

12th Grade Course Descriptions

ENGLISH DEPARTMENT

English 12 (1160)

This course focuses on the study of British literature and literature of other cultures. Students read and analyze epic poems, essays, plays, and novels. They also write persuasive and expository essays and revise them to improve sentences or vocabulary. Students complete research papers or projects and learn to document their sources from research. Students make an oral presentation in front of peers about a topic they choose. Most assignments will be completed in class, but some assignments for practice or completion will be done outside of class.

English 12 Dual Enrollment VHCC (1189V)

Dual Enrollment English 12 consists of three courses taken all year long during a block period. The following courses are available for qualified seniors. Entry level competencies are as follows:

Students must pass VHCC college placement tests in reading and writing before entry into college level English. SAT scores of 500 on both verbal and writing tests exempt students from the placement test as well as a score of 21 on the ACT English and verbal tests.

English 111: English 111 develops writing ability for study, work and other areas of writing based on experience, observation, research and reading of selected literature. The course guides students in learning writing as a process: understanding audience and purpose, exploring ideas and information, composing, revising and editing. Writing is supported by integrating experiences in thinking, reading, listening and speaking. In addition to the textbook, students are expected to read approximately three novels and compose multiple essays. Extensive out-of-class reading is required. Students are also required to attend five Arts Array cultural events and produce reactionary essays of their experiences. By successfully completing the course, students will earn three college credits. VHCC does recognize grades of A, B, C, and D as passing grades. However, when transferring to another school, the general rule is that grades lower than a "C" do not transfer (i.e. receive credit). ***English 112:*** Admission into this course requires successful completion of English 111. The main purposes of this course are to enhance skills developed in ENG 111, to develop understanding of several forms of literature and the conventions of writing about that literature. The basic skills of research will also be examined. Writing in English 112 consists roughly of two groups – writing about literature and research writing. Primary sources of material for composition will be texts of poems, stories, novels, films, plays and works of non-fiction. Underlying the specific assignments in this course is the belief that academic writing, like many other forms of writing, involves making assertions and supporting them with evidence, arguments, examples, illustrations and relevant details. Extensive out-of-class reading and research is required. Upon successful completion of the course, students will earn three college credit hours. Arts Array essays are also required. Transfer of credit guidelines are the same as in English 111.

English 278: English 278 examines selected works of outstanding authors of the Appalachian region. This course involves critical reading and writing. This course will be an intense study of Appalachian literature and culture. Included also in this course will be novel study, guided discussion,

digital and creative projects, field trips, biographical and historical writings. The pre-requisite for this course is successful completion of English 112 or VHCC division approval. This class is offered for three college credits.

Local Journalism (1220)

This course requires class members to work as a staff to produce the *Trojan Voice*, John S. Battle High School's monthly newspaper. Students in this course are required to participate in **ALL** aspects of newspaper production, which includes the following: writing, graphic design, ad sales, and photography. While not prerequisites, a good attendance record and at least a "B" average in English courses are highly recommended.

Photo Journalism (1215)

This course requires class members to work as a staff to produce *The Phoenix*, John S. Battle High School's yearbook. Students in this course are required to participate in **ALL** aspects of yearbook production, which includes the following: marketing, sales, graphic design, and photography. Summer workshops are sometimes a part of the course as well. While not a prerequisite, a good attendance record is crucial to being successful in this course.

HISTORY DEPARTMENT

World History II (2216)

This course covers World History from 1500 A.D. to the present. Beginning with the Renaissance and reformation students will study the cultures, wars, exploration, and politics from the 1500s to the present day. Topics will include World Wars I & II, Hitler's "Final Solution" and the "Holocaust", the French Revolution, the Great Depression, the Inquisition, the Reformation, the roles of Martin Luther and John Calvin in religious change, and the Cold War (from Truman to Reagan). *Students in World History II will complete the World History II Standards of Learning test upon completion of this course.

Virginia & U.S. Government (2440)

This is a course designed to provide the student with a firm understanding of the structure and functions of state, local, and national government. The class will cover the fundamental concepts of democratic theory and philosophy. Students will examine the structure, and institutions of the national government, analyze the Constitution and amendments, and investigate political beliefs and behaviors, party politics, and interest groups. Civil rights, civil liberties, and the interplay of freedom and equality are also primary areas of content and class discussion. The class will participate in mock elections as well as mock trials. Students may also take field trips to area courts to see how our judicial system works. This is a class required for graduation.

Advanced Placement Government (2445)

Advanced Placement Government is a course designed to give students an in-depth perspective on politics and government in the United States. The class provides students with an opportunity to receive college-level credits by obtaining a passing score on the AP exam. The work done in this course is college-level and it is expected that all students will treat it as such. Students are expected to participate fully, both in class and out, and to work diligently to get the most out of the course.

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20th Century History (2387)

Students will learn the history of the 20th Century from a world perspective to see the way that the previous century influences the way that our modern world functions. Covering such a span of time, students will be thrown back in time using a variety of tools from basic notes and time lines, to readings, movies, music, and simulations. We move through a great deal of content in the course of the year from the Boer War to the Gulf War; the Russian Revolution to the collapse of the USSR; the first flight of the Wright Brothers to the invention of the World Wide Web; the global divisions of imperialism to the end of apartheid in South Africa. Many key events that are seen within the global confines of this decade have roots running back to the prior century and to learn more about them, we must look to the past and dig in deep. This is a non-SOL class, and with that we have some liberties within this particular study to deviate, as long as the distraction is in the 20th Century, to cover more in depth certain aspects of the topic being discussed to enrich the student's learning experience.

Psychology (2900)

Psychology is a beginning study of the subject of psychology. The course focuses on individual behavior and why an individual thinks, feels, and reacts to certain stimuli. Major emphases will be placed on research methods, stages in childhood and adolescence, how the brain works, altered states of consciousness, psychological testing, and psychological disorders. This is an elective course.

Humanities (2215)

Humanities is the study of various culture-oriented topics such as philosophy, pop culture, television, art, theater, film, death, religion (studied from only a historical perspective), and human emotion. The class also includes a brief study of American (and some world) history, which is intended to illustrate how historical events and culture have influenced each other throughout the 20th and 21st centuries.

MATH DEPARTMENT

Algebra, Functions, and Data Analysis (3134)

Algebra, Functions, and Data Analysis (AFDA) is a non-SOL math course offered to students who have passed Algebra I and Geometry and need additional support before taking Algebra II. The course reinforces linear and quadratic functions taught in Algebra I and expands to include exponential and logarithmic functions. Some statistics such as probability, mean, median, mode, bell curves, and z-scores are also reinforced.

Prerequisite: Successful completion of Geometry

Trigonometry (3161)

This non-SOL course contains both content that reviews or extends concepts and skills learned in Geometry and Algebra II, plus the addition of new, more abstract and advanced concepts in trigonometry. Trigonometry is a field of mathematics in which the geometric properties of the angles and edges of triangles are used to measure lengths. Real-world problems involving trigonometry are common in engineering, physics, construction and design. This course is well suited for students who need sufficient mastery of trigonometry for use in fieldwork as well as those continuing their education. It is assumed that students enrolling in this course already possess intermediate algebra skills, which lead

to the trigonometry skills and concepts essential to success in calculus courses.

Prerequisites: Successful completion of Algebra II

*****Recommendation:** Proficiency on the Algebra II State Standard of Learning Test

Pre-Calculus- Dual Enrollment VHCC (3179V)

Dual enrollment pre-calculus consists of two college-level math classes: MTH 163 and MTH 164.

MTH 163 presents college level algebra, matrices, exponential and logarithmic functions.

MTH 164 presents trigonometry, analytic geometry, and sequences and series. In both classes, students will learn the mathematics concepts and skills necessary to continue with calculus and/or the study of physics, engineering, computer science, or other disciplines borrowing heavily on the physical or mathematical sciences.

Requirement: Proficiency on the Virginia Highlands Community College Placement Test.

Prerequisites: Successful completion of Algebra II Honors or Trigonometry

*****Recommendation:** Proficiency on the Algebra II Standards of Learning Test and teacher recommendation.

****VHCC Credit will only be earned if students pass each class with a C or higher.**

Applied Calculus – Dual Enrollment VHCC (3180V)

Dual Enrollment Applied Calculus consists of two college-level math classes: MTH 271 and MTH 272.

MTH 271 presents limits, continuity, and differentiation of transcendental functions.

MTH 272 presents techniques of integration, multivariable calculus, and an introduction to differential equations. In both classes, students should gain a workable knowledge of the calculus techniques for the study of business, economics, management, and the social and life sciences.

Prerequisites: MTH 163 and MTH 164

****VHCC Credit will only be earned if students pass each class with a C or higher.**

*****Proficiency on the Virginia Highlands Community College Placement Test**

AP Calculus AB (3177)

This course is designed for college-bound students who have **completed 4 high school level math courses: Algebra I, Geometry, Algebra II, and Trigonometry/VHCC Pre-Calculus.** The goals of this course are as follows: Work with functions represented in a variety of ways and understand the connections among these representations. Understand the meaning of the derivative in terms of a rate of change and local linear approximation, and use derivatives to solve a variety of problems. Understand the relationship between the derivative and the definite integral. Communicate mathematics both orally and in well-written sentences to explain solutions to problems. Model a written description of a physical situation with a function, a differential equation, or an integral. Use technology to help solve problems, experiment, interpret results, and verify conclusions. Determine the reasonableness of solutions, including sign, size, relative accuracy, and units of measurement. Develop an appreciation of calculus as a coherent body of knowledge and as a human accomplishment.

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SCIENCE DEPARTMENT

Biology II – Ecology (4340)

Biology II - Ecology is a course that explores interactions between living organisms and the environment. Special emphasis is placed on current environmental issues and on how humans interact with, and affect, the environment.

Prerequisites: Biology.

Chemistry I (4410)

Chemistry I is a laboratory-oriented course that provides students with a sound introduction to basic chemical principles. By using mathematics and scientific tools, students learn to define, explain, and explore why some things react and others do not. Chemistry I is a college preparatory course. Since the study of chemistry combines many different academic skills, this challenging course is recommended for all college-bound students. In particular, any students interested in a career in medicine, nursing, biology, or engineering should take Chemistry I by their junior year.

*Students enrolled in chemistry will complete the Chemistry Standards of Learning End of Course Test upon completion of the course. **Pre/Co-requisite:** Algebra II, Biology

Anatomy & Physiology (4330)

In this course, students will develop an understanding of the anatomical and chemical makeup of cells, tissues, organs and organ systems as they relate to the whole organism. The student will learn the location and function of the various parts of the human organ systems. Students will use both gross and microscopic observations of dissected organs and organisms in order to accomplish these tasks. Students will be expected to read the chapters and do homework regularly.

Prerequisites: Biology I with a grade of B or better.

AP Biology (4370)

Prerequisite: Honors Biology and Chemistry I with an A

This course is designed for students who are planning a career in biology, chemistry, bio-chemistry, or a related field. Since it is part of the Advanced Placement Program, the course includes the material presented in an up-to-date first year biology course for science majors. This course will move at a quick pace in order to cover all material in preparation for the AP Biology exam in the spring. Students enrolled in this course must be motivated and capable of working independently on some topics. A college textbook and materials are used. Students will be encouraged to take the AP Biology exam in the spring, most colleges will award anywhere from 4-10 college credit hours for a 3, 4, or 5 on the AP exam.

Biology Dual Enrollment VHCC (4370V)

This is an advanced biology course taught at the college level. This course explores the fundamental characteristics of living matter from the molecular level to the ecological community with an emphasis on general biological principles. It introduces the diversity of living organisms, their structure, function, and evolution. It is a fast-paced, challenging course. Students are expected to read all chapters and to prepare properly for lecture and lab exams.

Prerequisites: Earth Science, Biology, Chemistry, and Algebra II

*Proficiency on the Virginia Highlands Community College Placement Test

Physics (4510)

Physics is a non-SOL science course offered to juniors and seniors. The pre-requisite is Algebra II. Although physics uses math to predict and understand the physical world, focus is on conceptual understanding. Topics include mechanics of motion, energy, momentum, electricity, magnetism, heat, fluids, and waves. The course ends with students building their own solar cars to race.

Prerequisite: Algebra II

PHYSICAL EDUCATION DEPARTMENT

Advanced Physical Education(7640)

Grades: 11-12

This upper-level class is designed to teach a variety of lifelong activities. There is daily stretching and exercises prior to the activities to work on flexibility, strength, and injury prevention. Activities include more lifelong activities such as golf, bowling, badminton, pickle ball, tennis, and cycling. Students are taught to work together so each activity will be enjoyable for the entire class. Students will help develop and teach activities as well. Lifetime activities will be planned in order to teach students how to stay physically, mentally, and socially fit. Assessment will be based on daily participation, class projects, individual work, and written comprehensive exams.

Prerequisites: Successful completion of PE9/Health and PE 10/Driver's Ed

Strength & Conditioning (7650)

The strength and conditioning classes are designed to develop a high level of physical fitness in our students. Class activities will include running, strength training, speed and agility drills, flexibility, and other aspects of fitness training. Proper dress is required for class, and complete participation is necessary. This is a physically demanding class.

Prerequisite: Students should have a grade of A or B in physical education and teacher recommendation.

FOREIGN LANGUAGE DEPARTMENT

Spanish I (5510)

This course provides an introduction for absolute beginners to the language and cultures of Spain and Latin America. Successful students will develop basic listening, speaking, reading and writing skills necessary to communicate about self, family and daily life, as well as basic survival needs. Students will also explore cultural aspects of the Spanish-speaking world. **Prerequisite:** Successful students in Spanish I bring with them a good understanding of English grammar.

Spanish II (5520)

This course is a continuation of the first level of Spanish. Students will learn the use of the past tense structures and pronoun usage. Students will continue to develop listening, speaking, reading and writing skills necessary to communicate about self, family and daily life, as well as abstract concepts such as feelings and emotions. Students will also explore cultural aspects of the Spanish-speaking world. **Prerequisite:** Successful students in Spanish II bring with them the good foundation acquired in a successful year in Spanish I.

Spanish III (5530)

Students will explore geographical and cultural aspects of Spain as well as Central and South American Spanish-speaking countries. Students will learn the use of all indicative tenses in Spanish with the addition of the present subjunctive.

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There is a heavy application of real-life materials and activities in order to help students develop reading and listening skills. Students are expected to use more conversational skills to improve fluency in the language.

Prerequisite: Successful students in Spanish III have a good recall of all the subject matter covered in Spanish I and II.

Spanish IV (5540)

This course is an expansion of the skills acquired in levels I, II and III. Students will develop skills to prepare them for college-level study of the language.

Prerequisite: The successful student in Spanish IV has a good recall of the subject matter covered in Spanish I, II, and III.

French I (5110)

This course is an introduction to the French language that focuses on four essential parts of language learning: listening, speaking, reading, and writing. Students can expect to learn about the French language and culture through books, videos, music, skits, games, and more.

French II (5120)

This course builds upon the skills acquired in French I. Students will continue to learn about the French language and culture through games, videos, books, etc. Students will review essential verbs learned in French I and work to improve their writing skills.

French III (5130)

This course builds upon the skills acquired in French I & II. Students will continue to learn about the French language and culture through games, videos, books, etc. Students will review essential vocabulary and verbs from French I & II and work to improve their reading fluency in French.

French IV (5140)

Students will explore the history, art, and literature of France through their textbook *Trésors du temps*, as well as films, news articles, the Internet, and other books. Students will have the opportunity to use Moodle for class discussions and work at their own pace on certain cultural assignments. This course is a great preparation for college-bound students.

Prerequisites: Average grade of A or B in French I, II and III.

FINE ARTS DEPARTMENT

Art I (9120)

Art I is an introductory course that requires no prerequisite. It builds on the knowledge of the Elements of Art and Principles of Design which are taught in elementary and middle school art. Following Virginia state guidelines, this course includes art history, aesthetics, art criticism and studio production. The students will work in drawing from life, painting with watercolor and acrylics, ceramics, sculpture, printmaking, bookbinding, and visual journaling.

Art II (9130)

Art II requires the prerequisite of Art I. It extends and refines the student's abilities to investigate and respond to the visual arts. Areas of art not studied in Art I are introduced. Practice in other areas improves skills. The students will work in drawing, painting with water color and acrylic, ceramics, sculpture, printmaking, and fiber arts. Following Virginia state guidelines, this course includes art history, aesthetics, art criticism and studio production.

Art III (9140)

Art III requires the prerequisite of Art II. It is an advanced intermediate level of study. The student will work in a variety of two and three dimensional media. Study at this level affords the student the opportunity to develop a personal direction in the production of his/her works. Following Virginia state guidelines, this course includes art history, aesthetics, art criticism and studio production.

Art IV (9145)

Art IV requires the prerequisite of Art III. Art IV reinforces competence and confidence in skills of analysis, evaluation and creation of works of art. Following Virginia state guidelines, this course includes art history, aesthetics, art criticism and studio production.

Applied Art Design (9160)

This course focuses on the study of the applied arts, artistic objects with functional purposes. This includes, but is not limited to, ceramics, stained glass, mosaics, jewelry, fiber arts, batik, bookmaking, and metal works. Emphasis will be placed on careers in applied arts and creating opportunities for selling artisanal work. The evolution of crafts is explored historically and culturally. Home assignments and a sketchbook will be required.

PREREQUISITE: Completion of Art 1 with a grade of B or higher and teacher recommendation.

Photography (9190)

This course will help the students become well rounded in the fundamentals of digital photography. Four areas of instruction will be emphasized: How cameras work, how composition works, how lighting works, how to use photo editing software. Students will, generally, receive basic instruction, demonstration, and see samples of the desired outcomes, at the beginning of each period. They will be allowed to go outside and shoot assignments, based on what they are learning. Perhaps the most useful part of classroom instruction will be daily reviews of photos students have shot the previous day(s). They will see what makes a successful photo and what does not. **Prerequisite:** Completion of Art 1 and Art 2 with a grade of B or higher in both courses and teacher recommendation.

Chorus (9285)

Chorus is for students who love to express themselves through music. This course focuses on and challenges students to achieve the normal requirements of a singleton chorus class. Areas of learning are breathing, listening, sight singing, working on the vocal register, and achieving a pure sound of singing. Opportunities to audition for the Washington All-County Chorus, Virginia District VII Choruses, and Virginia All-State are possibilities for excelled learners. Performance in concerts is a requirement for assessment.

Advanced Chorus (9289)

Advanced Chorus is for students who love to express themselves through music. The course focuses on and challenges students to achieve the normal requirements of a singleton chorus class. Major learning areas are breathing, listening, sight singing, working on the vocal register, the vocal instrument and a pure sound of singing. Opportunities to

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audition for the Washington All-County Chorus, Virginia District VII Choruses, and Virginia All-State are possibilities for excelled learners. Performing is a requirement for assessment.

Jazz Chorus (9280)

Jazz Chorus is a one-semester block class that allows the student to sing difficult genres of music. Emphasis is on breathing, listening, sight singing, working on the vocal register and a pure sound while singing. Also learning to be a singer with self-confidence is important to carry their own part instead of relying on others. Opportunities to audition in the Washington All County Chorus, Virginia District VII Choruses and Virginia All State are available. Different styles of jazz and a *cappella* singing are done. The challenges are for a higher level student wanting to be involved in chorus.

General Music (9214)

This course will help students enjoy and know more about the different genres of music. The emphasis will be on the elements of music, the styles and history of the different musical eras, and composers - including some current musicians. There will also be guest speakers/performers and use of the media and technology to research topics. Students will be expected to participate in class activities and even learn to play simple melodies on the keyboard. No previous musical experience is required.

Band (9234)

The Instrumental Music Instructional Program is committed to ensuring that all students have an opportunity to develop the knowledge and skills needed for success playing as a soloist and in large ensembles.

The Instrumental Music Program is a sequential and continual program of study. Students generally begin instruction in middle school, but may begin in high school after the student and parents have met with the band director to develop a specialized path of learning an instrument. High school students enrolled in band class are required to participate in the marching and concert band components of the instrumental class and earn a credit for the year.

All instrumental music curricula is designed to foster competence in playing proficiency, note reading, ensemble performance skills, and musical understanding and is aligned with the Virginia State Music SOLs.

Percussion/Ensemble (9250)

The Instrumental Music Instructional Program is committed to ensuring that all students have an opportunity to develop the knowledge and skills needed for success playing as a soloist and in large ensembles.

The Instrumental Music Program is a sequential and continual program of study. Students generally begin instruction in middle school, but may begin in high school after the student and parents have met with the band director to develop a specialized path of learning an instrument. High school students enrolled in band class are required to participate in the marching and concert band components of the instrumental class and earn a credit for the year.

The Percussion Class/ Band Ensemble Class is specifically designed to meet the instrumental curriculum aligned with the Virginia Music SOLs. The Percussion/Ensemble class meets the specific needs that are associated with the percussion family of instruments. Students enrolled in the percussion class are full participants in the band program. Students in the

Ensemble portion of the class must have permission from the band director to enroll in that class.

Band Guard (9296)

The Color Guard Class is specifically designed to meet the special needs that are associated with the artistic skill sets required by the visual ensemble component of the overall instrumental program; especially during marching band. Students in color guard class are expected to attempt learning an instrument as a mean of expanding their skill sets, therefore helping them acquire addition marketable skills in the music industry. Enrollment in the class is by audition only. The auditions are held during March and/or April.

Music Theory I (9222)

In this course we will fundamentally break down music into its simplest, most basic forms. With each basic component of music, we will study it in written, aural, and audiated forms. Basic components will then be combined / supplemented to study progressively more advanced topics within music theory. You will be asked to listen, read, write, sing, correct errors, create exercises, review a music performance, and peer teach topics as part of this course. While we start at the very beginning as if students have zero musical knowledge, this course is very fast paced, and is often difficult for students without some sort of a musical background. That being said, some of my best students have been non-musicians, but have had to put forth a great deal of time and effort into daily study. This is not an acceptable course for students who are in need of a general music elective course, and do not want / have ample time to study daily.

Music Theory II (9225)

Music Theory is a block class course offered to students with substantial musical backgrounds (either formal, notation-based training, or significant amounts of self-taught or "by ear" knowledge) who wish to become more familiar with musical structure, language, and notation; and/or to advance personal musicianship and prepare for college. The course includes: introduction/review in the fundamentals and materials of music (notation, rhythm, melody, harmony, form, and texture); substantial amounts of ear training, arranging and composition; harmonic and formal analysis of both classical and pop/ jazz works; and ample opportunities for students to explore music of their own choosing.

BUSINESS DEPARTMENT

Accounting (6320)

Students study the basic accounting principles, concepts, and practices which are universally accepted. This course not only gives students a fundamental practice of double-entry accounting, it also gives them an opportunity to experience the basic framework of a sole proprietorship and a corporation. Students also prepare financial statements, payroll records, personal income tax forms, checks, bank reconciliation statements, and learn how to analyze a business's income or loss. Students take the NOCTI Accounting Basic exam at the conclusion of this course.

Advanced Accounting (6321)

Accounting II uses an automated accounting approach to incorporate skills and principles from Accounting I. It provides a hands-on approach to learning how modern computerized accounting systems function by using popular industry-based

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software such as QuickBooks. Students will also integrate accounting skills with other business applications such as spreadsheets and word processors and relate them to careers and employment in the accounting field.

Prerequisite: Accounting I

Information Technology Fundamentals (6670)

Information Technology (IT) Fundamentals is an introductory class that introduces students to basic computer information. Students must take Information Technology before taking the advanced computer classes. Students will produce simple business documents using Microsoft Office software. Basic internet skills, computer concepts, and Workplace Readiness will also be covered. Information Technology introduces the essential skills needed for students to pursue specialized programs leading to technical and professional careers and certifications in the IT industry.

Computer Information Systems Dual Enrollment VHCC (6640V)

Grades: 11-12

Students apply problem-solving skills to real-life situations through databases, spreadsheets, word processing software, and presentation software. Students will complete The Dream Team simulation and will prepare to become MOS certified in Word.

Prerequisite: IT Fundamentals

*Proficiency on the Virginia Highlands Community College Placement Test

Design, Multimedia, and Web Technologies (6630)

Students learn to use Microsoft Publisher and other design software to design and layout pages similar to those seen in magazines, newspapers, professional published documents, etc. Students also learn to use PowerPoint's advanced features, create web pages using Adobe Dreamweaver, and manipulate graphics using Adobe PhotoShop. Students will prepare to become MOS certified in PowerPoint.

Advanced Design, Multimedia and Web Technologies (6631)

This course is an extension of the Design, Multimedia, and Web Technologies course. Students work extensively on web site design updating and maintaining the John Battle High School web site. Students learn video editing and production using Adobe Premiere Pro. Students will produce the JSBTV news show and Senior Class video.

Prerequisite: Design, Multimedia, and Web Technologies

Introduction to Programming Dual Enrollment VHCC (6640V)

This Virginia Highlands Community College dual enrollment course provides an introduction to programming in a collaborative learning environment. Students will use Alice and Game Maker software to create gaming situations along with Legos and robotics.

Prerequisite: Computer Information Systems VHCC

*Proficiency on the Virginia Highlands Community College Placement Test

Marketing (8121)

Grades: 11-12

In addition to taking a marketing course, the student may choose to receive additional credits for work experience. He/she must be 16 years of age or have a valid work permit. Students can receive one co-op credit for a minimum of 198 hours of work (approximately 5 1/2 hours a week) and or two

co-op credits for 396 hours throughout the school year. The training takes place in an appropriate local marketing business and is planned, supervised, and documented on a training plan by the marketing teacher-coordinator. Prior approval must be given by the marketing teacher-coordinator on the first day of school in order to utilize the co-op option for any marketing course. The student may elect to have up to two co-op periods in his/her schedule.

**Requires application from the instructor

Advanced Marketing (8131)

Grades: 12

Advanced marketing is designed to provide students with an in-depth knowledge of the marketing functions, the supervisory and management responsibilities for those functions, and competencies important for successful supervisory management employment and advancement to other management positions. Students develop advanced marketing competencies in professional selling, marketing planning, marketing mathematics, purchasing, physical distribution, advertising, and visual merchandising as well as economic and social competencies related to the supervision of marketing employees.

Prerequisite: Successful completion of Marketing

Marketing Co-op - (8133)

Grades: 11-12

In addition to taking a marketing course, students may choose to receive additional credits for work experience. Students must be 16 years of age or have a valid work permit. Students receive two co-op credits for 396 hours worked throughout the school year. The training takes place in an appropriate local marketing business and is planned, supervised, and documented on a training plan by the marketing teacher-coordinator. Prior approval must be given by the marketing teacher-coordinator on the first day of school in order to utilize the co-op option for any marketing course. Students may elect to have up to two co-op periods in their schedule.

Economics and Personal Finance (6120)

Economics and Personal Finance prepares students for the major life decisions awaiting them beyond the doors of John Battle High School such as buying cars, renting apartments, and investing in stocks and bonds. Furthermore, the class allows students to begin preparation now for personal finance in areas such as savings, tax preparation for summer jobs, and maintaining checkbooks and checking accounts. Basic economic concepts such as supply and demand are covered as well. Simulations such as home buying activities and car shopping, along with internet games, present the EPF concepts in a tangible way to students.

**This class is a required class for all students graduating in 2015 and later.

AGRICULTURE DEPARTMENT

Agricultural Production Technology (8010)

Grades: 10-12

This course emphasizes 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 following livestock enterprises will be studied: beef cattle, dairy cattle, swine, horses, and sheep.

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Agricultural Production Management (8012)

Grades: 11-12

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.

Equine Management and Production (8080)

Grades: 9-12

Equine management is a class that explores the basic needs and care of the horse, anatomy, first aid, nutrition, reproduction, breeding, genetics, and many more hands on topics involved with the horse. The class will travel to farms with horses a couple of times a semester in order to learn hands on how to properly groom, tack, train and handle horses.

Veterinary Science (8088)

Grades: 11-12

Course Description: Veterinary science is an upper level course.

This course will focus on common veterinary practices, veterinary terminology, animal anatomy, diseases, first aid, animal restraints, and dissections. The curriculum is based on a veterinary technician's point of view. There will be dissections of organs and creatures in order to explore firsthand the make-up of animals' bodies and body functions.

HORTICULTURE DEPARTMENT

Greenhouse Plant Production and Management (8035)

Grades: 9-12

Students enrolled in this course learn the operating procedures for a greenhouse. Units of instruction include developing plant production facilities, science application in plant production, and identification of plants. Business management and marketing skills are emphasized to prepare students for careers in the greenhouse plant production and management industry. Leadership development is offered through participation in FFA.

Introduction to Horticulture Dual Enrollment VHCC (8039V)

Grades: 11-12

This course introduces commercial horticulture industry with emphasis on career opportunities. Students examine the practical approach to the study of horticulture and survey individual areas within the horticulture industry. Students develop skills in the areas of growing and marketing plants. Leadership development activities are included and participation in FFA activities is encouraged.

*Proficiency on the Virginia Highlands Community College Placement Test

Landscaping (8036)

Grades: 10-12

Students develop the necessary knowledge, skills, habits and attitudes for entry-level employment and advancement in areas such as landscape design, landscape construction and landscape maintenance. They receive instruction in sketching and drawing, analyzing a landscape site, designing for function and aesthetics, identifying and selecting landscape plants, purchasing and installing plants, and maintaining the landscape by watering, fertilizing, mulching, pruning and controlling pests. Leadership development is offered through participation in FFA.

Floral Design - Dual Enrollment VHCC (8055V)

Grades: 11-12

Course content covers career opportunities, floral design foundations, design applications and the marketing of floral products. Specific design styles to be studied include mass, line, vase, wedding, holiday, balloon, and personal arrangements. Students will gain skills required for the construction of basic table arrangements, identification of flowers and greens, use and identification of equipment, and conditioning and handling of cut flowers. Leadership development activities are included and participation in FFA is encouraged.

*Proficiency on the Virginia Highlands Community College Placement Test

Floriculture (8038)

Grades: 10-12

Students will learn the basics of the horticulture plant production industry. Instruction includes plant production as well as marketing and business management. Plant material identification and floral design round out this course to prepare the student for an entry-level position in the floriculture industry. Participation in FFA activities provides leadership development opportunities.

SPECIAL EDUCATION DEPARTMENT

Study Skills (0130)

Students in study skills class work one-on-one with a special education teacher to increase test preparation skills in all subjects.

Students receive tutoring, homework help, and SOL remediation.

Lessons are prepared for individual students needing assistance with basic life skills such as counting money, making change, working on a budget, completing a job application and writing a resume, etc.

Prerequisite: Individualized Education Plan through Special Services Department.