

Carlisle School
Upper School Course Catalog 2016-2017

ENGLISH:

ENGLISH 9

Emphasis for all students will be on developing composition, oral communication, critical reading skills, technology skills, vocabulary acquisition, research based projects and grammar skills which will enable the student to be successful in higher level English courses throughout Upper School. This course will encourage a holistic learning approach along with intercultural awareness through the use of a wide genre of materials and multi-cultural texts.

ENGLISH 10

Tenth Grade Honors English involves literature studies, grammar, vocabulary, writing and rhetoric. The novels, poetry, plays, and short stories studied come from a range of backgrounds and topics giving students the opportunity to discuss and explore other times and cultures. Students are encouraged to be open-minded about the texts and opinions of other students during discussion. The study of grammar, vocabulary, and writing helps the students become better communicators of the written word.

Course Content:

- Literature and Poetry Studies through assigned and related texts challenges students to learn about themselves and the world around them as they analyze the writing of others.
- Grammar is studied through the need to make clear communication and correcting mistakes in our own writing.
- Vocabulary is an ongoing study that involves the literature we are reading as well as useful words, roots, prefixes for SAT preparation.
- Writing and Rhetoric involves examining the techniques of master writers and practicing various writing techniques throughout the year.

ENGLISH 11

This course, focusing on American literature, introduces students to longer, more complicated literary works and the appropriate techniques for analysis. Students learn the process of writing persuasive and discursive essays, read and annotate texts, and make arguments regarding the quality and structure of literary works.

AP ENGLISH LITERATURE AND COMPOSITION (GRADE 11)

AP English Literature introduces students to the spectrum of literary genres, from ancient Greek drama to Romantic poetry, from the American novel to free verse. Students learn to use the essential elements of literary analysis, including close reading and interpretation. Students should expect to be challenged, with college-level subject matter, and equivalent rigor in grading and

homework. This class requires substantial time and attention for reading and writing, and will prepare students for an intermediate or entry-level college English class.

ENGLISH 12

This course, focusing on world literature up to the present, helps students to polish their writing and reading skills. In the final year before college, students continue to refine their understanding and use of the writing process, following rules of mechanics and grammar. Students learn to research and compile information, culminating in a required Senior Project, an external job-observation project at the end of the school year.

AP ENGLISH LANGUAGE AND COMPOSITION (GRADE 12)

AP English Language asks students to read and analyze writing as rhetoric, from political speeches to Shakespearean monologues. Students learn to analyze arguments, understanding how an argument is built, and how arguments reflect personal interest and status. Students should expect to be challenged, with college-level subject matter, and equivalent rigor in grading and homework. This class requires substantial time and attention for reading and writing, and will prepare students for an intermediate or entry-level college English class.

SPANISH:

SPANISH 1

Spanish 1 provides an introduction to the language and culture of the countries where Spanish is spoken. Conversational skills and listening comprehension are stressed. Through the use of practical conversational topics, grammar and vocabulary are introduced and incorporated.

Course Content (includes but not limited to the following):

- Alphabet, colors, numbers
- Basic greetings and goodbyes
- Basic questions and answers including interrogative words
- Definite and indefinite articles
- Making nouns plural
- Adjectives and adjective agreement
- Subject pronouns
- Infinitives and regular verb conjugations in the present tense
- Irregular verbs like ser, estar, ir
- Introduction to stem-changing verbs like jugar and **-go** verbs
- Telling time
- Days, months, seasons, date
- Weather expressions
- Family words
- Applicable vocabulary with each chapter
- Culture

SPANISH 2

Spanish 2 provides the student a brief review of the material presented at the first level as well as further development of listening and speaking skills so that the student is able to express himself in daily situations given the length of study of Spanish. Vocabulary is emphasized. More complex grammatical structures are introduced, as are other verb tenses. Cultural themes continue to be studied as they pertain to current units. Reading and writing skills receive more emphasis utilizing the topics under current study, but encouraging the students to draw upon learned skills to better understand and communicate the Spanish language.

Course Content:

- Vocabulary acquisition
- Verbs in several different tenses
- Grammar and structure of spoken and written language
- Culture

SPANISH 3

The Spanish 3 student refines his knowledge of the vocabulary and grammatical structures learned during the previous two years of study. Learned vocabulary continues to be expanded upon. As new units are introduced, relevant vocabulary is introduced to supplement each unit. Vocabulary relevant to the student's daily life routine is emphasized so that meaningful discussion and conversation takes place. Listening and speaking skills are strongly emphasized while added emphasis is placed on reading and writing skills.

SPANISH 4 AND 5

Spanish 4 and Spanish 5 provide an opportunity for students to advance their knowledge of grammar and culture while improving their listening, speaking, reading, and writing proficiencies in Spanish. The focus of the course will include "the 5 C's of foreign language learning:" communication, cultures, connections, communities, and comparisons.

HISTORY:

WORLD STUDIES

World Studies is a survey course covering the history of Western, Asian, Indian, and Middle Eastern societies. This course examines the social, economic, political, religious, cultural, and philosophical development of the world. This course will teach students to critically evaluate primary source documents, learn and apply secondary course material, synthesize historical knowledge through written work, projects and/or presentations, and analyze the forces that shaped World History.

WORLD HISTORY

World History is a survey course covering the history of Western, Asian, Indian, and Middle Eastern societies. This course examines the social, economic, political, religious, cultural, and

philosophical development of the world. This course will teach students to critically evaluate primary source documents, learn and apply secondary course material, synthesize historical knowledge through written work, projects and/or presentations, and analyze the forces that shaped world history.

AP EUROPEAN HISTORY

The Advanced Placement European History course is for qualified and motivated students who wish to acquire knowledge of the basic history of Europe from approximately 1450 to the present. It is important that American students immerse themselves in the events and ideas that have influenced our culture. Despite the current discussion of multiculturalism and the undoubted value and influence of non-European cultures, European traditions continue to be a major influence.

The course introduces cultural, economic, political and social developments that played a fundamental role in shaping the world. Students acquire a context for understanding the development of contemporary institutions, the role of continuity and change in present-day society and politics, and the evolution of current forms of artistic expression and intellectual discourse. Human rights and material abundance are goals of many cultures all over the world. Both are products of Europe. Understanding the strengths and weaknesses of modern Europe helps students function more effectively.

US HISTORY

11th Grade U.S. History is a survey course covering the History of the United States. This course examines the social, economic, political, religious, cultural, and philosophical aspects of its development. This course will teach students to critically evaluate primary source documents, learn and apply secondary course material, synthesize historical knowledge through written work, projects and/or presentations, and analyze the forces that shaped United States History

AP US HISTORY

AP U.S. History is designed to provide students with the analytic skills and factual knowledge necessary to deal critically with the problems and materials in U.S. History. The program prepares students for intermediate and advanced college courses by making demands upon them equivalent to those made by full-year introductory college courses. Students should learn to assess historical materials—their relevance to a given interpretive problem, reliability, and importance—and to weigh the evidence and interpretations presented in historical scholarship. AP U.S. History develops the skills necessary to arrive at conclusions on the basis of an informed judgment and to present reasons and evidence clearly and persuasively in essay format. In addition to exposing students to the historical content, AP U.S. History will also train students to analyze and interpret primary sources, including documentary material, maps, statistical tables, and pictorial and graphic evidence of historical events. Students need to have an awareness of multiple interpretations of historical issues in secondary sources. Students should have a sense of multiple causation and change over time, and should be able to compare

developments or trends from one period to another.

AP PSYCHOLOGY

Psychology is most appropriately defined as the systematic study of behavior and experience. One of the goals of this course is to provide students with an opportunity to acquire a better understanding of how the human mind works and how this affects behavior.

Content: The psychology standard level syllabus is divided into the following four parts:

Part 1-Perspectives

The study of all three of the following perspectives is compulsory:

- The biological perspective
- The cognitive perspective
- The socio-cultural perspective

Part 2-Options

- Abnormal psychology
- Developmental psychology

Part 3- Qualitative Research Methodology

The study of research methodology is compulsory. It comprises the following elements:

- Introduction to research methods
- Ethics
- Quantitative research methods

Part 4-Simple Experimental Study

The completion of a simple experimental study is compulsory.

HONORS ANTHROPOLOGY:

This class studies the biological and cultural history of humanity, using the social science of anthropology. Students will learn the four subfields of linguistics, archaeology, biological anthropology, and cultural anthropology. This includes studying the evolution of the human body, the ways that languages change and shape human thought, how ritual and symbol can influence human behavior, and what the ancient past can tell us about human culture.

GOVERNMENT:

This course focuses on the role of government in history, organization and operation of local, state, and national government. Students will study the U.S. Constitution with particular emphasis on the legislative, executive, and judicial branches. This course is intended to enable students to become active citizens in the democratic process. Students will interpret key sections of the U.S. Constitution, and apply them to current situations; analyze the role and actions of American Government and the media; as well as, examine critical rights and responsibilities of U.S. Citizens in democracy.

MATHEMATICS:

ALGEBRA 1

The purpose of Algebra 1B is to create a solid foundation in the understanding of algebraic

concepts. Students will learn how to do calculations involving variables and how to solve equations and inequalities. Students will learn to communicate using correct mathematical terms, when asked to explain their various reasoning process for different types of mathematical problems. Students will show their work and learn how to check back over their work for accuracy. Students will learn the necessary algebra concepts for the placement of geometry the following year.

GEOMETRY

Geometry examines various plane figures and their relationships. This course strives to engage students in spatial reasoning and analytical thinking. Students will be encouraged to explore and reflect upon the useful applications of geometric principles. With the use of appropriate symbols, students will strive to speak and write the language of mathematics comfortably. Attention will be drawn to the significance and beauty of mathematics in our global society.

HONORS GEOMETRY

In this course, students will gain knowledge and understanding of geometric concepts and their importance in our day-to-day lives. Students will develop keen problem-solving skills and the use of logic through direct and indirect proofs. A strong connection to algebra will be made through the use of solving equations with radicals, factoring and the quadratic formula in geometric problems. Prerequisite: Algebra 1

ALGEBRA 2

As an extension of the material covered in Algebra I and Geometry, this course aims to strengthen one's ability to analyze and solve mathematical problems both in the classroom and in "the real world". Topics to be covered include linear equations and inequalities, polynomials, coordinate geometry, transformations, linear systems, linear programming, matrices, rational expressions, radicals, sequences, complex numbers, exponentials, and logarithmic functions.

HONORS ALGEBRA 2

The purpose of this course is to enable students to gain a further knowledge of algebra and to develop an appreciation for complex algebra theories and their value in society. Students will learn to communicate about the concepts being taught using correct mathematical terms. At the end of this course, students will have gained knowledge of complex and abstract algebraic concepts.

CONTENT • Solving systems of linear equations and inequalities • Matrices and transformations • Polynomials-operations and factoring • Quadratic functions • Solving quadratic equations • Polynomial functions-graphing and roots • Rational expressions and equations • Logarithms • Sequences and series • Trigonometry

HONORS PRECALCULUS

This course is designed to enhance the material covered in the Algebra and Geometry courses in order to prepare students for the topics covered in Calculus. Students will be required to take elementary concepts and apply them in problem-solving using data, functions, and graphs. The students will be able to represent data using numerical, algebraic, graphical, and verbal forms. The graphing calculator will be used to enhance and assess problem-solving techniques.

Content covered includes:

Functions and graphs, polynomial, power and rational functions, exponential, logistic and logarithmic functions, trigonometric functions, analytic trigonometry, applications of trigonometry, systems and matrices and discrete mathematics.

AP CALCULUS

This course is designed to help students understand the principles and concepts of calculus, not to memorize an enormous amount of formulas and identities to use to solve problems. If students can connect to the concepts being taught and visualize what is being asked in the problem, then there will be no need for rote memorization. I want students to appreciate the beauty and complexity of Calculus while gaining respect for the field of mathematics.

At the beginning of the course, we spend several weeks becoming familiar with all the families of functions. We use labs and other activities with the graphing calculator to gain a better understanding of how different functions behave and the properties that go with each function.

The Rule of Four is used starting on day one of this course. Students are expected to express ideas in graphical, numerical, algebraic, and written form. Proper terminology and notation is expected. Students are required to spend time, outside of the classroom, reviewing and studying the topics discussed in class. Frequently, I pass out additional handouts for students to read on their own.

AP STATISTICS

This course is designed to model a college introductory level statistics course. The text and resources in this course encourage students to participate in whole class and small group discussions involving collecting, analyzing, and drawing conclusions from data. Students are required to use journals, articles, newspapers, and the Internet to aid in their research and analysis of data. Each student must use a TI 83/84 graphing calculator, java applets, and Microsoft Excel to investigate statistical concepts. Students will communicate statistical concepts throughout the course of the year. Clear expectations will be set from the beginning of the year and every reasoning, interpretation, and numerical summary are to be justified with clear reasoning and correct statistical terminology/notation.

PERSONAL FINANCE

Finance: The aims of this course are to:

1. Develop an appreciation for the importance of personal finance and career planning.
2. Master a wide range of financial vocabulary and concepts.
3. Analyze real-world situations.
4. Use economic reasoning.

5. Improve critical thinking skills.

SCIENCE:

CONCEPTUAL PHYSICS

This course is designed to lay the foundation of physics for progress through the remainder of the Upper Division science curriculum. The concepts of physics are examined using basic algebraic mathematical analysis, conceptually and in the laboratory. A passing grade for the class indicates that the student has a good understanding of the basic concepts covered in this course and is prepared to enter chemistry and biology. Course content includes: vectors, mechanics, matter and heat, waves, sound and light, electricity and magnetism, and nuclear physics and radioactivity.

HONORS PHYSICS

This course is designed to lay the foundation of physics for progress through the science curriculum and to prepare students for a second year course of AP Physics. The concepts of physics are examined using basic algebraic mathematical analysis, conceptually and in the laboratory. A passing grade for the class indicates that the student has a good understanding of the basic concepts covered in this course. It also indicates that the student has learned to analyze problems in physics logically and is able to apply the concepts to new situations.

CHEMISTRY

The general chemistry course is designed to be the second level of scientific advancement in the Upper Division of Carlisle School. An emphasis on basic laboratory skills and scientific analysis is built into the classroom experience. After successful completion of this course students have a solid foundation of chemistry, both for subsequent science courses and knowledge of chemistry in the world around them.

HONORS CHEMISTRY

The honors chemistry course is designed to give a strong foundation in chemistry and prepare students to continue with a second year course of AP Chemistry. An emphasis on basic laboratory skills and scientific analysis is built into the classroom experience. After successful completion of this course students have a solid foundation of chemistry, both for subsequent science courses and knowledge of chemistry in the world around them. Course content includes: structure of matter, atomic theory, chemical bonding, nuclear chemistry, states of matter, reactions, reaction types, stoichiometry, equilibrium, kinetics, thermodynamics and descriptive chemistry.

AP CHEMISTRY

The AP Chemistry course is designed to be the equivalent of the general chemistry course usually taken during the first year of college. The textbook used in this course is college-level. Prerequisites are successful completion of Honors Chemistry and Honors Algebra II.

AP PHYSICS

AP Physics is an introductory algebra based college level physics course. The course is designed to earn credit in a science course for non-engineering majors. Students will get a thorough introduction to Newtonian mechanics; work energy and power; mechanical waves and sound; and simple circuits. Investigations are inquiry based and deriving equations from real world experiences is emphasized.

BIOLOGY

Biology is an introductory high school biology course. It is a broad survey of the world of living things that prepares students to take college biology. Assignments include reading and note taking in the textbook, lab preparation and reports, on-line research and simulations, and individual and group projects and presentations.

HONORS BIOLOGY

Honors Biology is a challenging introductory high school biology course that prepares students to take AP Biology or college biology. It emphasizes biological content as well as critical thinking skills, especially in the laboratory component. Assignments include reading and note taking in the textbook, lab preparation and reports, on-line research and simulations, and individual and group projects and presentations. Students taking Honors Biology should have taken chemistry.

Course content includes: chemistry, water and biochemistry, photosynthesis and respiration, cells and cell processes, genetics, DNA structure and function, recombinant DNA technology, plant biology, ecology and evolution, and human physiology.

AP BIOLOGY

AP Biology is an introductory college-level biology course. Students cultivate their understanding of biology through inquiry-based investigations as they explore the following topics: evolution, cellular processes — energy and communication, genetics, information transfer, ecology, and interactions. This course requires that 25 percent of the instructional time will be spent in hands-on laboratory work, with an emphasis on inquiry-based investigations that provide students with opportunities to apply the science practices.

HUMAN ANATOMY & PHYSIOLOGY:

Human Anatomy & Physiology is a laboratory-based course that investigates the structure and function of the human body. Topics covered will include the basic organization of the body; biochemical composition; and major body systems along with the impact of diseases on certain

systems. Students will engage in many topics and competencies related to truly understanding the structure and function of the human body. Students will be responsible for proper use of lab equipment, lab reports, and projects assigned throughout each unit.

TECHNOLOGY:

ROBOTICS PROGRAMMING

Robotics programming develops 21st century skills such as design, innovation, problem solving, project management, communications and teamwork. It also teaches specialized concepts in technology (purpose of technology, relationships, systems, design tradeoffs, troubleshooting, sensors, performance, boundaries, mechanical elements, controls) and communication (brainstorming solutions, reasoning with evidence, explanatory composition, documenting processes).

Course content includes: building robots, firmware, downloading firmware, fundamentals, movement, direction, speed, sensing, touch, light, sound, variables, storing values, performing calculations, counting, and functions.

VIDEO GAME PROGRAMMING

This course is an introduction to video game development as well a venture into more complex thinking patterns and an exercise in planning, organization and problem solving.

Course content includes: loading/running a program, program structure, editing, debugging, variables, random numbers, loop structures, decision structures, objects, cameras, input, collisions, textures, sounds, arrays, functions, motion, heads-up displays, sprites, projectiles and light effects.

PROGRAMMING

This course is an introduction to the hyper-text markup language used to create web pages as well a venture into more complex thinking patterns and an exercise in planning, organization and problem solving.

Course content includes: tags, tables, graphics, styles and cascading style sheets, framesets, attributes, site map, embedding objects and scripts.

VISUAL BASIC PROGRAMMING

This course is an introduction to the techniques of problem solving, algorithm development and good structured programming style. The use of the programming language, Visual Basic, will be used to introduce as well as strengthen the desired programming skills.

Course content includes: computer history, windows and visual basic introduction, variables and constants, decision structures, looping structures, procedures, mathematical and business functions, arrays, graphics, color and sound, sequential files, random access files, sorting and searching, and multiple forms.

HONORS JAVA PROGRAMMING I

This course is an introduction to the Java programming language. The techniques of problem-

solving, algorithm development and good structured programming style will be practiced in an object-oriented environment.

Course content includes: applets, variables and constants, conditional control structures, loop structures, strings, methods, classes, inheritance and polymorphism, and arrays.

HONORS JAVA PROGRAMMING II

This course is an extension of Java Programming I focusing on higher level programming skills. The course culminates with an extensive project giving students the opportunity to create and thoroughly document a piece of software.

Course content includes: GUIs, event-driven programming, files and exception handling, recursion, sorting and searching.

PYTHON PROGRAMMING

This course is an introduction to the Python programming language. The techniques of problem-solving, algorithm development and good structured programming style will be practiced in an object-oriented environment.

Course content includes: software development process, algorithm design, expressions, assignment statements, numeric data types, type conversions, strings, objects, graphics, functions, decision structures, loop structures and Booleans, simulation and design, classes, data collection, OOP design and recursion.

ADDITIONAL ELECTIVES:

JOURNALISM

Identify, master, and practice the skills necessary in conceptualizing and designing the yearbook. Determine the basis of design and layout, including page elements common to a yearbook publication. Apply the basic principles of design, use graphics as an element in design, and use technology to aid in the design process. Understand the basic rules of photography, use computer programs to edit photos, and organize pictures in an effective way. Identify, master and practice the skills necessary in financing the yearbook, determine and monitor sales goal for ad sales, and approach businesses during the ad campaign. Conduct an effective interview, use quotations effectively, and create various types of captions and headlines.

STUDIO ART

Studio Art is a skill-building course designed to meet the needs of each individual

student. The objective is to encourage each student to master a variety of techniques using different artistic media.

Description of course content:

- First year students begin with gesture and contour drawing.
- Students progress to negative space and perspective drawing.
- Students learn about rendering, value, light, form and texture and are required to apply these techniques in still life and landscape drawings.
- Students experiment with acrylic paint and learn how to mix colors and apply paint to canvas.
- After the first year the course is more individualized and tailored to the strengths and weaknesses of each student. This allows for free expression and formation of a unique creative style.
- More creativity is stressed as the student masters the basic techniques and concepts.
- Students interested in pursuing a college level artistic education, have the opportunity to develop a portfolio suitable for college entrance requirements.

FILM

Through literature and film, students will gather a new understanding of the text and context of each medium. Literary knowledge will be enhanced through the accompanying film, and film analysis will be based on various elements from social and economic climate to film techniques.

BAND

The Upper Division band continues and builds upon concepts taught in previous years of band instruction. Using a spiral learning model, concepts remain the same, but the complexity increases. Through performance in band, students continue to increase their performance abilities and understanding of fundamental musical concepts such as tone development, playing with a steady pulse, rhythm, intonation, articulation, reading musical notation, and phrasing, as well as proper technique, posture, breathing techniques, and aural skills. Through selected band literature, students begin to learn about music theory, music as it relates to outside fields, and music as it relates to various cultures. Additionally, instruction is interdisciplinary and comprehensive in scope.

CHOIR

Choir - The focus of the class is on public performance. Music skills are introduced throughout the literature being studied at the time. Music from all periods will be introduced. Students are expected to attend all performances. Grading falls heavily on class participation and performances.

Content:

- Music Theory
- Singing Techniques
- Choral Experience
- Musical Interest and Performance Decorum

HONORS DRAMA

The intent of the Honors Drama course is to introduce students to the various aspects of the study of the theatre arts including history, performance skills, costume design, lighting and sound design, script analysis and performance production. Students will study the theoretical acting traditions of Aristotle, Strasberg and Boal among others using the cultural traditions of Greek storytelling. Students will also have the opportunity to practice performance skills such as ensemble work, acting techniques and characterization, performance techniques (movement and voice skills) and the use of improvisational games.

Students will also have the opportunity to analyze various play extracts and texts to consider staging from the director's point of view, as well as providing lighting, set and make-up designs.

SPORTS MEDICINE

Sports Medicine is offered year round or by semester and designed for students interested in fields such as athletic training, physical therapy, medicine, fitness, exercise physiology, kinesiology, nutrition, and other sports medicine related fields. The first semester focuses on the prevention and management of athletic injuries and classroom instruction on emergency procedures, sports medicine careers, and medical terminology. The second semester focuses on specific athletic injuries and related problems and classroom lecture on: sports psychology, nutrition, and strength and conditioning programs. Class time will include lecture, hands on experience, and other practical experiences designed by Mrs. Carter.

PHYSICAL EDUCATION

Our Upper Division Physical Education class focuses on teamwork, cooperation, sportsmanship, development of character, and inclusion of all students, regardless of athletic ability or cultural differences. We stress physical well being and improving and sustaining good health habits. Students will dress out in shorts or sweatpants, t-shirt, and tennis shoes, everyday to participated in class activities.

We have five basic units that are used throughout the year. They are in a class team tournament, (class is divided into teams that compete, tournament style, in ten different sports), physical fitness tests, presentation of sports throughout the world, physical fitness program created to fit individual needs, and a classroom section on nutrition.