

John I. Burton High School

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Mr. Aaron Williams, Principal

Course Descriptions



Committed to Excellence

Art

Visual Art I – Art Appreciation

This is a beginning class into the visual arts. The class will consist of a basic introduction into the visual arts in three six weeks segments. The first six weeks will be basic drawing skills, such as shading, perspective, and the human figure, etc. The second six weeks will be color theory and painting with tempera, oil, and watercolor. The third six weeks will be three-dimensional design and pottery. During each of the six weeks, the students will study art history and be required to maintain a sketchbook and a portfolio.

Advanced Art – Art I, II, III, IV, and V

This is a follow-up course to Art I. The course will be an intensive course for the student to further their drawing, painting, sculpture, and pottery ability.

First Semester: The first semester will consist of 3-D artwork, such as sculpture and pottery. This is a follow-up course to Art I. The course will be an intensive course for the student to further their three-dimensional ability. The first six weeks, the student will explore hand built pottery in the coil, slab, and pinch method. The second six weeks, the students will explore sculpture in various methods including carving, plaster, and clay.

Second Semester: The second semester will consist of intense study in drawing and painting. The first six weeks, the students will study drawing the human figure, still life and landscape. The second six weeks, the students will study painting the human figure, illustration, and still life in non-representational methods. The third six weeks, the student will explore different group projects from year to year.

Note: Although Advanced Arts is divided into two semesters, a student can take either semester or both semesters. Each semester counts as one credit or two credits for both semesters.

Band/Chorus

Marching Band

This course is offered to instrumental music students with prior elementary band experience or with approval of band director. The course will coordinate music with marching maneuvers with emphasis placed upon a high degree of music and marching competencies utilizing both large and small group practices. Participation in the class will involve rehearsal during school hours, rehearsing after school as needed and participation in performance events.

Concert Band

This course is offered to instrumental music students with prior elementary band experience or with approval of the director. The course will emphasize the development of a high degree of music performance in a concert setting. Emphasis will be placed upon: intermediate and advanced instrumental techniques, developing individual musicianship, opportunity for solo and

ensemble performance, and experience playing wide variety and styles of music literature. Students will be required to audition for a seating assignment in their respective sections.

Choral Music

This course is offered to facilitate for the students choral music-making on a high level to strive for a thorough understanding of each piece, a well rehearsed presentation, and an inspired performance. Students will work on refinement of their own individual instrument.

Music Appreciation

A survey of Western music from the middle ages through contemporary periods. The student will correlate music with history, art and philosophy from the major music historical periods. The seven basic elements of music (melody, harmony, rhythm, form, texture, tempo and dynamics) will serve as guidelines as the student will hear representative examples from the major periods.

Business Course Offerings

Accounting

Grade Level: 10-12

Students study the basic principles, concepts, and practices of the accounting cycle for a service business and a merchandising business. Topics covered include analyzing transactions, journalizing and posting entries, preparing payroll records and financial statements, and managing cash systems. Ethics and professional conduct are emphasized. Students learn fundamental accounting procedures using both manual and electronic systems.

Business Law

Grade Level: 9-12

Students examine the foundations of the American legal system and learn the rights and responsibilities of citizens. Students gain practical knowledge and life skills by exploring economic and social concepts related to laws governing business and individuals. Focus areas include contracts, consumer protection, criminal law, tort law, international law, family/domestic law, employment law, and careers in the legal profession. The cooperative education method is available for this course.

Computer Applications

Grade Level: 8-12

Students develop or review correct keyboarding techniques and gain a basic knowledge of word processing, spreadsheet, database, graphics, and telecommunications applications. Students demonstrate an understanding of computer concepts through application of knowledge. Students

learn to use software packages and local and worldwide network communications systems. Grade 8 Computer/Technology Standards of Learning are incorporated and reinforced in this course.

Computer Information Systems

Grade Level: 10-12

Prerequisites: Keyboarding

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

Journalism

Grade Level: 11-12

Students develop intermediate to advanced level word processing skills using a variety of software functions, including graphics, desktop publishing, and telecommunications. Students gain competence integrating other applications such as database and spreadsheet into word processing activities. Classroom experiences also provide for skill development in communication.

Economics and Personal Finance

Grade Level: 10-12

Students learn how to navigate the financial decisions they must face to make informed decisions related to career exploration, budgeting, banking, credit, insurance, spending, taxes, saving, investing, buying/leasing a vehicle, living independently, and inheritance. Development of financial literacy skills and an understanding of economic principles will provide the basis for responsible citizenship and career success. In addition to developing personal finance skills, students will also study basic occupational skills and concepts in preparation for entry-level employment in the field of finance.

Principles of Business and Marketing

Grade Level: 8-12

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

Digital Input Technologies

Grade Level: 10-12

Digital Input Technologies introduces new and emerging input devices (e.g., speech- and handwriting-recognition software, tablets, cloud computing software applications, headsets/microphones, scanners, digital cameras, digital video cameras, mobile devices, keyboards, mice) to prepare students for using tools that are becoming standard in the workplace and everyday life.

Introduction to Marketing

Grade Level: 10-12

Students gain an understanding of the importance of marketing in today's society. They develop skills related to interpersonal communication, self-presentation, economics, marketing, sales, employability, career discovery, and ethical decision-making.

Marketing

Grade Level: 11-12

Students examine activities in marketing and business important for success in marketing employment and postsecondary education. Students will learn how products are developed, branded, and sold to businesses and consumers. Students will analyze industry trends and gain hands-on experience in the marketing of goods, services, and ideas. Topics will include professionalism in the workplace, product planning and positioning, promotion, pricing, selling, economic issues, and the impact of technology on the marketplace. The cooperative education method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year.

English

Acting

Develops personal resources and explores performance skills through such activities as theatre games, role playing, improvisation, work on basic script units, and performance of scenes. The class will also include rehearsal, presentation and performance of the class's entry into the Virginia High School League One Act Competition.

Online Communication

The focus of this course is to strengthen written and oral communication skills. Students are required to write in a variety of subject areas. Student articles usually fall into one of the

following five categories: news, features, sports, opinion, and entertainment. Students are expected to understand and correctly utilize AP (Associated Press) Style in the writing. Students are also required to communicate and collaborate with class members, students, and faculty to gather information for news stories. Students are encouraged to experiment with a variety of writing in a variety of subject areas. Students use their written and oral skills to communicate with the Burton community and the Norton City community. Students are required to utilize technologies including blogging, social networking, photography, videoing, and video editing. Students are also required to develop a diverse writing portfolio that showcases their abilities. The ultimate goal of this course is to familiarize students with the field of journalism and to allow our students to have a voice in our community.

Public Speaking

Applies theory and principles of public address with emphasis on preparation and delivery.

DE CST 151 FILM APPRECIATION I AND FILM STUDIES

The study of the history of film, various genres of film, thematic and analytical analysis of film, research of the different pioneers in the invention of moving pictures, terms associated with film, research of various directors and their contributions to film, how to view film symbolically, other educational and entertaining aspects of film and the motion picture business.

Grade 8

This grade level will focus on previous writing prompts released from the VDOE website. The written essay will be broken down into a web organizer (brainstorming), a rough draft, and a final copy, as well as a proofreading checklist. Also, this course will focus on various short stories and some classical stories to further enhance the students' knowledge and comprehension of the material. The class will be constantly reading and evaluating various sources, poems, advertisements, stories, and in some cases novels.

Grade 9

Grammar and Vocabulary Intensive. This grade level will focus on grammar and vocabulary exclusively. Reading and Writing (because sadly the reading of literature is becoming more and more obsolete) will focus on Workplace Literature: 1) Applications, 2) Resumes, 3) Writing professional e-mails and memos, 4) spreadsheets, etc.

Grade 10

Terms, Archetypes and Themes. This level will focus on literary terms used in analysis with appropriate literature used to identify these terms (culled from all literature books grades 9-12).

Reading and Writing will be dedicated to essays (also culled from all grade levels). Writing will be predicated on responding to those essays in terms of theme, content, and life lessons. The Developmental Level One Guide from the MECC Guide will be used as a basis for structuring this class. This grade level will also go to the college library monthly for resources including the on-line library with full text databases. Students must know how to use college libraries.

Grade 11

Writing Intensive. Students should know grammar, vocabulary and terms by this time so the class can become writing intensive (instead of trying to teach basic grammar rules to juniors). Writing will deal with opinion essays (which correlates with the new SOL requirement for focusing on persuasion) and developing the argumentative thesis. A point/counterpoint argument. Opinion essays will be taken from news magazines, etc. so that students will read opposing viewpoints and then have to develop their own argument. Conversely, students could be forced to defend a viewpoint with which they do not agree. This class will be modeled on Developmental Level Two from the MECC guide.

Grade 12

Research/Citation Extensive. Write three major research papers during the semester including outlines, annotations, note cards, etc. Students will move from the five paragraph model used for SOL preparation and learn to extrapolate a longer paper from the five paragraph model. Model on Development Level Three from the MECC Guide.

Foreign Language

Spanish I

Grade levels: 9-12

Spanish I provides instruction in the skills of listening, speaking, reading and writing Spanish. Emphasis is placed upon the fundamentals of vocabulary, grammar and pronunciation. The student will also be introduced to the culture and customs of the Spanish-speaking world.

Spanish II

Grade levels: 9-12

Spanish II presents the more complex structures of basic Spanish and reviews and refines the elementary aspects presented in Spanish I. More emphasis is placed upon writing, composition

and speaking skills. The course focuses upon developing an appreciation of the breadth and variety of the Spanish-speaking world.

Spanish III

Grade levels: 10-12

This course emphasizes conversational skills and listening comprehension with continued practice in reading and writing. More advanced grammar concepts are introduced. Through varied project-based activities, the student is introduced to Spanish and Hispanic literature and becomes more aware of the culture, customs and history of the Spanish-speaking world.

Health and Physical Education

Health & P.E.8

In this course, the student becomes involved in activities to emphasize individual flexibility, endurance, and good physical conditioning. Activities will be based on team as well as individual sports. There is an emphasis on warming up, stretching properly, running, and aerobic activities. In addition, personal appraisal, personal growth, and good health, nutrition, drugs, alcohol, tobacco, first aid, and family life education will be studied. *This is a non-credit bearing class.*

Health & P.E.9

This course is a continuation of Health/P.E. 8 with emphasis gradually shifting from team sports to more individual and dual sports. Focus on personal fitness and maintaining a healthy weight through physical activity. There is an emphasis on warming up, stretching properly, running, and aerobic activities. Also, prevention and disease control, consumer health, environmental health, weight management, personal responsibility for own health, and family life education will be studied.

Health & P.E. 10

This course continues to emphasize individual, team and dual sports. These activities provide the student with the opportunity to participate in lifetime sports and those sports that have carry over value for the individual person; *Physical activity for life*. There is an emphasis on warming up, stretching properly, running, and aerobic activities. Health activities offered and studied in this class include health careers, mental health, relationships, family life education, drug awareness, and stress management.

Driver Education

The classroom segment of driver education will be taught the first six weeks of each semester as part of the P.E. 10 curriculum. The in-car portion of driver education will be taught during the remaining days of each semester. The classroom phases consist of 40 hours of instruction, and in car phase consists of five blocks of driving and observation or a total of at least 80 miles driven. In order to receive a driver's license, a student must have the principal's certification that he/she is in good academic standing and meets all state regulations.

Weightlifting and Conditioning

Grade Levels: 9-12

This course will target overall physical fitness, flexibility, strength, and muscular endurance. Emphasis will be placed on stretching, running, weight lifting and aerobic activities. *Specific weight training programs will be offered to meet the needs of athletes who participate in all sports. We strongly recommend that a student in this class not have another P.E. class that same semester.*

Mathematics

Pre-Algebra

Pre-Algebra is a two semester eighth grade level course designed to prepare students for Algebra I. Skills in the basic operations of arithmetic will be incorporated in the solving of problems involving the different sets of the real number system. Using decimals and fractions along with the basic understanding of ratio and proportions will lead into the concept of percent. Algebraic concepts will be introduced including graphing, relations and functions, and solving basic equations. The geometry concepts of perimeter, area and volume will be emphasized.

Algebra I

Algebra 1 introduces the student to variables, algebraic expressions, equations, functions, inequalities, and their graphical representation. The student develops the ability to: explore and solve mathematical problems, think critically, work cooperatively with others, and communicate mathematical ideas clearly.

Mathematics SOL Preparation

SOL Prep class is designed to reinforce and remediate those students who need help with the skills necessary for SOL tests. This class will also teach multiple choice testing skills. This class may not be used in place of a regular math class but as a supplement.

Geometry

Geometry introduces the study of points, segments, triangles, polygons, circles, solid figures, and their associated relationships as a mathematical system. Emphasis is placed on the description and use of inductive, deductive, and intuitive reasoning skills. Powers of abstract reasoning, spatial visualization and logical reasoning patterns are improved through this course. Points, segments, triangles, polygons, circles, and solid figures are the structures studied. The focus is on comparisons between these figures concerning surface areas, volumes, congruency, similarity, transformations, and coordinate Geometry. Algebra I skills and a scientific calculator are used throughout the course.

Algebra Functions and Data Analysis

Algebra, Functions, and Data Analysis: A Virginia Course is intended to build on previous mathematics courses, including Algebra I, and to place emphasis on bringing about a deeper understanding of those mathematical relationships that will help students gain mathematical literacy in the real world, show the connection between algebra and statistics, and simultaneously help them build a strong foundation for future study in mathematics and other disciplines. Students will work independently and cooperatively to construct, reflect on, apply, and describe their own mathematical models, which they use to solve meaningful problems.

Algebra II

This course is designed to build on algebraic and geometric concepts. It develops advanced algebra skills such as systems of equations, advanced polynomials, imaginary and complex numbers, quadratics, and includes the study of logarithmic and trigonometric functions. The content of this course is important for students' success on both the SAT/ACT and college entrance exams.

Trigonometry/Math Analysis

This course continues the student's exploration of various algebraic concepts including systems of equations, polynomial and rational functions, conics, exponential and logarithmic functions, trigonometry, and probability and statistics. This class serves as a bridge to Pre-Calculus. Many topics discussed in Math Analysis will also be discussed in Pre-Calculus.

MTH 157 – Statistics

Presents elementary statistical methods and concepts including descriptive statistics, estimation, hypothesis testing, linear regression, and categorical data analysis.

MTH 163 – PRECALCULUS I

Presents college algebra, matrices, and algebraic, exponential, and logarithmic functions. Prerequisites: a placement recommendation for MTH 163 and Algebra I, Algebra II, and geometry or equivalent. Lecture 3 hours per week.

MTH 164 PRECALCULUS II

MTH 164 presents trigonometry, analytic geometry, and sequences and series. Prerequisite: MTH 163 or equivalent. Lecture 3 hours per week. This course is intended for college transfer.

MTH 273 Calculus I

Presents topics in differential calculus of one variable including the theory of limits, derivatives, differentials, definite and indefinite integrals and their application to algebraic and transcendental functions.

Science

Earth Science

Earth Science is a laboratory science course that studies the dynamic Earth and the processes that affect it on a day to day basis and over long periods of time. Geology, oceanography, meteorology, astronomy and environmental science are the broad topics that will be explored. The relationships between these areas and their influence and dependence upon one another will be investigated. This is a Virginia SOL course and students will be required to take the Earth Science EOC SOL test at the conclusion of the course.

Environmental Science

Environmental Science is laboratory science course that studies the interaction of living things and their environment. It is an interdisciplinary course that explores topics such as pollution (water, air, solid waste), ecosystems, environmental ethics, energy sources (renewable and non-renewable), hazardous waste and land/soil use.

Chemistry I

Chemistry is a laboratory course that studies matter and the basic interactions of matter. Some of the topics that will be covered include laboratory safety, scientific investigation and measurements, physical and chemical properties of matter, types of reactions, stoichiometry and gas laws. An overview of the theory, problem solving techniques and applications of the different areas of chemistry will be covered. This is a Virginia SOL course and students will be required to take the Chemistry EOC SOL test at the conclusion of the course.

Biology

Biology is a laboratory science course that studies life. Topics are selected from areas of scientific method, microscopy, biochemistry, cytology (study of cells), genetics, ecology (study of the ecosystems and the environment, natural selection, zoology (study of animals), and botany (study of plants). By detailed study of these areas, the student will complete this course with a basic understanding of biology and a greater appreciation for all living organisms. The objectives are accomplished through lectures, lab work, special projects, and multimedia. This is a Virginia SOL course and students will be required to take the Biology EOC SOL test at the conclusion of the course.

Human Anatomy and Physiology

Human Anatomy and Physiology is a laboratory course that studies the structures and systems of the human body and the functioning of those structures and systems. It is an interdisciplinary course that studies how aging, genetics, substance abuse, and other factors affect human beings. The course objectives are accomplished through lecture, classroom discussion, lab work, and creating models and picture diagrams. The student will complete the course with a basic understanding of the human body, how it functions, and various things that affect it.

Physical Science

Science 8, Physical Science, introduces students to the study of matter and energy and to the methods scientists use in their studies. Students will integrate problem-solving skills with laboratory activities to build an understanding of overlapping concepts to expand upon in future Chemistry and Physics classes. This course will involve lecture, classroom discussions, models, pictures, and diagrams to emphasize the effects of science on mankind's way of life. *This is a non-credit bearing course.*

Forensic Science

Forensic Science is the study of science in the matter of laws. Students will integrate problem-solving skills with laboratory activities to build an understanding of concepts that deal with the use of science in the justice system. Students will complete the course with a basic understanding of the justice system, crime scene investigation, and scientific observation and experimentation.

Physics

Physics is a laboratory course that studies various topics including motion, forces, gravity, energy and momentum. Additional topics that may be covered include heat, fluids, waves, sound, light, electricity and magnetism. An overview of the theory, problem solving techniques and applications of the different areas of physics will be covered.

Social Studies

20th United States History- Grade Level: 10

This course is designed for students who have an interest in United States History and who are interested in enhancing their performance in the United States and Virginia History class 11th Grade). The course begins its study with the Gilded Age of the 19th Century and how the Progressive Era (the first movement of the 20th Century) attempted to solve the many problems presented to society by Industrialization, Immigration and Urbanization. Special emphasis will be placed on the two World Wars, the Roaring Twenties, the Fall of Wall Street and the Great Depression, the Cold War and the Civil Rights Movement. Students will study major events, people, and terminology that shaped our modern world.

Sociology- Grade Level: 11 and 12

This course is designed for students who are interested in human relationships in a modern world. Students will study how socio-economic conditions, ethnicity, race and sexual orientation are viewed world-wide and how we have changed over the past decades in our acceptance of these factors. The structure of the course will focus on tolerance and adaptation to unfamiliar social behavior.

World Geography- Grade Level: 8

This course is designed to address the physical and cultural sides of Geography and focus on concepts such as map reading, chart interpretation, and climate and weather influences. Students will study different cultures of the world and how geographic features affect social aspects, the economy, and politics.

Psychology-Grade Level: 11 and 12

This course is designed to introduce students to the development of the mind in coordination with human physical development. During the semester, students will study early childhood development, adolescent psychological development, and adult psychological development and understand how psychological development and biological development are interdependent.

World History I to 1500 A.D.- Grade Level 9

World History I is a survey course that spans from the beginning of time to 1500 A.D. Students will study the development of civilization from the Mesopotamia Era to the Fall of the Roman Empire (and all major civilizations in between). Important people, places, and events will be studied that are relative to the development of Western Civilization.

World History II From 1500 to the Present– Grade Level 9

World History II is a survey course of the world from the fall of the Roman Empire to Present Day. Special emphasis will be placed on the later days of the Renaissance, the Enlightenment,

the Age of Exploration, the two World Wars, and the world's movement into modern times. Important people, places, and events pertinent to content will also be studied.

Virginia/United States History-Grade Level 11

This course is a general survey course of the development of the United States of America from a former British colony to Superpower in the Modern World. Students will begin the class with the age of Exploration in the 1600's, cover all major American Wars, major social, economic, and political movements that help shape our culture and our identity as the most powerful nation on earth. Also included is the relationship between people and technology and how technology has contributed to our success.

Virginia/United States Government-Grade Level 12

This course is designed to examine the political heritage of the Western World and trace the roots of American Democracy to the Ancient World. Students will focus on the history of America from a political standpoint, analyze the writing of the Constitution, evaluate the changes of Government over time, and explain how a document written so long ago has acted as a constant that has held our country together for nearly 300 years. Students will also study state and local government and learn why it is our responsibility to vote and participate.

A.Linwood Holton Governor's School

APPALACHIAN HISTORY

Standards: Dual Enrollment (3 credit hours)

Pre-requisites: U.S. History (can be taken concurrently)

This course addresses the history of the Appalachian region (from the Pre-Columbian period through the early 21st century) with a focus on southern Appalachia. Emphasis will be placed on such skills as: historical research, use of primary documents, oral history, archival work and preservation.

ENVIRONMENTAL SCIENCE & RELATED PROBLEMS

Standards: Dual Enrollment (6 credit hours)

Pre-requisites: Biology

This course will place emphasis on the unique Appalachian environment and its challenges. Presents and discusses basic scientific, health-related, ethical, economic, social and political aspects of environmental activities, policies/decisions. Studies the relationship of man to his environment; ecological principles, population dynamics, topics of current importance including air, water, and noise pollution; poisoning and toxicity, radiation, conservation and management of natural resources.

WESTERN CIVILIZATION

Standards: Dual Enrollment (6 credit hours)

Pre-requisites: U.S. & World History

This course is designed to introduce students to the history of humankind from the earliest period through the present with an emphasis on Western Civilization. Students will learn about the major cultures, ideas, people, and events which have influenced the development of modern Western society.

WORLD CIVILIZATION

Standards: Dual Enrollment (6 credit hours)

Pre-requisites: U.S. & World History

The World Civilization course offers students an introduction to the history of humankind from prehistory to the twenty-first century. While the approach is similar to the Western Civilization course, this course has a global perspective. This course is designed to survey the Asian, African, Latin American, and European civilizations from the ancient period to the present. Students will find that World Civilization supplements rather than replaces the Western Civilization course.

PROBABILITY & STATISTICS

Standards: Dual Enrollment (6 credit hours)

Pre-requisites: Algebra II (Pre-Calculus I, MECC only)

Class Materials: Graphing Calculator

This course is designed to introduce students to fundamental techniques of probability calculation and statistical analysis. Students will learn basic mathematical tools for effective experiment design, experimental result analysis, and “real world” probability determination. Class discussion will emphasize how statistics and probability relate to daily news stories, contemporary debate topics, and day-to-day life.

CREATIVE WRITING

Standards: Dual Enrollment (6 credit hours)

Pre-requisites: ENG-112 or divisional approval

Introduces the student to the fundamentals of writing imaginatively. Students write in forms to be selected from poetry, fiction, drama, and essays.

ADVANCED MULTIMEDIA APPLICATIONS

Standards: Dual Enrollment (6 credit hours)

Pre-requisites: Keyboarding

This course is designed to introduce students to the exciting world of multimedia. Students will learn to select and manage software and hardware resources required for multimedia production including: digital media, video clips, still images, audio clips, etc. The focus will be on using multimedia to develop and present projects that simulate those required of professionals in a variety of fields.

INTRODUCTION TO ENGINEERING METHODS & COMPUTER PROGRAMMING

Standards: Dual Enrollment (6 credit hours)

Pre-requisites: Algebra II

This course is designed to teach you to apply problem-solving techniques to engineering challenges and to use computer programming and algorithms in a higher level computer language (C++) to address real problems faced by engineers.

ASTRONOMY

Standards: Dual Enrollment (8 credit hours)

Pre-requisites: Algebra II

Astronomy continues to enjoy a golden age of discovery and exploration. In this course you will learn of new adventures in the study of the oldest science. Not only will you discover new facts, but you will grow to appreciate the cosmos that surrounds us. You will complete projects such as building your own telescope and star finder to guide your understanding and knowledge of the universe.

PRINCIPLES OF PHYSICS

Standards: Dual Enrollment (8 credit hours)

Pre-requisites: Algebra II, Geometry (or equivalent)

This course covers the fundamental principles of physics, including the mechanics, thermodynamics, wave phenomena, electricity and magnetism, and selected topics from modern physics. It is to give you an idea of the way physicists view the world; to have the satisfaction of understanding and even predicting the outcome of activities happening all around you; to know enough about physics to have a rewarding career in a highly technological society; to be able to make informed decisions in an increasingly complex world, and perhaps most important of all, to learn to ask questions.

ENGINEERING & ROBOTICS

Standards: Dual Enrollment (5 credit hours)

Pre-requisites: Physics, Algebra I, II

This course is designed to help you understand what an engineer is and what an engineer does. It will give you a strong foundation in engineering fundamentals and help cultivate your problem-solving skills. The relevance of robotics technology has increased dramatically in the last few years. Our students will also need to be able to participate in controlling technological change because it will shape their lives and their children's lives. We will explore industrial robots, educational robots, as well as personal robots. You will even build your own robot!

HUMAN ANATOMY & PHYSIOLOGY

Standards: Dual Enrollment (8 hours credit)

Pre-requisites: Biology and General Chemistry

This course will present an integrated approach to human anatomy and physiology along with microbiology and pathology. The structure and function of the human body will be investigated. Upon completion of this two semester study students should understand the scope and subdivision of anatomy and physiology as well as the chemistry of the human body as it relates to the health sciences. All students who are considering any field in the medical sciences will benefit from an in-depth knowledge of the internal and external body systems. The instructor will introduce terminology as well as applications used in the medical arena. Virtual laboratory activities and simulations will be integrated into this study to aid students in making the information their own.

Course descriptions received from: http://www.hgs.k12.va.us/courses_page.htm

Elite Learning Courses

BUS 241-242: BUSINESS LAW

This course will examine the foundations of our legal system. The course will be geared to the highly motivated student or advanced level student with an interest in a law-related career. Topics include criminal law, business law, family law, etc. Research on a variety of legal professions will also be conducted during this course. Students will study case law that has made an impact on the way we live our lives today. Prerequisite: Students should have an interest in pursuing a job in the legal or business fields

HIS 121-122: UNITED STATES HISTORY

HIS 121-122 is a survey of United States history from its beginning in early colonial times to the present. The political, economic, and social development of the people of the United States will be examined with specific references to the era of discovery, the colonial period, the Revolution, the emergence of sectionalism, the Civil War, Reconstruction, the frontier experience, industrial development, reform movements, expansion of governmental activity, and the emergence of the United States as a world power.

ENG 111-112: ENGLISH

ENG 111--Introduces students to critical thinking and the fundamentals of academic writing. Through the writing process, students refine topics; develop and support ideas; investigate, evaluate, and incorporate appropriate resources; edit for effective style and usage; and determine appropriate approaches for a variety of contexts, audiences, and purposes. Writing activities include exposition and argumentation with at least one researched essay.

ENG 112--Continues to develop college writing with increased emphasis on critical essays, argumentation, and research, developing these competencies through the examination of a range of texts about the human experience. Requires students to locate, evaluate, integrate, and document sources and effectively edit for style and usage. Prerequisite: Students must successfully complete ENG 111 or its equivalent to enroll in ENG 112. 6 credits.

HIS 269-270: CIVIL WAR AND RECONSTRUCTION / AMERICA IN THE GILDED AGE

This course is a reading-intensive survey of America in the mid- to late nineteenth century. The class will study and explore the factors leading to the division between North and South and the military, social, political, and economic aspects of the war, as well as Reconstruction. The course will also explore the major developments and themes that defined American life between 1870 and 1900. Reading assignments will come from the textbook, as well as from numerous collected primary and secondary Internet source materials.

PLS 211-212: UNITED STATES GOVERNMENT

Teaches structure, operation, and process of national, state, and local governments. Includes in-depth study of the three branches of the government and of public policy. 6 credits

Course descriptions and Course Syllabi received from: <http://svetn.org/elite-learning/courses/>

Dual Enrollment Academy

Semester One (Mountain Empire Community College)

English 111

Part I - College level English course.

Political Science 211

Part I - College level Government Course.

Biology 101 and Lab or Physics 201 and Lab

Part I - College level Biology or Physics Course with Lab.

College Success Skills

Course is design to help students successfully transition into college.

Semester Two (Mountain Empire Community College)

English 112

Part II - College level English course.

Political Science 212

Part II - College level Government Course.

Biology 102 and Lab or Physics 202 and Lab

Part II - College level Biology or Physics Course with Lab.

Humanities Course