

# Course Offerings

2009-2010

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# AGRICULTURE

## **8006 Agriculture I 80061 Agriculture I**

**Grade: 8th Grade  
Grades: 9th grade and above**

Agricultural Mechanics and Basic Plant Science is a one year, single period, occupational preparation course usually offered at the eight or ninth grade level. Approximately one-half of the course is devoted to agricultural mechanics, with emphasis placed on skill development in basic metals, introduction to arc welding, sheet metal working, soldering and brazing, plan reading and sketching, and hand woodworking. The remainder of the course emphasizes the development of competencies in plant sciences, rural and urban living, leadership, and resource conservation.

## **8008 Agriculture II**

**Grades: 9<sup>th</sup> and above**

Agricultural Mechanics and Basic Animal Science is a one year, single period, occupational preparation course usually offered at the ninth-grade level. Approximately one-half of the course is devoted to agricultural mechanics, with emphasis placed on skill development in fundamentals of electricity, arc welding, small engines, power woodworking, and wood and metal preservatives. Instruction is also provided in animal science and further development of competencies in rural and urban living, leadership, and resource conservation. (Cost for supplies on optional student-selected projects: \$8.00 - \$10.00) Prerequisite: Agriculture I.

## **8010 Agriculture III**

**Grades: 10<sup>th</sup> and above**

Prerequisite 8008 Agriculture II

Agricultural Production Technology is a one year occupational preparation course offered at the tenth or eleventh grade level. When only single periods are provided, greater emphasis is placed on individualized instruction and supervised occupational experience programs. The major emphasis in the agricultural production program is the attainment of competencies in one or more areas of plant science, animal science, soil science, agricultural business management, and agricultural mechanization, based upon the student's employment objective. The course includes appropriate instruction in agricultural mechanics, crop production, farm family living, and basic farm management. Supervised occupational experience programs and leadership training are important parts of the course. (Cost for supplies on optional student-selected projects: \$8.00 - \$10.00). Prerequisite: Agriculture II.

## **8012 Agriculture IV**

**Grades: 11<sup>th</sup> and above**

Prerequisite 8010 Agriculture III

Agricultural Production Management is a one year occupational course offered at the eleventh or twelfth grade levels. The course includes instruction in agricultural mechanics, with emphasis placed on the application of mechanical skills to farm power and machinery, soil and water management, supervised farming programs, and leadership training. (Cost for supplies on optional student-selected projects: \$8.00 - \$60.00). Prerequisite: Agriculture III.

## **8014 Agriculture V**

**Grade: 12<sup>th</sup>**

Prerequisite 8012 Agriculture IV

Operating the Farm Business is a one year occupational preparation course offered at the twelfth grade level. Much of the curriculum may be provided through individualized instruction. Emphasis is placed on establishment in farming, farm management, and occupational experience. Students receive instruction in adjusting, operating, and maintaining farm machinery and equipment and in planning and constructing farm buildings and facilities. Continued emphasis is placed on leadership training. (Cost for supplies on optional student-selected projects: \$8.00 - \$60.00). Prerequisite: Agriculture IV.

## **8034 Horticulture Sciences I**

**Grades: 10<sup>th</sup> and above**

Horticulture Sciences is a one year occupational preparation course offered students in grade 10 and beyond. In this course, students develop the necessary knowledge, skills, habits, and attitudes for entry-level employment and advancement in areas such as floriculture, landscape design, greenhouse operation, nursery plant production, and turf management. They receive instruction in using soil and other plant-growing media and in identifying, propagating, and growing horticultural plants in the greenhouse and land laboratory. Instruction is provided in safety practices and leadership development. (Cost for supplies on optional student-selected projects \$8.00- \$20.00)

# AUTOMOTIVE TECHNOLOGY

## **8709 Automotive Maintenance**

**Grades: 9<sup>th</sup> and above**

This is a basic course designed for students in grade nine who have not had previous experience in automotive repair. This course is ASE approved and is designed to prepare students to enter into the automotive repair industry at an entry-level position.

## **8507 Automotive Servicing I**

**Grades: 10<sup>th</sup> and above**

This is a basic 2 block course designed for students who have not had previous experience in automotive repair. This course is ASE approved and is designed to prepare students to enter into the automotive repair industry at an entry-level position. Must pass English 9 and be in a 10<sup>th</sup> grade homeroom to take this course. (Cost for supplies: Students pay for parts they use)

## **8511 Automotive Servicing II**

**Grades: 11<sup>th</sup> and above**

Pre-requisite: Auto Servicing I

This 2 block course continues from Automotive Servicing I. Students will use all the related automotive equipment in the diagnosis, removal, installation, and repair of Automotive Starting, Charging, Ignition, and Electrical Systems. This course is ASE approved and is designed to prepare students to enter into the automotive repair industry at an entry-level position. (Cost for supplies: Students pay for parts they use).

## **8512 Automotive Servicing III**

**Grade: 12<sup>th</sup>**

Prerequisite: Auto Servicing II

This 1 block course continues from Automotive Servicing II. Students will use all the related automotive equipment in the diagnosis, removal, installation, and repair of Automotive Ignition, Fuel, Computer and Electronic Engine and Emission Controls. This course is ASE approved and is designed to prepare students to enter into the automotive repair industry at an entry-level position. (Cost for supplies: Students pay for parts they use).

# BUILDING TRADES

## **8515 Building Trades I**

**Grades: 10<sup>th</sup> and above**

Building Trades I is a 2 block course that includes classroom and laboratory experiences concerned with the erection, installation, maintenance, and repair of buildings, homes, and other structures using assorted materials such as metal, wood, stone, brick, glass, concrete, and composition substances. Instruction provides a variety of activities such as cost estimating, cutting, fitting, fastening, and finishing various materials, the uses of a variety of hand and power tools, blueprint reading and following technical specifications. Knowledge concerning the physical properties of materials is also emphasized. Instruction in plastering, dry wall installation, and roofing is also covered in the course of study. Must have passed English 9 and be in 10<sup>th</sup> grade homeroom.

## **8516 Building Trades II**

**Grades: 11<sup>th</sup> and above**

Prerequisite: Building Trades I

Building Trades II is a 2 block course that is designed for Junior and Senior students who have a definite desire to pursue one of the various kinds of construction careers involved in the construction industry. There will be two period blocks of time offered. Also, completion of this class fulfills the requirements to become a vocational completer. A student will continue to apply the skills previously learned in Building Trades I, but to a higher level.

# BUSINESS & INFORMATION TECHNOLOGY

## **6670 Information Technology Fundamentals**

**Grade: 8<sup>th</sup>**

This course is designed to provide coverage of topics of the new Internet and Computing Core Certification. Instruction will be provided on computer basics, software application and computer networking and the Internet.

## **6625 Word Processing**

**Grades: 9<sup>th</sup> and above**

Students develop intermediate to advanced level word processing skills using a variety of software functions, including graphics and desktop publishing. Classroom experiences also provide for skill development in communication. Software: Word 2007

## **6320 Accounting**

**Grades: 10<sup>th</sup> and above**

Students study the basic principles, concepts, and practices of the accounting cycle. Students learn fundamental accounting procedures using a manual and an electronic system. Software: Excel 2007, Peachtree Accounting

## **6321 Advanced Accounting**

**Grades: 10<sup>th</sup> and above**

Prerequisite: 6320 Accounting

Students gain in-depth knowledge of accounting procedures and techniques used to solve business problems and make financial decisions. Students use accounting and spreadsheet software to analyze and interpret business applications. Software: Excel 2007, Peachtree Accounting

## **6135 Business Management**

**Grades: 11<sup>th</sup> and above**

Students study basic management concepts and leadership styles as they explore business functions, economics, international business, and human relations issues such as employee motivation and conflict resolution.

## **6612 Computer Information System**

**Grades: 10<sup>th</sup> and above**

Students apply problem-solving skills to real-life situations through word processing, spreadsheet, and database software, and through integrated software activities. Students work individually and in groups to explore computer concepts, operating systems, and emerging technologies. Students will be able to obtain Internet and Computing Core Certification (IC3).  
**Software and Equipment** : Office 2007 (Word, Excel, Access, PowerPoint), Microsoft Outlook, scanner, and digital camera.

**6630 Design, Multimedia, and Web Technologies****Grades: 10<sup>th</sup> and above**

This course is a Dual Enrollment Program with New River Community College. This course provides a working knowledge of web page design and construction using headings, lists, links, images, image maps, tables, forms, and frames. **Software and Equipment** : Office 2007, Macromedia Flash X, Dreamweaver MX 2004, Fireworks MX

**6120 Finance****Grades: 11<sup>th</sup> and above**

Students explore many facets of financial decision-making involved in daily life. Skills in money management, record keeping, and banking are enhanced through the study of basic concepts of economics, insurance, credit, and other related topics. The course will also prepare students to plan, manage, and analyze the financial and monetary aspects and success of business enterprises, banking institutions, and other organizations. Students will explore the stock market and how it impacts the economy.

**6621 Office Administration****Grades: 11<sup>th</sup> and above**

This course is a Dual Enrollment Program with New River Community College. Introduces problem solving through computer applications and a programming language. Students enhance word processing and communication skills as they develop competencies needed by administrative support professionals. Students study office procedures. **Software and Equipment:** Office 2007, Macromedia Flash X, Dreamweaver MX 2004, Fireworks MX

# COMPUTER SYSTEMS TECHNOLOGY

## **8622 Computer Systems Tech I Introduction to Computer Science-Lego Robotics**

**Grades: 10<sup>th</sup> and above**

CST I is a Dual Enrollment Program with New River Community College. This class is the first in the new “computer science” courses offered here at FCHS. This class is designed to break down something as complicated as the computer into smaller parts...such as the layers of an onion! This class also: Provides broad introduction to computer science, Discusses architecture and function of computer hardware, including networks and operating systems, data and instruction representation and data organization. This course covers software algorithms, programming languages, and software engineering along with discussion on artificial intelligence and theory of computation. It also involves hands-on components using LEGO robotics.

## **8623 Computer Systems Tech II Introduction to Telecommunications and Internet Business**

**Grades: 11<sup>th</sup> and above**

Prerequisite: 8622 Computer Systems Technology I  
Dual Enrollment Program with New River Community College. Surveys data transmission systems, communication lines, data sets, network, modes of transmission, protocols, and interfacing. Course content emphasizes network structure and operation. Maps to CompTIA iNet & CIW Internet Business Foundation Certifications. This course prepares students to work effectively in today's business environment.

## **6640 Programming (Intro to Gaming Design & Development)**

**Grades: 11<sup>th</sup> and above**

Prerequisite: 8622 Computer Systems Technology I  
Dual Enrollment Program with New River Community College. This course is an introductory overview of the electronic game design and development process. It underlines the historical context, content creation strategies, and future trends in the gaming industry. It also explains how games are produced, tested and released. **Software & Equipment:** 2D game program, GameMaker, and a 3D program, Alice.

# ENGLISH

## **1180 English Study Skills**

**Grades: 8<sup>th</sup> and above**

The nature of the English Study Skills curriculum demands that students take responsibility for their own learning. The focus is on assisting students in becoming active readers. A variety of reading strategies are used to help students improve reading skills, learn common letter-sounds, recognize words and their meanings, and increase fluency, all of which will increase students' reading ability. Students will also be instructed in applying the writing process.

## **11201, 11202 English 8 Part I and Part II**

**Grade: 8<sup>th</sup>**

Students may be required to take a two-part English 8 class based on the Test of Higher Standards and English 7 SOL scores. This course covers the same material as 1120 but at a slower pace.

## **1120 English 8**

**Grade: 8<sup>th</sup>**

The eighth grade curriculum emphasizes the writing process: prewriting, writing, evaluating and revising, proofreading, and publishing. Students will also study basic grammar rules that serve as the foundation for editing. In addition, students will read a variety of literary selections including short stories, poems, plays, novels, and nonfiction pieces with the emphasis on reading comprehension and literary analysis.

## **11201 English 8 Honors**

**Grade: 8<sup>th</sup>**

English 8 Honors goes beyond the regular English 8 class. The pace will be accelerated and the content will be enriched. The requirements for enrolling in this class include a recommendation from the 7<sup>th</sup> grade English teacher, a writing sample to be assessed by the members of the FCHS English Department, a score of 500 or better on the English 7 SOL, and an A or B in English 7. Summer reading is also required.

## **1130 English 9**

**Grade: 9<sup>th</sup>**

The ninth grade curriculum emphasizes language, reading/literature, dramatic readings, writing and research, planned oral presentations, analysis of literature from a variety of cultures and eras, and writing for different purposes.

## **11301 English 9 Honors**

**Grade: 9<sup>th</sup>**

English 9 Honors is an intensive, in-depth course designed to challenge students and begin to prepare them for advanced English courses, including Dual Enrollment and AP English in the 12<sup>th</sup> grade. Students will be thoroughly exposed to and actively engaged in literature, writing, grammar, and other language arts activities. Requires an "A" or "B" in English 8 to take this class and/or recommendation from 8<sup>th</sup> grade English teacher. Summer reading is also required.

**1140 English 10****Grade: 10<sup>th</sup>**

English 10 students will continue to develop skills to be effective communicators. Students will read and critique many different types of literature, including informational material, poetry, novels, plays, and short stories. These readings will be used to generate writing ideas for both informal (journals, summaries, and critiques) and formal writing (literary and research essays) assignments. Student writings will include several expository papers, a research paper, and a few creative works. Students will focus on editing for correct grammar, capitalization, punctuation, spelling, sentence structure, and paragraphing in their work. In addition, students will be asked to complete an oral report for the class.

**11401 Honors English 10****Grade: 10<sup>th</sup>**

Honors English 10 goes beyond the regular English 10 class. It adds an intense study of vocabulary, expanding reading skills through 5-6 classic novels, and 5-6 written essays that demonstrate critical thinking skills. Requires an “A” or “B” in English 9 and/or a recommendation from 9<sup>th</sup> grade English teacher. Summer reading is also required.

**1150 English 11****Grade: 11<sup>th</sup>**

English 11 students will continue to develop communication skills, prepare clear and accurate personal, business, and technical writing, and develop documented expository and persuasive compositions. Students read and study a variety of American literature and examine relationships among American literature, history, and culture. Students research, analyze, synthesize, and organize information in order to write, revise, and edit a documented paper, using available technology, and adhering to MLA documentation requirements.

**11501 Honors English 11****Grade: 11<sup>th</sup>**

Honors English 11 students continue to develop communication skills by making and analyzing persuasive oral presentations, preparing clear and accurate personal, business, and technical writing, and developing documented expository and persuasive compositions. Students' appreciation for literature is enhanced by the reading and study of a variety of American literature, both classic and contemporary, and by analyzing the relationships among American literature, history, and culture. Students develop critical/analytical writing skills in this college-preparatory course. Students research, analyze, synthesize, and organize information in order to write, revise, and edit documented papers, using available technology, and adhering to MLA documentation requirements. Requires an A or B in English 10 and/or a recommendation from 10<sup>th</sup> grade English teacher. Summer reading is also required.

## **1160 English 12**

**Grade: 12<sup>th</sup>**

In English 12 students will examine a wide range of British literature, beginning with works as early as Beowulf (around 700 A.D.) and onto Chaucer, Shakespeare, and more. Students will also read and examine many classical pieces, including works from the Middle Ages, the Renaissance, the Restoration Period, the Romantic Period, the Victorian Period, and the Twentieth Century. Writing will consist of expository and informational writings, as well as a well-documented research paper and working resume. Students will demonstrate correct usage of grammatical conventions in their papers through study, practice, and revising. Finally, students will use organizational skills, audience awareness, and both verbal and nonverbal presentation skills to give a major formal presentation.

## **11601 Honors English 12**

**Grade: 12<sup>th</sup>**

English Honors 12 has two purposes. The first is to be a preparatory course for those students who plan to take AP English. Offered the first semester, English Honors 12 covers some writing skills necessary for AP as well as providing the basic background in British literature for the course. The second purpose is to provide an opportunity for those students planning to attend college who don't want either DE English or AP English, but who want to hone their writing skills and to cover British literature which is a basis for most college sophomore English courses. Student must earn an "A" or "B" in English 11 and passed the Reading & Literature SOL. Summer reading is also required.

## **11602 English 12 Dual Enrollment**

**Grade: 12<sup>th</sup>**

A major objective of Freshman Composition 111 and 112 is to develop students' personal voices as readers and writers. In doing so, students will aim at understanding the "textual" environments surrounding us, environments such as literature, journalism, and the Internet. Students will focus on communication as a social process that requires an interaction of the individual and his/her environment, and also one that requires an assimilation of accepted conventions and standards of society. Students will adapt these standards to their own forms of communication through the study and inquiry into rhetoric. In Freshman Composition students will write a total of eight papers, many of which will require extensive research. Students are given a class syllabus and class schedule at the start of the semester explaining all guidelines, rules, and assignments of the course. Students are expected to follow these materials, as college students in any composition class must. Successful completion of this class will count as six semester hours towards a college degree. The course is offered through New River Community College and is accepted at most colleges as two Freshman English courses. Requires placement test given by NRCC, an "A" or "B" in English 11, a 500 or better on the English 11 Writing SOL, and receive a recommendation from English 11 teacher.

## **1195 AP English**

**Grade: 12<sup>th</sup>**

**Advanced Placement Literature and Composition** is offered second semester of the school year. Any students who took Honors English 12 the first semester and now want the chance to try to test out of college freshmen English courses can take this intensive reading and writing program. Included with the study of four novels, two or three plays, and a variety of poems, short stories, and essays are ongoing writing assignments as well as vocabulary study. The AP exam is in early May. The rest of the school year is spent on a creative project the student designs and instructor approves.

## **1220 (1<sup>st</sup> semester), 12201 (2<sup>nd</sup> semester) Mass Media      Grades: 9<sup>th</sup> and above**

The **Mass Media** class produces two publications— Bison , the FCHS yearbook, and The Hoof Print , the FCHS newspaper. These publications are student-produced, meaning that the students are entirely responsible for the planning, creating, revising, submitting, fundraising, and marketing. The course begins with an introduction to copy and caption writing, photography skills, and design rules. Next students learn how to use Adobe I Design software in order to create yearbook and newspaper layouts. Finally, students concentrate on interview, sales, and marketing skills in order to research, fundraise, and market for the newspaper and yearbook. The focus of this course, in sum, is to train students as journalists in order to create innovative, creative, and interesting layouts and articles to better capture the history of the year at FCHS. Application is required and is available in guidance.

## **1410 Introduction To Theatre**

**Grades: 9<sup>th</sup> and above**

This course will give students a “taste” of life in the theatre and the world of acting. It is an ideal course for those who want to see what theatre is like as well as explore acting and improvisation. This class will give practical experience on stage in a comfortable and non-threatening environment. Acting in scenes and monologues, improvisations, ensemble work and theatre games, vocal study, and theatrical terms, students will develop a basic knowledge of performance. Topics covered will include: solo, duet, and group acting, theatre vocabulary, stage movement, pantomime, theatre make-up, voice techniques, theatre history, and production of a one-act play. There will be emphasis on developing methods of responding thoughtfully to theatrical performances and productions. Memorization is a key component for studying and performing for various audiences.

## **1420 Intermediate Theatre (Theatre II)**

**Grades: 10<sup>th</sup> and above**

Prerequisite – Introduction to Theatre

Practical experience gained in the Introduction to Theatre course will be built upon with a continued focus on ensemble work and vocal exercises, the monologue and duet scenes. Students will perform for both the high school and elementary schools. Emphasis will be on performance techniques, advanced exploration of character, theatrical movement and styles, and advanced ensemble work. Memorization of lines is expected. Students will delve further in their understanding of how the theatre and artistic representation work to reflect and shape our culture, and an opportunity to conceptualize a theatre piece will be required. This class will be limited to 15 students and will be taught concurrently with Advanced Theatre. Memorization is a key component for studying and performing for various audiences.

## **1440 Advanced Theatrical Production**

**Grades: 10<sup>th</sup> and above**

Enrollment is by audition only; certain fundamental on-stage skills are required. Selected students work as an ensemble to prepare and perform a full-scale dramatic production in the FCCHS theatre. Cast members are expected to exhibit a strong and consistent commitment to one another, the director, and the play. In the latter part of the semester, additional rehearsals are scheduled after school and on weekends. The results should be a wonderful shared experience, finely honed acting skills and impressive public performance. Additionally, there will be opportunities to explore directing and independent production work.

Technical Theatre components include theatrical safety, technical terminology, basic scene painting, elements of lighting and sound, basic stage make-up application, and elements of costuming. Students will be expected to complete numerous projects in the subject areas and will be expected to work independently and complete projects on time. Memorization is a key component for studying and performing for various audiences.

# FAMILY AND CONSUMER SCIENCE

## **8245 Exploring Work & Family Studies**

**Grade: 8<sup>th</sup>**

Exploring Work & Family Studies, an eighth grade course, is based on individual interests, needs, and concerns of students. Emphasis is placed on helping early adolescents achieve self-responsibility at home, within the family, and in the community through the development of skills in problem solving, interpersonal relationships, management, and citizenship. Through practical problem solving, students practice making choices that promote the well-being of self and others. (Cost for supplies: \$10.00)

## **8219 Resource Management**

**Grades: 9<sup>th</sup> and above**

Ninth grade students enrolled in Resource Management focus on 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 relating to nutrition, housing, and clothing, and managing a household. Basic skills of math, science, and communication are used when appropriate in content. (Cost for supplies: \$15.00)

## **8247/8249 Introduction to Culinary Arts/Fashion Design**

**Grades: 10<sup>th</sup> and above**

This course provides students with a set of exploratory experiences that relates Family & Consumer Science to the work place. The course is divided into two 9 week segments, Introduction to Fashion Design and Merchandising Occupations and Introduction to Food Occupations. Emphasis is placed on developing characteristics and skills necessary for career success. The foods core explores food service careers and technology and practices planning for good nutrition, using food safety and sanitation, and the basic food preparation skills. The fashion focus explores careers in textiles and fashion manufacturing and marketing, and provides practice in making clothing decisions that affect self and others. (Cost for supplies: \$15.00)

## **8275 Culinary Arts I**

**Grades: 11<sup>th</sup> and above**

This is a basic foods course designed as a pre-requisite for the Culinary Arts II course offered to seniors. It is designed on the cluster concept of skills in career pathways for food occupations to prepare students to enter a sequenced course in which they will receive 1 credit and begin a completer program for vocational education. (Cost for supplies: \$5.00)

**8276, 82761 Culinary Arts II****Grade: 12<sup>th</sup>**

This is the second part of a sequenced course offered in food occupations. It is offered to seniors who have successfully completed the first part of the course (Culinary Arts I) as a pre-requisite. The class is based on the cluster concept of career pathways in food occupations. It is designed to prepare students to enter the food industry at an entry level position, receive 2 credits and be a completer in the Work Focus section of Culinary Arts. It is a two semester class. (Cost for supplies: \$20.00)

**8280 Fashion Design Occupations I****Grades: 11<sup>th</sup> and above**

This course prepares for career opportunities in the field of fashion design, manufacturing, and merchandising by gaining knowledge and skills for entry-level employment. The program emphasizes entrepreneurship, applying fabric technology, using clothing construction skills, and merchandising fashions. (Cost for supplies: \$25.00 and up based on project chosen)

**8281 Fashion Design Occupations II****Grades: 12<sup>th</sup>**

Prerequisite FDOI (8280)

Students contract to complete independent projects that use fashion construction textiles, and merchandising skills. This course is geared toward the goals of the individual. (Cost for supplies: \$25.00 and up based on project chosen)

# FINE ARTS

## **9120 Foundation Art I**

**Grades: 9<sup>th</sup> and above**

The class concentrates on drawing and color as a means to study what one sees and to translate that sight to visual form. Design, color use, and art as a personal statement are emphasized. Students concentrate on two-dimensional studies in Art I. Material covered in the course trains the student to "see" in a different perceptual form. The material is the basis for advanced work in all forms of art. This class must be successfully completed before any other art class can be taken.

## **9130 Art II-Advanced Drawing**

**Grades: 10<sup>th</sup> and above**

Prerequisite: Foundation Art 9120

The class emphasizes drawing at a more advanced level using a variety of drawing materials. Studies range from abstract to realistic, and cover a wide range of subject matter. The class begins with a review of composition principles and elements, design and art history. Work of individual artists is studied throughout the year.

## **9140 Art III-Sculpture**

**Grades: 10<sup>th</sup> and above**

Prerequisite: Foundation Art 9120

The class emphasizes three-dimensional forms and experiments with a variety of materials. Studies range from abstract to realistic. The class begins with a review of composition principles and elements, design and art history. Work of individual artists is studied throughout the year.

## **9147 Painting**

**Grades: 10<sup>th</sup> and above**

Prerequisite: Foundation Art 9120

The class explores painting expressions from abstract to naturalistic by using color techniques of tempera, watercolor, and acrylic paint. The class begins with a review of composition principles and elements, design, and art history. Work of individual artists is studied throughout the year. The use of art talents to improve the living environment is explored by developing painting projects throughout the school facility.

## **9145 Pottery**

**Grades: 10<sup>th</sup> and above**

Prerequisite: Foundation Art 9120

The class emphasizes the techniques of pottery building. Studies cover a range of methods from elementary hand building to throwing on the wheel. Both functional and sculptural forms are explored. The student works with relief as well as free-standing forms. Art history is explored by viewing the use and approach of pottery by different cultures. These exercises are inter-woven throughout the year.

## **9160 Crafts & Design**

**Grades: 10<sup>th</sup> and above**

Prerequisite: Foundation Art 9120

The class begins with a review of composition principles and elements, design, and art history. Work of individual artists is studied throughout the year. The class will focus on crafts and product quality. The use of art talents to improve the living environment is explored by developing painting projects throughout the school facility.

## **9232 Beginning Band-Marching**

**Grade: 8<sup>th</sup>**

Students will develop the principles used in modern marching band ensembles, and increase the level of their physical endurance and musicality.

## **9233 Intermediate Band-Concert**

**Grade: 8<sup>th</sup>**

Students will learn the principles of intonation, breathing, and listening while performing in a wind band ensemble. The students will be introduced to age appropriate music of a high standard. Performances will include two concerts as well as the Virginia Music Educators Association Concert Festival.

## **9234 Advance Band-Marching**

**Grades: 8<sup>th</sup> and above**

This competition-oriented ensemble will learn the art of visual and musical performance. The students will present a competition show of the highest degree for the purpose of competing against other schools and entertaining the crowd at football games. Precision marching, quality musicianship and physical endurance will be learned in a discipline-style format.

## **9296 Advanced Band-Concert**

**Grades: 8<sup>th</sup> and above**

Students will continue practicing the concepts learned in beginning concert band. Musical pieces performed will include the works of Beethoven, Tchaikovsky, Copeland and Grainger. The concert band will perform two concerts every year as well as the Virginia Music Educators Association Concert Festival.

## **9260 Beginning Chorus**

**Grade: 8th**

Beginning Chorus emphasizes fundamental vocal development, traditional notation, and ensemble singing. These topics require performance, creativity, and investigation at a rudimentary level. Opportunities are provided for student exploration of ways in which the content of other arts and disciplines are related to music.

## **9285 Intermediate Chorus**

**Grade: 9th**

This course emphasizes fundamental vocal development, traditional notation, and ensemble singing. These topics require performance, creativity, and investigation at a basic level. Opportunities are provided for student exploration of ways in which the content of other arts and disciplines are related to music.

## **9289 Advanced Chorus**

**Grades: 10<sup>th</sup> and above**

The focus of Advanced Chorus stresses a continuation of proficiency in ensemble singing and in individual performance. The student will perform with increasing refinement of expressive qualities and will sight-sing at an increased level of difficulty. Through enrollment in this class students are eligible to audition for several special ensembles at the local school--The Madrigal Singers and a Broadway musical-- as well as district and state choirs.

# FOREIGN LANGUAGE

## **51045504 Exploratory French/Spanish**

**Grade: 8th**

Exploratory French/Spanish is a one-semester course providing an introduction to the French and Spanish language and culture. Students will begin to develop the three modes of communicative competence: interacting with other Spanish/French speakers, understanding oral and written messages in Spanish/French, and making oral and written presentations in Spanish/French. Students will survey aspects of the history, culture, geography, and daily life in French and Spanish-speaking countries. The introductory nature of the course permits students to become acquainted with French and Spanish, to strengthen skills in the acquisition of a foreign language; however, it is not a prerequisite for Level I study. This course could help a student choose which of the two languages they wish to pursue in the future.

## **5110 French I**

**Grades: 8<sup>th</sup> and above**

The French I curriculum is designed to introduce students to the language and culture of France and other French-speaking countries. The course will cover the basic grammar and vocabulary used in day-to-day communication along with listening, reading and writing skills, and correct pronunciation. Students will also be exposed to different aspects of culture in the francophone world.

## **5120 French II**

**Grades: 9<sup>th</sup> and above**

Prerequisite: French I

The French II curriculum is designed to continue students' exposure to practical, conversational French as well as the culture of France and other francophone countries. Students will continue to learn basic grammar and vocabulary used in every day communication along with listening skills, reading skills, writing skills and correct pronunciation. At this level there is increasing emphasis on students' ability to write and converse in French. Students will also be exposed to French slang as appropriate. We will continue to explore different aspects of culture in the francophone world. It is highly recommended that students attain a "C" or better in French I before taking this class.

## **5130 French III**

**Grades: 10<sup>th</sup> and above**

Prerequisite: French II

The French III curriculum is designed to continue students' exposure to practical, conversational French as well as the culture of France and other francophone countries. As in French I and II, there is a continuing emphasis on students' abilities to write and converse in French. We will continue to explore different aspects of culture in the francophone world as well. It is highly recommended that students attain a grade of "C" in French II before taking this class.

## **5510 Spanish I**

**Grades: 8<sup>th</sup> and above**

This course is an introduction to the Spanish language and Hispanic culture. Students will be introduced to Spanish grammar, basic verb tenses, and practical vocabulary. The goal is to develop basic oral and written communication skills in the Spanish language, as well as to develop an appreciation and understanding of the Hispanic culture, both in Spain and in the Americas. The course places an emphasis on correct pronunciation, listening comprehension, vocabulary development, learning the fundamentals of verb conjugation, and the formulation of simple complete and grammatically correct Spanish sentences.

## **5520 Spanish II**

**Grades: 9<sup>th</sup> and above**

Prerequisite: Spanish I

This course is a continuation of Spanish I and is designed for the student who wants to reinforce the skills learned in the previous class and learn new grammar, verb tenses and vocabulary. The goal is to develop oral and written communication skills in the Spanish language as well as to develop an appreciation for the Hispanic culture. The course places an emphasis on correct pronunciation, listening comprehension, vocabulary development, the use of idiomatic expressions, and the formulation of complete and grammatically correct sentences. It is highly recommended that students attain a “C” or better in Spanish I before taking this class.

## **5530 Spanish III**

**Grades: 10<sup>th</sup> and above**

Prerequisite: Spanish II

This course is a continuation of Spanish II and is designed for the student who wants to reinforce the skills learned in previous classes and learn new grammar, verb tenses and vocabulary. The goal is to develop oral and written communication skills in the Spanish language as well as to develop an appreciation for the Hispanic culture. The course places an emphasis on correct pronunciation, listening comprehension, vocabulary development, the use of idiomatic expressions, and the formulation of complete and grammatically correct sentences. It is highly recommended that students attain a “C” or better in Spanish II before taking this class.

## **5540 Spanish IV**

**Grades: 11<sup>th</sup> and above**

Prerequisite: Spanish III

Students will continue to develop their proficiency in the three modes of communicative competence: interacting with other Spanish speakers, understanding oral and written messages in Spanish, and making oral and written presentations in Spanish. They will improve their ability to comprehend spoken and written Spanish texts from a variety of authentic sources. Students will interact with local business people, using Spanish. They will memorize several poems and read short works of various Hispanic authors. Students will use Spanish to access information in other subject areas and to compare and contrast cultural elements of countries where Spanish is spoken with their own.

# HEALTH OCCUPATIONS

## **8302 Introduction to Health and Medical Science**

**Grades: 9<sup>th</sup> and above**

Introduction to Health and Medical Science is a one-semester course generally taught at the ninth or tenth grade level. Collaborative learning is practiced and the student must successfully participate in all activities to complete the course. All students are encouraged to participate in HOSA, a student led organization of future health care professionals. Areas explored are: HOSA, medical terminology, health careers, metric system, history of health care, trends in health care, health industry, structure and function of body systems, human growth & development, communication, nutrition, culture and diversity, infection control, vital signs, CPR & First Aid, and principles of the world of work. (Cost for supplies: \$15.00)

## **8360 Nurse Aide I**

**Grades: 10<sup>th</sup> and above**

Nurse Aide I is a two block dual-enrollment course taught at the tenth or eleventh grade level. Collaborative learning is practiced in class and clinical settings; the student must successfully demonstrate and participate to complete the course. All students are encouraged to participate in HOSA, a student led organization of future health care professionals. Students may take the Certified Nursing Assistant (CNA) exam when they have obtained all required clinical and class hours. Areas explored are: HOSA, medical terminology, metric system, health care industry, structure and function of body systems, human growth & development, communication, nutrition, cultural and diversity, infection control, vital signs, CPR & First Aid, and principles & techniques of CNA skills. (Cost for supplies: Up to \$45.00, plus optional exam fee \$80.00)

## **8332, 83321 Health Aide II**

**Grades: 11<sup>th</sup> and above**

Health Aide II is a two semester dual-enrollment course taught at the eleventh or twelfth grade level. The student must successfully complete the first semester to proceed to the second semester. Collaborative learning is practiced in class and clinical settings; the student must demonstrate success and participate in all activities to complete the course. All students are encouraged to participate in HOSA, a student led organization of future health care professionals. Health Aid I is a pre-requisite. Areas explored are: HOSA, medical terminology, metric system, health care industry, communication, cultural and diversity, CPR & First Aid, nursing assistant skills, and principles & techniques of the world of work. (Cost for supplies: \$15.00)

# MATHEMATICS

## **3112 Math 8**

**Grade: 8<sup>th</sup>**

This course is designed to prepare students for success in Algebra 1 while simultaneously reviewing the SOL requirements for all 8th graders. Concepts covered, but not limited to, include geometry, general mathematics, probability and statistics, and algebraic concepts. Students will take the Math 8 SOL test upon completion of this course.

## **31121, 31122 Math 8 Part I and Part II**

**Grade: 8<sup>th</sup>**

Students may be required to take a two-part Math 8 class based on Test of Higher Standards and Math 7 SOL. Math 8 Part I and Part II, offered in two semesters, covers the same material as the one semester course but at a slower pace. Time is allowed for more extensive review of the concepts covered in the one semester course. Students will take the Math 8 SOL upon the successful completion of Part II. The next course taken should be Algebra I Part I and Part II.

## **3130 Algebra I**

**Grades: 8<sup>th</sup> and above**

Students will study topics in Algebra including data relationships, graphing, order of operations, operations on integers, properties of mathematics, matrices, functions, relations, modeling and solving equations, inequalities, probability, percents, linear equations, slope, rate of change, and direct and indirect variations. Becoming proficient with the graphing calculator is also a goal. This is a one semester course and students will take the Algebra I SOL test upon completion. In order to enroll in the one semester Algebra I course, students should have passed Math 8 with at least a "C" average, passed SOL and get teacher approval.

## **30301 Algebra I Honors**

**Grade: 8<sup>th</sup>**

This course is available for eighth graders. In order to take this class, students must be recommended by their 7<sup>th</sup> grade math teacher and receive a score of 500 or above on the Math 8 SOL. The course description is similar to Algebra I (3130), but will have an accelerated pace and cover the topics in greater depth. Students will take the Algebra I SOL test upon completion. This is not a weighted course.

## **3131 Algebra I Part I**

**Grades: 9<sup>th</sup> and above**

Algebra I (Part I) is designed to reinforce basic math skills and build upon the student's ability to solve problems using algebraic concepts. Topics include operations with signed numbers, solving equations, functions, graphing functions, laws of exponents, and operations with polynomials. The course is also designed to allow students who have more difficulty with math time to master abstract mathematical concepts. Students must complete this course to take Algebra I (Part II).

### **3132 Algebra I Part II**

**Grades: 9<sup>th</sup> and above**

Algebra I (Part II) is designed to continue the development of math skills necessary for basic problem-solving using algebraic concepts. Topics include a review of material covered in Algebra I (Part I), slope, writing equations of straight lines, solving systems of equations, and solving quadratic equations. Like Algebra I (Part I), this course is designed to allow students who have difficulty with math to master abstract mathematical concepts. Students must complete this course successfully before they can take Geometry. Students will take the Algebra I SOL test upon completion of this course.

### **3143 Geometry**

**Grades: 9<sup>th</sup> and above**

Prerequisite: Algebra I

This course is for students who have successfully completed Algebra I. Both plane and solid geometry are studied. The many aspects of geometry will include: theory and application, informal and formal reasoning, symbolic and visual thinking, coordinate and transformational methods. Geometry provides the students with many opportunities to solve equations and to apply other topics covered in Algebra. In order to enroll in the one semester geometry class the student should have passed Algebra I with at least a “C” average and pass Algebra 1 SOL. Students will take the Geometry SOL test upon completion of this course.

### **3144 Geometry Part I**

**Grades: 9<sup>th</sup> and above**

Prerequisite: Algebra I

This course is designed for students who have successfully completed Algebra I or Algebra I Part 1 & 2. The same material is covered as in the one semester class but at a slower pace. This allows for more discussion of the topics and more practice. The Geometry SOL test is given at the end of the part 2 course.

### **3145 Geometry Part II**

**Grades: 9<sup>th</sup> and above**

Prerequisite: Geometry Part I

This course is designed for students who have successfully completed Algebra I or Algebra I Part 1 & 2 and Geometry Part I. The same material is covered as in the one semester class but at a slower pace. This allows for more discussion of the topics and more practice. The Geometry SOL test is given at the end of the part 2 course.

### **Geometry Honors**

**Grade: 9<sup>th</sup>**

Prerequisite: Algebra I

This course covers both plane and solid geometry. The concepts covered include, but are not limited to, theory and application, informal and formal reasoning, symbolic and visual thinking, coordinate and transformational methods. This class will have an accelerated pace and cover the topics in greater depth. In order to take this class, students must have a “B” and score at least a 500 on the Algebra 1 SOL.

### **3135 Algebra II**

**Grades: 9<sup>th</sup> and above**

Prerequisite: Algebra I, Geometry

Algebra II reviews fundamental concepts acquired in Algebra I and develops those concepts to a more advanced degree. The student will solve practical problems by applying advanced algebraic concepts and by using the graphing calculator to solve and verify solutions. In order to enroll in the one semester Algebra II course, students should have passed geometry with at least a “C” average and pass the Geometry SOL. Students will take the Algebra II SOL test upon completion of this course.

### **31351 Algebra II Part I**

**Grades: 10<sup>th</sup> and above**

Prerequisite: Algebra I, Geometry

Algebra II Part 1 & 2, offered in two semesters, covers the same material as the one semester course but at a slower pace. Time is allowed for more extensive review of basic algebraic concepts and additional time may be used for each topic as needed.

### **31352 Algebra II Part II**

**Grades: 10<sup>th</sup> and above**

Prerequisite: Algebra II part I

Algebra II Part 1 & 2, offered in two semesters, covers the same material as the one semester course but at a slower pace. Time is allowed for more extensive review of basic algebraic concepts and additional time may be used for each topic as needed. Students will take the Algebra II SOL test upon completion of this course.

### **3137 Advanced Algebra & Trigonometry**

**Grades: 10<sup>th</sup> and above**

Prerequisite: Algebra II

This course is designed to apply the concept of the functions from Algebra to observations made in Geometry, and to explore and extend the mathematics that result from connecting material from these past courses. Trigonometry has many applications in science and engineering, and is the basis of many challenging topics in Calculus and other college-level mathematics courses. In order to enroll in this class, the student should have at least a “C” in Algebra II and have passed the Algebra II SOL. This is a weighted class.

### **3162 Math Analysis/Pre-calculus**

**Grades: 11<sup>th</sup> and above**

Prerequisite: Advanced Algebra & Trigonometry

Math Analysis/Pre-calculus is a thorough course designed to prepare students in the necessary topics for many college level mathematics courses and/or AP Calculus. Students will investigate many types of functions and their graphs as well as beginning the calculus topics of limits and differentiation. A minimum of a B average is recommended in all previous math courses including Advanced Algebra & Trig to continue in Calculus. This is a weighted course.

## **3177 Calculus AP**

**Grade: 12<sup>th</sup>**

Prerequisite: Math Analysis/Pre-calculus

AP Calculus is a rigorous two semester course designed to prepare students for engineering, economics, life sciences, mathematics, and physical sciences. AP Calculus is the same freshman engineering calculus course taught at most universities. A minimum of a “B” average is recommended in all previous math courses including Advanced Algebra & Trig and Calculus. This is a weighted course. Students take the AP exam in the spring.

# PHYSICAL EDUCATION

**7200 Health & PE 8 Boys**  
**72001 Health & PE 8 Girls**

**Grade: 8<sup>th</sup>**

Health 8 continues the process of educating students in the importance of proper mental and physical health. Systems of the body and their functions, drug, alcohol, and tobacco education, personal hygiene, proper diet and exercise programs, social health and respect for others are areas that are taught. The Physical Education curriculum will be comprised of a variety of team sports, lifetime and leisure sports, and activities designed to promote general physical fitness. For each unit taught, the students will develop an understanding and appreciation of the subject matter, develop basic skills, and observe safety measures.

**7300 Health & PE 9 Boys**  
**73001 Health & PE 9 Girls**

**Grade: 9<sup>th</sup>**

The Health component of PE 9 investigates responsibility for safeguarding the health of the public by studying the nature of infectious diseases, the body's defense against infection, and prevention of infectious disease. (Special attention is given to sexually transmitted diseases). The Physical Education curriculum will be comprised of a variety of team sports, lifetime and leisure sports, and activities designed to promote general physical fitness. For each unit taught, the students will develop an understanding and appreciation of the subject matter, develop basic skills, and observe safety measures.

**7405 Health & PE/Driver's Education Boys**  
**74051 Health & PE/Driver's Education Girls**

**Grade: 10<sup>th</sup>**

Prerequisite: Health & PE 9

Students will learn safe driving techniques through a classroom experience. Students will also be exposed to physical activities that will promote lifetime sports and wellness.

**7640 Advanced Physical Education**

**Grades: 11<sup>th</sup> and above**

Fitness and Conditioning continues the process of helping students develop overall fitness. The emphasis is on improvement in the areas of strength, agility, endurance, explosive power, flexibility, and speed.

# SCIENCE

## **4125 Physical Science 8**

**Grade: 8<sup>th</sup>**

Physical Science is a survey course focusing on two major scientific areas of study; physics and chemistry. Each major area is divided into smaller units to allow students to study matter and energy, and their relationship to each other. Students will take the Science 8 SOL test upon completion of this course.

## **4210 Earth Science I**

**Grade: 9<sup>th</sup> and above**

Earth Science connects the study of the earth's composition, structure, processes, and history. The earth's atmosphere, fresh water, oceans, and environment in space are also investigated. Major topics of study include plate tectonics, rock cycle, earth history, oceans, atmosphere, weather and climate, and solar system. Students will take the Earth Science SOL test upon completion of this course.

## **4220 Earth Science II**

**Grades: 11<sup>th</sup> and above**

Earth Science II is an environmentally oriented course designed to provide an understanding of the Earth's weather systems and how they are predicted. The major biomes and how they relate to each other, and the affects of human activities on the earth are also studied.

## **4310 Biology I**

**Grades: 9<sup>th</sup> and above**

Biology is a course designed to advance understanding of the living world. This course will study life at many levels: molecular, cellular, multicellular, population interactions, and global ecology. Students will take the Biology SOL test upon completion of this course.

## **4320 Biology II**

**Grades: 11<sup>th</sup> and above**

Biology II is a course designed to advance understanding of the living world at many levels: molecular, cellular, multicellular, population interaction, and global ecology. This course is an in-depth study of biological processes and biochemical reactions in living things. Prerequisite: Must have a "B" in both Biology I and Chemistry I. Taught on alternate years with Anatomy and Physiology.

## **4330 Human Anatomy and Physiology**

**Grades: 11<sup>th</sup> and above**

Human Anatomy and Physiology is a course designed to advance understanding of the human body. All of the major organ systems will be discussed with the emphasis on form following function and physiology being dependent on this concept. Prerequisite: Must have a "B" in both Biology I and Chemistry I. Taught on alternate years with Biology II.

## **4410 Chemistry I**

**Grades: 10<sup>th</sup> and above**

Chemistry I standards are designed to provide students with a detailed understanding of the interaction between matter and energy. This understanding is developed through the power of observations, logical problem solving, and introduction to the basic principles of chemistry. Students will take the Chemistry SOL test upon completion of this course. Prerequisite: C in Algebra I.

## **4420 Chemistry II**

**Grades: 11<sup>th</sup> and above**

Chemistry II standards are designed to provide students with a detailed understanding of the interaction between matter and energy. This is developed through the power of observation, logical problem solving, and introduction to the advanced principles of chemistry. The materials are drawn from a freshman College Chemistry source. Prerequisite: Must have a “B” in both Biology I and Chemistry I.

## **4510 Physics I**

**Grades: 11<sup>th</sup> and above**

Physics is the science that deals with the study and application of the forces of nature, including matter and energy. This course is lab-based. Students will verify theory through experimentation and mathematical analysis. Mathematics will be used to verify physics phenomena and be used to represent phenomena examined according to the scientific method. They will learn and apply each concept in depth and in real-world ways. This is accomplished through both experimentation and observation. The curriculum will be encountered at a pace that facilitates comprehensive interaction and mastery. The key concepts of this course include: motion and time analysis, vector analysis, kinematics (the equations of motion), planetary motion and gravitation, Newton's Laws of Motion (and force analysis), energy and work, electromagnetic forces, and electricity. Other topics will be studied as time permits such as: fluids, field concepts, optical systems, and non-Newtonian physics. The course grade consists of lab experimentation and associated reports, projects, quizzes, and the keeping of a portfolio of the student's work. Prerequisites: A “C” or better in Algebra II and proficiency with trigonometric functions and right triangles.

# SOCIAL STUDIES

## **2351 World Studies**

**Grade: 8<sup>th</sup>**

World Studies is a survey course designed to explore the historical development of people, places and patterns of life from ancient times through 1500 A.D. Emphasis is placed on the historical development of Western Civilization.

## **2342 World History II**

**Grades: 9<sup>th</sup> and above**

World History II is a survey course designed to explore the historical development of people, places and patterns of life from 1500 A.D. to the present. Emphasis is placed on the historical development of Western Europe . Study of historically significant people and events of the 19<sup>th</sup> and 20<sup>th</sup> centuries will be emphasized for their strong connections to contemporary issues. World History II includes an end of course SOL test.

## **23421 World History II Honors**

**Grades: 9<sup>th</sup> and above**

World History II is a more in depth course designed to explore the historical development of people, places and patterns of life from 1500 A.D. to the present. Emphasis is placed on the historical development of Western Europe . Study of historically significant people and events of the 19<sup>th</sup> and 20<sup>th</sup> centuries will be emphasized for their strong connections to contemporary issues. Student must have earned a “B” in World Studies to take this class. World History II includes an end of course SOL test.

## **2210 World Geography**

**Grade: 10<sup>th</sup> and above**

The focus of World Geography is the study of the world's peoples, places and environments, with an emphasis on world regions. Students will study the world's population and cultural characteristics, land forms and climates, economic development, and migration and settlement patterns. Particular emphasis is placed on students' understanding and application of geographic concepts and skills for their daily lives. This course includes an end of course SOL test.

## **22101 World Geography Honors**

**Grade: 10<sup>th</sup> and above**

The focus of World Geography is a more in depth study of the world's people, places and environments, with an emphasis on world regions. Students will study the world's population and cultural characteristics, land forms and climates, economic development, and migration and settlement patterns. Particular emphasis is placed on students' understanding and application of geographic concepts and skills for their daily lives. To enroll in this course, students must have earned a “B” or better in World History II and pass the World History II SOL. This course includes an end of course SOL test.

## **2360 VA & US History**

**Grades: 11<sup>th</sup> and above**

Virginia and United States History is a survey course that includes the historical development of American ideas and institutions from the Age of Exploration to the present. The course will provide the student with a basic knowledge of American culture through a chronological study of major issues, movements, people and events in U.S. and Virginia history. Virginia and United States History includes an end of course SOL test.

## **23601 VA & US History Honors**

**Grades: 11<sup>th</sup> and above**

Virginia and United States History Honors covers the same topics as mentioned in the above VA & US History course, but provides a more in-depth study with a heavier concentration on writing. Requires a “B” in World Geography and pass the World Geography SOL.

## **2440 VA & US Government**

**Grade: 12<sup>th</sup>**

Virginia and United States Government is a course designed to provide students with the knowledge that will enable them to participate effectively in civic life. Students will examine fundamental constitutional principles, the rights and responsibilities of citizenship, the structure and function of governments at each level, and the operation of the United States market economy. Virginia and United States Government does not include an end of course SOL test.

## **24401 VA & Government Honors**

**Grade: 12<sup>th</sup>**

Virginia and United States Government Honors covers the same topics as mentioned in the course description for 2440 VA & US Government on the previous page, but provides a more in-depth study with a heavier concentration on writing. Requires B in Virginia and US History and pass the VA/US History SOL.

## **2500 Sociology**

**Grades: 10<sup>th</sup> and above**

Sociology is the scientific study of social structure (human social behavior). The student will explore Sociology through the research of various cultures, socialization, social structure, societies, groups, and formal organizations. They will also focus on social equalities, gender, age, deviance and social control, social institutions and social change.

# **SPECIAL EDUCATION DEPARTMENT**

Special Education courses are available in several areas based upon a student's IEP. Please meet with your child's IEP coordinator for clarification.

# TECHNOLOGY EDUCATION

## **8483 Introduction to Technology**

**Grade: 8<sup>th</sup>**

Intended for the eighth grade student, this class provides opportunities for students to work independently, and in teams of two or more to explore the hands on processing and fabrication of materials like wood, metals, plastics, and composites. Computers are used in a variety of ways, including desktop publishing, vehicle design, and word processing. Students are introduced to the fundamentals of working safely and efficiently with hand tools, power tools and machines. The course includes experiences in design, drafting, woodworking, mechanics, and model rocketry. (Cost for supplies: \$22.00)

## **8425 Manufacturing**

**Grades: 9<sup>th</sup> and above**

Intended for ninth graders, this class is open to students through twelfth grade. All aspects of the manufacturing industry are studied, with opportunities for hands-on activities in the shop. With an emphasis on safety, students learn to use the tools, machines and processes used in the manufacturing industry. Students learn to transform basic materials like lumber and sheet metal into goods and products for consumers. Students will form a worker owned manufacturing corporation, mass produce and market a product, liquidate and distribute profits to student stockholders. (Cost for supplies: \$22.00)

## **8433 Materials & Processes**

**Grades: 9<sup>th</sup> and above**

Intended for ninth and tenth graders, this class is open to students through twelfth grade. Students learn the fundamentals of working safely and efficiently with hand tools, power tools and machines. Students become familiar with different types of wood, their qualities and uses. All aspects of woodworking are explored, including wood joints, shaping, fastening and finishing. Emphasis is on safety and quality of construction. After completing required project work in the first part of the course, students may choose one or more independent projects. (Cost for supplies: \$22.00)

## **8415 Communication Systems-Black & White Photography**

**Grades: 10<sup>th</sup> and above**

This course is offered to students in grades 10 through 12 interested in the graphic arts and video imaging fields. The technology associated with desktop video editing, still digital imaging, black & white photography, graphic production, and digital image manipulation is covered. Students will complete projects associated with the following software: CorelDraw, Paintshop Pro, Adobe Premiere, Acid Music, PowerPoint, and many others. (Cost for supplies: \$10.00)

### **8435 Technical Drawing and Design**

**Grades: 9<sup>th</sup> and above**

Prerequisite: Algebra 1

This is the foundation course designed to teach the basic concepts and methods required to communicate using sketches and AutoCAD produced technical drawings. (Cost for supplies: \$1.50)

### **8436 Engineering Drawing**

**Grades: 10<sup>th</sup> and above**

Prerequisite: 8435.

This course continues the design sequence by concentrating upon the concepts that engineering students will need to know in college. Emphasis is placed upon problem solving and advanced 3D computer aided design skills using AutoDesk Inventor 3D modeling software. Taught on alternate years with Architectural Drawing. (Cost for supplies: \$1.50)

### **8437 Architectural Drawing**

**Grades: 10<sup>th</sup> and above**

Prerequisite: 8435

This course concentrates upon the concepts and skills required to produce the working plans of a home. Students that wish to someday design and build their own homes would find this course to be beneficial. Students will use AutoDesk REVIT CAD software. Taught on alternate years with Engineering Drawing. (Cost for supplies: \$1.50)

### **8455 Digital Imaging Technology**

**Grades: 9<sup>th</sup> and above**

This course is designed to teach students how to capture, edit, and produce top quality images in both digital and 35mm formats. Students will learn a variety of photographic techniques, and how to use software to enhance and manipulate images. Students will research the history of photography, as well as compare different camera types, their unique functions, and their basic mechanics. Upon the completion of this course, students will have compiled a portfolio of their most outstanding work which they may share with prospective employers. (Cost for supplies: to be determined)

# WELDING

**8672 Welding I**  
**8673 Welding II**

**Grade: 12<sup>th</sup>**

This course will provide the participants with a basic theoretical and practical understanding of the gas metal arc welding process and machinery that is used in industry. This unique training program is required for personnel who are responsible for the hand MIG welding in both production and repair applications. Upon successful completion of this course, the student will have the option to become a certified welder and the student may receive eight college credits from New River Community College .

# Advanced Placement Classes

<http://www.virtualvirginia.org/>

The Virginia Virtual Advanced Placement School (VVAPS) offers online AP and foreign language courses to students across the commonwealth and nation. Each course contains video segments, audio clips, whiteboard and online discussions as well as text. E-Teachers are available for telephone conversations with students throughout the school day. VVAPS classes offer a rich multimedia learning environment that appeals to a variety of learning styles. VVAPS courses can be scheduled flexibly throughout the day, as courses do not have to be taken in 'real' time. Upon completion of a course, students take the AP exam. Completion of the course and passing the AP exam enables a student to earn college credit. Courses available are:

## Online Courses (4x4 Semester Block- 1 Credit):

### *Online Courses (4x4 Block/1college credit)*

#### **Fine Arts**

9151 AP Art History

#### **Language Arts**

1165 World Mythology

1171 Creative Writing

1195 AP English Literature and Composition

1196 AP English Language and Composition

#### **Mathematics**

3162 Pre-Calculus/Mathematical Analysis

3177 AP Calculus AB

3192 AP Statistics

#### **Science**

4270 AP Environmental Science

4370 AP Biology

4470 AP Chemistry

4570 AP Physics B

#### **Social Studies**

2212 AP Human Geography

2319 AP U.S. History

2380 AP World History

2399 AP European History

2445 AP Government and Politics: US

2450 AP Government and Politics: Comparative

2802 AP Microeconomics

2803 AP Macroeconomics

2902 AP Psychology

#### **World Language**

5380 AP Latin Literature: Catullus and Ovid

5570 AP Spanish Language