree plus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forklift Operator</td>
<td>Laser technician</td>
<td>Industrial Production Manager</td>
</tr>
<tr>
<td>Welder</td>
<td>Production Planner</td>
<td>Quality Assurance Specialist</td>
</tr>
<tr>
<td>Quality Control Technician</td>
<td>Electronic Technician</td>
<td>Environmental Engineer</td>
</tr>
</tbody>
</table>


Do you have talent in math and science?
Are you good at abstract thinking?
Do you like to explore new ideas and test them methodically?

<table>
<thead>
<tr>
<th>Diploma with some training</th>
<th>Certification or Associate degree</th>
<th>College degree plus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drafter</td>
<td>Electronics Technician</td>
<td>Engineer</td>
</tr>
<tr>
<td>Field Crew Surveyor</td>
<td>Civil Engineering Technician, Aerospace Technician</td>
<td>Meteorologist</td>
</tr>
<tr>
<td>Lab Animal Caretaker</td>
<td>Biological Technician</td>
<td>Anthropologist, Archaeologist</td>
</tr>
</tbody>
</table>

Creativity and Career Planning

A well-rounded high school program involves the careful planning of electives. The 21st century work place requires new multi-disciplinary and creative ways of thinking about problem solving and managing knowledge. Thus, we suggest that students think creatively about how a variety of electives, especially in the areas of art, business, engineering, and human relations, can support their career goals. Remember, creativity is the key to success in the 21st century!
### Pathways to Your Future—Guide to High School Credit Courses

Please refer to the Course Description Section for complete listings, descriptions, prerequisites and credits information.

**Albemarle High School (AHS)**

<table>
<thead>
<tr>
<th>Pathway / Course</th>
<th>Grade Level</th>
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<tbody>
<tr>
<td><strong>ART, AV, COMMUNICATION &amp; HUMANITIES</strong></td>
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<tr>
<td>African American Studies</td>
<td>10-12</td>
</tr>
<tr>
<td>Art I-IV</td>
<td>9-12</td>
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<tr>
<td>Art History (AP)</td>
<td>11-12</td>
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<tr>
<td>Ceramics I-III</td>
<td>9-12</td>
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<tr>
<td>Chorus I-IV</td>
<td>9-12</td>
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<tr>
<td>Concert Band I-IV</td>
<td>9-12</td>
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<tr>
<td>Concert Strings</td>
<td>9-12</td>
</tr>
<tr>
<td>Contemporary Literature</td>
<td>9-12</td>
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<tr>
<td>Creative Writing I-IV</td>
<td>9-12</td>
</tr>
<tr>
<td>Debate</td>
<td>9-12</td>
</tr>
<tr>
<td>Design, Multimedia &amp; Web Tech I- II</td>
<td>11-12</td>
</tr>
<tr>
<td>Drama I-IV</td>
<td>9-12</td>
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<tr>
<td>Early Morning Marching Band</td>
<td>9-12</td>
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<tr>
<td>Fashion Design</td>
<td>11-12</td>
</tr>
<tr>
<td>Film Studies/Filmmaking</td>
<td>10-12</td>
</tr>
<tr>
<td>Graphic Communications</td>
<td>9-12</td>
</tr>
<tr>
<td>History Through Film</td>
<td>10-12</td>
</tr>
<tr>
<td>Humanities I-III</td>
<td>9-12</td>
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<tr>
<td>Intro to Interior Design &amp; Housing</td>
<td>11-12</td>
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<tr>
<td>Jazz Band I-IV</td>
<td>9-12</td>
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<tr>
<td>Journalism I-IV</td>
<td>9-12</td>
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<tr>
<td>Men's Ensemble/Women's Ensemble I-IV</td>
<td>9-12</td>
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<tr>
<td>Music Industry Technology CATEC</td>
<td>11-12</td>
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<tr>
<td>Photographic Explorations</td>
<td>10-12</td>
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<tr>
<td>Photography I-III</td>
<td>10-12</td>
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<tr>
<td>Psychology &amp; AP</td>
<td>11-12</td>
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<tr>
<td>Show Choir I-IV</td>
<td>9-12</td>
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<tr>
<td>Sociology</td>
<td>10-12</td>
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<tr>
<td>Speech &amp; Communication</td>
<td>9-12</td>
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<tr>
<td>String Ensemble I-IV</td>
<td>9-12</td>
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<tr>
<td>Studio Art Portfolio (AP)</td>
<td>11-12</td>
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<tr>
<td>Symphonic Band I-IV</td>
<td>9-12</td>
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<tr>
<td>TV Production I-III</td>
<td>9-12</td>
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<tr>
<td>Vocal Jazz</td>
<td>9-12</td>
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<tr>
<td>Wind Ensemble</td>
<td>9-12</td>
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<tr>
<td>World Languages</td>
<td>9-12</td>
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<tr>
<td>Yearbook I-IV</td>
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**BUSINESS, FINANCE, MARKETING & INFORMATION TECHNOLOGY**

<table>
<thead>
<tr>
<th>Pathway / Course</th>
<th>Grade Level</th>
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</thead>
<tbody>
<tr>
<td>Business Cooperative Ed.</td>
<td>11-12</td>
</tr>
<tr>
<td>Business Management</td>
<td>9-12</td>
</tr>
<tr>
<td>Computer Info Systems I-II</td>
<td>9-12</td>
</tr>
<tr>
<td>Computer Science I-II</td>
<td>9-12</td>
</tr>
<tr>
<td>Computer Science Adv.</td>
<td>10-12</td>
</tr>
<tr>
<td>Design, Multimedia &amp; Web Tech I-II</td>
<td>9-12</td>
</tr>
<tr>
<td>Graphic Communications</td>
<td>9-12</td>
</tr>
<tr>
<td>Marketing I-II</td>
<td>10-12</td>
</tr>
<tr>
<td>Marketing Cooperative Ed.</td>
<td>11-12</td>
</tr>
<tr>
<td>Principles of Business &amp; Marketing</td>
<td>9-12</td>
</tr>
<tr>
<td>Psychology</td>
<td>11-12</td>
</tr>
<tr>
<td>Speech &amp; Communication</td>
<td>9-12</td>
</tr>
<tr>
<td>Sports, Enter. &amp; Rec. Marketing I-II</td>
<td>11-12</td>
</tr>
<tr>
<td>Statistics (AP)</td>
<td>11-12</td>
</tr>
<tr>
<td>World Languages</td>
<td>9-12</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pathway / Course</th>
<th>Grade Level</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ENGINEERING, TECHNOLOGY, SCIENCE &amp; NATURAL RESOURCES</strong></td>
<td></td>
</tr>
<tr>
<td>Air Force Junior ROTC I-IV @MoHS</td>
<td>9-12</td>
</tr>
<tr>
<td>Architectural Drawing/ARC 121 PVCC</td>
<td>10-12</td>
</tr>
<tr>
<td>Auto Body Technology I-II CATEC</td>
<td>11-12</td>
</tr>
<tr>
<td>Auto Service Technology I-II CATEC</td>
<td>10-12</td>
</tr>
<tr>
<td>Biology II AP</td>
<td>11-12</td>
</tr>
<tr>
<td>Biology II AP Environmental Science</td>
<td>10-12</td>
</tr>
<tr>
<td>Building Trades I-II CATEC</td>
<td>10-12</td>
</tr>
<tr>
<td>Computer Science</td>
<td>9-12</td>
</tr>
<tr>
<td>Computer Science Adv.</td>
<td>10-12</td>
</tr>
<tr>
<td>Computer Science AP A</td>
<td>11-12</td>
</tr>
<tr>
<td>Design, Multi-Media &amp; Web Tech I-II</td>
<td>9-12</td>
</tr>
<tr>
<td>Ecology</td>
<td>10-12</td>
</tr>
<tr>
<td>Engineering Drawing/DR 140 PVCC</td>
<td>10-12</td>
</tr>
<tr>
<td>Horticulture Science/Landscaping</td>
<td>10-12</td>
</tr>
<tr>
<td>Masonry I-II</td>
<td>10-12</td>
</tr>
<tr>
<td>Math 163 Pre-Calculus I</td>
<td>PVCC</td>
</tr>
<tr>
<td>Math 164 Pre-Calculus II</td>
<td>PVCC</td>
</tr>
<tr>
<td>Math 271 Applied Calculus</td>
<td>PVCC</td>
</tr>
<tr>
<td>Math 277 Calculus III</td>
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</tr>
<tr>
<td>Math Analysis</td>
<td>11-12</td>
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<tr>
<td>Physics II (AP)</td>
<td>11-12</td>
</tr>
<tr>
<td>Statistics (AP)</td>
<td>11-12</td>
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<tr>
<td>Technical Drawing</td>
<td>9-12</td>
</tr>
<tr>
<td>World Languages</td>
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</table>

**HEALTH SCIENCES**

<table>
<thead>
<tr>
<th>Pathway / Course</th>
<th>Grade Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anatomy &amp; Physiology</td>
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<tr>
<td>Biology II (AP)</td>
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<tr>
<td>Calculus (AP) BC</td>
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<tr>
<td>Chemistry II (AP)</td>
<td>11-12</td>
</tr>
<tr>
<td>Dental Assistant I CATEC</td>
<td>11-12</td>
</tr>
<tr>
<td>Early Childhood Dev.</td>
<td>9-12</td>
</tr>
<tr>
<td>Emergency Medical Tech. &amp; Firefighter CATEC</td>
<td>11-12</td>
</tr>
<tr>
<td>Fitness/Weight Training I-IV</td>
<td>11-12</td>
</tr>
<tr>
<td>Fitness/Yoga</td>
<td>11-12</td>
</tr>
<tr>
<td>Health &amp; Medical Sciences I-II</td>
<td>9-12</td>
</tr>
<tr>
<td>Life Management I-II</td>
<td>9-12</td>
</tr>
<tr>
<td>Math 163 Pre-Calculus I</td>
<td>PVCC</td>
</tr>
<tr>
<td>Math 164 Pre-Calculus II</td>
<td>PVCC</td>
</tr>
<tr>
<td>Math 271 Applied Calculus</td>
<td>PVCC</td>
</tr>
<tr>
<td>Math 277 Calculus III</td>
<td>PVCC</td>
</tr>
<tr>
<td>Nurse Aide CATEC</td>
<td>11-12</td>
</tr>
<tr>
<td>Pharmacy Tech</td>
<td>11-12</td>
</tr>
<tr>
<td>Physics II AP</td>
<td>11-12</td>
</tr>
<tr>
<td>Practical Nursing CATEC</td>
<td>11-12</td>
</tr>
<tr>
<td>Psychology &amp; AP</td>
<td>11-12</td>
</tr>
<tr>
<td>Sociology</td>
<td>10-12</td>
</tr>
<tr>
<td>World Languages</td>
<td>9-12</td>
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</tbody>
</table>

All students are expected to have a community based learning experience by the time they graduate.

**HOSPITALITY & TOURISM SERVICES**

<table>
<thead>
<tr>
<th>Pathway / Course</th>
<th>Grade Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barbering I-II CATEC</td>
<td>11-12</td>
</tr>
<tr>
<td>Business Management</td>
<td>9-12</td>
</tr>
<tr>
<td>Computer Info Systems I-II</td>
<td>9-12</td>
</tr>
<tr>
<td>Culinary Arts I-II CATEC</td>
<td>11-12</td>
</tr>
<tr>
<td>Debate</td>
<td>9-12</td>
</tr>
<tr>
<td>Early Childhood Dev.</td>
<td>9-12</td>
</tr>
<tr>
<td>Emergency Medical Tech. &amp; Firefighter</td>
<td>11-12</td>
</tr>
<tr>
<td>Fitness/Weight Training I-IV</td>
<td>11-12</td>
</tr>
<tr>
<td>Fitness/Yoga</td>
<td>11-12</td>
</tr>
<tr>
<td>Leadership I-II</td>
<td>9-12</td>
</tr>
<tr>
<td>Mediation Training I- II</td>
<td>9-12</td>
</tr>
<tr>
<td>Practical Law</td>
<td>10-12</td>
</tr>
<tr>
<td>Psychology</td>
<td>11-12</td>
</tr>
<tr>
<td>Sociology</td>
<td>10-12</td>
</tr>
<tr>
<td>Speech &amp; Communication</td>
<td>9-12</td>
</tr>
<tr>
<td>Virginia Teachers for Tomorrow I-II</td>
<td>11-12</td>
</tr>
<tr>
<td>World Languages</td>
<td>9-12</td>
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</table>

**LEGAL, PROTECTIVE, EDUCATION & HUMAN SERVICES**

<table>
<thead>
<tr>
<th>Pathway / Course</th>
<th>Grade Level</th>
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</thead>
<tbody>
<tr>
<td>Air Force Junior ROTC I-IV @MoHS</td>
<td>9-12</td>
</tr>
<tr>
<td>Barbering I-II CATEC</td>
<td>11-12</td>
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<tr>
<td>Business Management</td>
<td>9-10</td>
</tr>
<tr>
<td>Computer Info Systems I-II</td>
<td>9-12</td>
</tr>
<tr>
<td>Culinary Arts I-II CATEC</td>
<td>9-12</td>
</tr>
<tr>
<td>Debate</td>
<td>9-12</td>
</tr>
<tr>
<td>Early Childhood Dev.</td>
<td>9-12</td>
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<tr>
<td>Emergency Medical Tech. &amp; Firefighter</td>
<td>11-12</td>
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<tr>
<td>Fitness/Weight Training I-IV</td>
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<tr>
<td>Fitness/Yoga</td>
<td>11-12</td>
</tr>
<tr>
<td>Health &amp; Medical Sciences I-II</td>
<td>9-12</td>
</tr>
<tr>
<td>Leadership I-II</td>
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<tr>
<td>Mediation Training I- II</td>
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<td>Practical Law</td>
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<td>Psychology</td>
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<td>Sociology</td>
<td>10-12</td>
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<tr>
<td>Speech &amp; Communication</td>
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<tr>
<td>World Languages</td>
<td>9-12</td>
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</tbody>
</table>

All students are expected to have a community based learning experience by the time they graduate.

**Business or Marketing**

<table>
<thead>
<tr>
<th>Pathway / Course</th>
<th>Grade Level</th>
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<tbody>
<tr>
<td>Cooperative Education</td>
<td>11 - 12</td>
</tr>
<tr>
<td>Independent Study</td>
<td>9 - 12</td>
</tr>
<tr>
<td>Internship</td>
<td>11 - 12</td>
</tr>
<tr>
<td>Smart Money Management/ Economics</td>
<td>11 - 12</td>
</tr>
</tbody>
</table>
Please refer to the Course Description Section for complete listings, descriptions, prerequisites and credits information.

Monticello High School (MoHS)

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**BUSINESS, FINANCE, MARKETING & INFORMATION TECHNOLOGY**

| Business Management                                   | 9-12        |
| Classes in Art                                        |             |
| Computer Info Systems I, II                           | 9-12        |
| Computer Science I, II                                | 10-12       |
| Design, Multi-Media & Web Tech. I, II                  |             |
| Digital Imaging Technology I, II                      |             |
| Marketing I, II                                       | 10-12       |
| Model United Nations                                  | 10-12       |
| Office Specialist I, II                               | 9-12        |
| Principles of Business & Marketing                    | 9-10        |
| Sports, Entertainment, & Rec. Marketing I, II         | 10-12       |
| Yearbook I-V                                          |             |
| World Languages: (French, Spanish, Russian, Chinese, Latin, German, Japanese) | 9-12 |
| Cooperative Education (Coop) - Business & Marketing  | 11-12       |

**LEGAL, PROTECTIVE, EDUCATION & HUMAN SERVICES**

| Air Force Junior ROTC I-IV                             | 9-12        |
| Barbering I, II (CATEC)                               | 11-12       |
| Business Management                                    | 9-12        |
| Classes in Art                                        |             |
| Computer Info, Systems I, II                          | 9-12        |
| Cosmetology I, II (CATEC)                             |             |
| Debate                                                | 9-12        |
| EMT & Firefighter (CATEC)                             |             |
| Health & Medical Sciences I, II                       | 10-12       |
| Mediation Training I                                  |             |
| Model United Nations                                  | 10-12       |
| Principles of Business & Marketing                    | 9-10        |
| Psychology & AP                                       |             |
| Speech & Communication                                | 9-12        |
| Virginia Teachers for Tomorrow I-II (PVCC-DE)         |             |
| World Languages: (French, Spanish, Russian, Chinese, Latin, German, Japanese) | 9-12 |
| Cooperative Education (Coop) - Business & Marketing  | 11-12       |

**HEALTH SERVICES**

| Anatomy & Physiology                                   | 10-12       |
| Biology II Animal Studies                              | 11-12       |
| Culinary Arts (Introduction)                          | 10-12       |
| Culinary Arts (Introduction-CATEC)                    | 11-12       |
| Dental Assistant (CATEC)                              |             |
| EMT & Firefighter (CATEC)                             | 11-12       |
| Fitness/Weight Training I-IV                           |             |
| Health & Medical Sciences I, II                       |             |
| Life Management I                                     | 9-12        |
| Mediation Training I                                  |             |
| Nurse Aide (CATEC)                                    |             |
| Pharmacy Technician (CATEC)                           | 11-12       |
| Physics I                                             |             |
| Physics II AP                                         | 11-12       |

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| World Languages: (French, Spanish, Russian, Chinese, Latin, German, Japanese) | 9-12 |
| Air Force Junior ROTC I-IV | 9-12 |
| EMT I-IV                  | 9-12 |
| *ESOL                      | 9-12 |
| Summer Camps (CATEC)       | 8-10 |

All students are encouraged to have a community based learning experience by the time they graduate. For example: Internship, Cooperative Education, Virginia Teachers For Tomorrow, Independent Study, Community Service, Work Study.
Please refer to the Course Description Section for complete listings, descriptions, prerequisites and credits information.

**Western Albemarle High School (WAHS)**

www.k12albemarle.org/WesternAlbemarleHS

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**ADDITIONAL ELECTIVES, ENRICHMENT & Career Experiences That Can Apply To Any Career Pathway**

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*Education for Employment & Work Study .......... 9-12
*ESOL ......................................... 9-12
*AVID ......................................... 9-12
* admission criteria apply

All students are expected to have community-based learning experiences before graduation: independent study, community service, internship, cooperative education, Virginia teachers for tomorrow, teacher fellows
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VISION
All learners believe in their power to embrace learning, to excel, and to own their future.

MISSION
The core purpose of Albemarle County Public Schools is to establish a community of learners and learning, through rigor, relevance, and relationships, one student at a time.

VALUES
EXCELLENCE: We believe in meaningful learning that stretches people to the frontiers and boundaries of their abilities.

YOUNG PEOPLE: We believe young people deserve the best we have to offer. Each individual child is capable and has the right to safety, mutual respect, and learning.

COMMUNITY: We believe in our collective responsibility to work together in a cooperative effort to achieve common goals by building communities of practice, establishing a high quality learning community, and listening to the community.

RESPECT: We believe in treating all individuals with honor and dignity.

GOALS
Goal 1: Prepare all students to succeed as members of a global community and in a global economy.

Goal 2: Eliminate the Achievement Gap.

Goal 3: Recruit, retain and develop a diverse cadre of the highest quality teaching personnel, staff and administrators.

Goal 4: Achieve recognition as a world-class educational system.

Goal 5: Establish efficient systems for development, allocation and alignment of resources to support the Division’s vision, mission and goals.