Sierra Preparatory Academy Curriculum Overview

	6th	7th	8th	9th	10th	11th	12th
English	English and Composition I	English and Composition II	English and Composition III	**Humane Letters:** Ancient Greece & Rome: History, Literature, Philosophy	**Humane Letters:** Europe: History, Literature, Philosophy	**Humane Letters:** American: History, Literature, Philosophy	**Humane Letters:** All Eras: History, Literature, Philosophy
Social Studies	World History	American History I Geography	American History II Geography			Economics Civics	Senior Colloquium: Contemporary Issues/ Senior Thesis
Writing				Writing I: Grammar/Intro to 5 paragraph analytical essay	Writing II: Cont. 5 paragraph essay/Intro to research papers	Writing III: Poetry and Creative Writing	
Mathematics	Mathematics	Pre-Algebra	Algebra I	Geometry	Algebra II	Trigonometry/Calculus I	Calculus II
Science	General Science	Life Science	Earth Science	Physics I	Physics II	General Chemistry	Biology
Foreign Language	Latin I	Latin II	Latin III	Latin IV Greek I	Modern Language I (French or Spanish)	Modern Language II (French or Spanish)	Modern Language III (French or Spanish)
Fine Arts	Music/Art Appreciation	Music/Art Appreciation	Music/Art Appreciation	Music Theory, History, Appreciation	Art Theory, History, Appreciation	See Writing III: Poetry and Creative Writing	Speech, Rhetoric and Drama
Physical Education	Physical Education	Physical Education	Physical Education				

Middle School Humanities:

Grade	Course Title	Description
6th	**Literature and Composition**	**Literature includes:** *Shane*, *Across Five Aprils, Tales of Greek Heroes, Wind in the Willows, Treasure Island, The Lion the Witch and the Wardrobe, Alice's Adventures in Wonderland.* **Composition/Grammar:** A thorough review of basic English grammar and sentence diagramming is paired with the study of the fundamentals of Latin grammar.
6th	**World History**	An examination of the roots of civilization as based in the cultures of Mesopotamia, Egypt, Israel, and Greece and Rome. Students investigate the political, economic, military, artistic and literary qualities unique to the periods and regions.
7th	**Literature and Composition**	**Literature includes**: *Canterbury Tales, The Last Battle, Julius Caesar, The Hobbit, Lord of the Flies, King Arthur, Call of the Wild, Twenty Thousand Leagues under the Sea.* **Composition/Grammar:** Focus on sentence, paragraph and essay writing, and grammar.
7th	**American History I Geography**	An investigation of the development of the United States from the pre-Revolutionary War era through modern times. A thorough study of civics and *The Constitution* is included.
8th	**Literature and Composition**	**Literature includes:** *To Kill a Mockingbird, The Chosen, Beowulf, Midsummer Night's Dream, Song of Roland, Cyrano de Bergerac.* **Composition/Grammar:** Focus on essay writing and grammar and research tools/writing.
8th	**American History II Geography**	An investigation of the development of the United States from the pre-Revolutionary War era through modern times. A thorough study of civics and *The Constitution* is included.

High School Humanities:

Grade	Course Title	Description
9th	**Humane Letters**	The 9th grade focuses primarily on some of the key literary and philosophical contributions of the Greeks to Western Civilization including Homer's *Odyssey*, Sophocles' *Oedipus* cycle, selected shorter Platonic dialogues, selections from Herodotus, Thucydides, and Plutarch, and Aristotle's *Poetics*. Shakespeare's *Hamlet* and a few selections from the Old and New Testaments of the Bible complete the 9th grade reading curriculum.
10th	**Humane Letters**	The 10th grade addresses the modern European tradition, including European history from the Late Middle Ages to the end of World War II. Texts will include: selections from *The Decameron*, *Utopia*, *Henry V*, Locke's *Second Treatise*, selections from Hobbes and Rousseau, *A Tale of Two Cities*, *Pride and Prejudice*, *Frankenstein*, *Crime and Punishment*, and *Night*.
11th	**Humane Letters**	The 11th grade addresses American history and literature, as well as some key philosophical documents central to the American tradition, including *The Declaration of Independence, The Constitution of the United States,* selections from *The Federalist Papers*, and landmark Supreme Court cases. Literature will include: *The Scarlet Letter*, *Moby-Dick*, *Huckleberry Finn*, *My Antonia*, *The Sun Also Rises*, *The Great Gatsby*, and *The Grapes of Wrath*.
11th	**Civics**	Although the study of civics, the Constitution, and economics will be integrated with the Humane Letters and history program, students in the 11th grade will have a full trimester of in-depth civics studies encompassing local, state, and national ideas of citizenship.
11th	**Economics**	This economics course will serve as one of many ways to bridge the humanities and mathematics curricula through the study of conceptual and mathematical macro and micro economics during the two spring trimesters.
12th	**Humane Letters**	The 12th grade curriculum is the most diverse in its presentation of literary and philosophical works stretching from the founding of Rome and the early Athenian empire to the 20th century. The essay writing skills taught and practiced throughout all four years are progressive and cumulative. The practice of Socratic discussion, however, remains the same throughout all four years of high school: it differs only according to the texts used and the insights of the student participants.
12th	**Senior Colloquium: Contemporary Issues/ Senior Thesis**	The Humane Letters sequence will culminate with the Contemporary Issues/Senior Thesis, which is meant to be a true "capstone" course at Sierra Prep Academy, combining the best and most advanced elements from the previous three years - blending all of the student's skills for close textual reading, analytical writing, and seminar discussion and exposing in depth students to modern/contemporary curriculum and texts. The Senior Thesis is created through a collaborative effort among members of the community of learners. The Senior works closely with an Advisor throughout the year. The Senior is then joined by other members of the community – including peers, parents, teachers – in an open discussion concerning the Thesis.

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Writing:

Grade	Course Title	Description
9th	**Writing I**	Grammar/Introduction to the 5-paragraph analytical essay. This includes a thorough examination of rhetorical purpose in writing and the fundamental models of analysis including examples, comparison, ways in which, causes of, effects of, steps of, and parts of methods of development. The writing course will be fully integrated as part of a 'Writing Across the Curriculum' approach."
10th	**Writing II**	Cont. 5- paragraph essay/Introduction to research papers. In addition to mastering the five-paragraph essay format, students will write at least two research based papers that employ both synthesis and evaluation. As with Writing I, this writing course will be fully integrated as part of a 'Writing Across the Curriculum' approach."
11th	**Writing III (Poetry and Creative Writing)**	Sierra Prep's Writing III (Poetry and Creative Writing) curriculum engages students in poetry writing in conjunction with the literary study of poetry. Students will study poetry and creative writing as part of an examination of rhetoric. In pursuing the literary tradition, students experience oral poetic performance, memorization, literary study of the masterpieces of the tradition, and instruction in the rational and systematic interpretation of poetic meaning and the wisdom of great poems. Additionally, students will explore the creative processes of short story and dramatic writing through analysis of great works and guided practice for producing their own works. Students will emerge from the year of creative writing –with an expanded perspective, wrought through the repeated attempt to think through images and to find symbols that express significant truths, and an expanded proficiency with the elements of language.

Mathematics:

Grade	Course Title	Description
6th	**Mathematics**	Students solidify their understanding of fractions, decimals, percents, arithmetic operations, graphical analysis, probability, and plane/solid/coordinate geometry before moving on to algebraic properties and solving algebraic proportions and equations, working with rational and irrational numbers.
7th	**Pre-Algebra**	A continuation of the 6th grade course, including operations with real numbers, solving algebraic equations and inequalities, systems of equations, and factoring polynomials.
8th	**Algebra I**	A continuation of the 7th grade course, Algebra I prepares students for honors level geometry and College Algebra/Trigonometry. Students end the year with a study of quadratic, polynomial, rational, exponential, and logarithmic functions.
9th	**Geometry**	A course in plane geometry that addresses Euclidean proof and includes topics of parallelism, congruent figures, polygons, similarity, circles, area, volume of solids, and transformations.
10th	**Algebra II**	A continuation of Algebra I that integrates concepts from Geometry, students will more fully develop their algebraic skills and analyze higher order functions. In addition to linear and quadratic functions, students study exponential, logarithmic, polynomial, rational, and radical functions. Discrete mathematic topics of probability, statistics, sequences and series will be studied.
11th	**Trigonometry/ Calculus I**	A focus on the nature, behavior, and complex analysis of functions (exponential, logarithmic, polynomial, rational, and radical), with special attention to (and advanced study of) geometric transformations, systems of equations, matrices, basic probability, sequences and series, trigonometric functions, analytic geometry, and conic sections. Beginning study of Calculus including limits and derivatives.
12th	**Calculus II**	A continuation of the study of calculus, focusing mostly on integrals. To emphasize the importance of thinking and reasoning in a mathematical context while analyzing functions, the course begins with a five-week unit on mathematical logic and reasoning.

Sciences:

Grade	Course Title	Description
6th	**Physical Science**	This first course is an introduction to science as a means for exploring and understanding the world. Scientific methods of observation, basic experimental design, measurement, and data collection and interpretation are emphasized, as students engage in active research, projects and labs in a variety of science areas. Content includes foundational physical science (matter, forces, motion, energy), key life and earth science cycles (e.g. water, carbon, rock, energy). There will be an emphasis throughout the year on the applications of mathematics to science, as the fluidity between the two disciplines is exemplified.
7th	**Life Science**	This course is an introduction to the diversity of living organisms. Students explore basic cell processes, single and multi-celled organisms through a number of key microscope labs and dissections. Taxonomy is a focus throughout the course, as students learn the importance of classification based on anatomical structures/functions, and evolutionary relatedness.
8th	**Earth Science**	This course is organized and presented based on an analysis of decreasing spatial and temporal scales. We examine the myriad topics of Earth Science starting at the universe and progressively wind our way down to the atomic level, while realizing that all of these scales are interdependent. The four main units of the course are astronomy, atmosphere-ocean dynamics (including climate and weather), geology, and cartography/geography.
9th	**Physics I**	In the Physics I class students learn how to investigate and think critically about the concepts of mechanics. The ideas of measurement, linear motion, and statics are dealt with in the first semester, while dynamics, projectile motion, work, energy, circular motion, and momentum are covered in the second semester.
10th	**Physics II**	The Physics II curriculum uses the discovery method to investigate the basic laws of electricity and magnetism, mechanical waves, sound, and light. Emphasis is placed on models that explain the data obtained from experiments, and then these models are applied in various scenarios. The use of a variety of types of diagrams helps to clarify, facilitate, and richen the learning experience.
11th	**Chemistry**	This course provides students with a solid conceptual and mathematical understanding of chemical behavior while bridging concepts between math, physics and biology. Underlying these goals is an examination of energy changes and a systematic analysis of the electron as the mechanism of energy change in chemical systems. Students also acquire small-scale laboratory skills and continue to refine lab reporting skills gained in previous science courses.
12th	**Biology**	Biology focuses on the molecular basis of living things - the cellular processes which enable organisms to exist and function as they do. Included are detailed studies of DNA (the genetic code for all life), mitosis/meiosis (cell division), photosynthesis (light and dark reactions), cellular respiration (glycolysis, Krebs cycle, and oxphos), and protein synthesis (from DNA to RNA transcription to polypeptide assembly/translation). In the second semester, we explore microorganisms (bacteria, protists), fungi, plants, and genetics and evolution, and finally engage in a comparative anatomy study of a variety of animals.

Classical Languages:

Grade	Course Title	Description
6th	**Latin I**	Latin I is primarily a grammar course in which the students will receive substantial review of basic English as well as an introduction to Latin. Particular to Latin, the fundamentals learned will be: declensions and conjugations, rules of subject/verb and noun/adjective agreement, present and imperfect tenses, case endings and corresponding noun function, elementary sentence structure, and common constructions. Additionally in Latin I, the students will learn about Latin culture and mythology. These topics will include the family unit, slaves, dress, geography, housing, and the names and attributes of the primary gods and goddesses.
7th	**Latin II**	Additional elementary and intermediate grammar topics will include: 3rd declension adjectives; the future, perfect, pluperfect, and future perfect tenses in active voice; all tenses in passive voice; uses of the dative case; additional uses of the ablative case; further uses of the infinitive; subordinate clauses; substantive, demonstrative, interrogative, and indefinite adjectives; personal, reflexive, relative, and interrogative pronouns; 4th and 5th declension nouns. There will also be some further study of Roman history and culture, including the topics of patron/client relationships, dining, hospitality, travel, occupations, the city of Rome, aqueducts, provincial life, Roman government, early heroes of Rome, and chariot racing.
8th	**Latin III**	The primary focus of the class will be grammar with the goal of nearly concluding the study of Latin forms, endings, and constructions. These topics will include: calendar dates, deponent verbs, expressions of place and time, participles, subjunctive mood verbs, indirect statement, indirect command, indirect questions, *cum* clauses, hortatory and jussive, ablatives absolute, sequence of tenses, and purpose and result clauses. There will continue to be additional gains made in the understanding of Roman culture and history with re-enactments of a Roman wedding, funeral, and Saturnalia celebrations. The students will also study Roman education, piracy, the baths, games, gladiators, coming-of-age rituals, and Roman religion.
9th	**Latin IV and Greek**	Mastery of grammar and exposure to specialized vocabulary continues in Latin IV. The culmination of the Latin program is dedicated to the translation and analysis of primary source history, oratory, prose fiction, science, and poetry. The Greek class is dedicated to the study of beginning grammar and vocabulary, which may be accomplished at a relatively rapid pace due to the students' understanding of Latin and the number of parallels between the languages.

Modern Languages:

Grade	Course Title	Description
10th	**Modern Language I (Grammar and Conversation)**	In the first year of a modern language course, the students work to build all four communicative skills in the language: listening, speaking, reading, and writing. To this end, all classroom activities are conducted entirely in the target language and are designed to give students the opportunity to interact with the instructor, as well as with other students, by using the language in a meaningful way. Most classroom activities focus on aural/oral practice, while homework assignments give the students daily practice reading and writing in the language. Students are introduced to all of the basic grammar of the language, along with building essential vocabulary.
11th	**Modern Language II (Advanced Grammar and Intro to Literature)**	The Modern Language II course continues the study of grammar and vocabulary begun in the first year, along with an introduction to reading literary texts. The grammar program consists of a comprehensive review of essential first-year components, as well as introducing advanced structures. Vocabulary continues to be a focus of the second year course, and much of the vocabulary memorized comes from new words encountered in the literary texts. The texts used are authentic works of literature, written for native speakers of the language; nonetheless texts are chosen for their appropriate length and difficulty for this course. Students read a variety of short stories and poems, as well as one full-length work (either a novel or a play) during the second year.
12th	**Modern Language III (Literature and Composition)**	In Modern Language III, the students explore literary works representative of various authors from the country or countries of the target language. The literature read includes drama, poetry, and prose. In addition to reading and discussing literary works, advanced grammar is reviewed in response to students' questions and areas of difficulty in speaking and writing. Reading comprehension and communication skills are practiced and evaluated in class discussions and in Humane Letters-style essays. Performance is also gauged by written tests and quizzes, in addition to daily encouragement of questioning and Socratic discussions of the works.

Fine Arts:

Grade	Course Title	Description
6th, 7th, 8th	**Music/Art Appreciation**	The first course in the fine arts sequence comprises a basic introduction to the fine arts primarily through music, two-dimensional visual arts, and the plastic arts. Students will develop a vocabulary for discussing works of art, and experience each of the art forms directly through a series of active "hands-on" projects. Students will be exposed to great works by the masters in each discipline through a chronological study of each major artistic period. The historical approach is a vehicle for exploring and discerning the aesthetics of each period as well as the interconnected nature of the various arts and their connections to literature, history, and philosophy covered in other courses.
9th	**Music Theory, History, and Appreciation**	This course engages students in the world of music as a theorist, performer and critical listener. Primarily, students examine the mathematical order of musical structures through an analysis of music theory. Students are introduced to musical notation, modes and scales, key signatures, basic rhythm/meter, and basic intervals as the foundations of chordal harmony. High school music theory includes a study of triads, grand staff notation, and harmonic analysis of chords with Roman numerals and inversions. Students will be challenged by the type of logical, ordered thinking necessary to complete some of the theory tasks (e.g. keeping track of intervallic relationships when altering top and bottom pitches, identifying harmonic functions of chords by examining within the context of a key, etc.). They will learn to solve problems methodically through the multi-step processes explored in class, and will come to appreciate the inherent beauty and order which exists in musical forms. There is also a strong emphasis on listening. Ear-training and solfege-singing figure prominently in our theory units (e.g., singing and recognizing scales by ear). Students will also listen to recordings of hallmark works from various composers, and will discuss and review the piece afterward, noting instruments used, compositional techniques, and the historical context (aesthetic period, genre, etc.) of the piece.
10th	**Art Theory, History, and Appreciation**	This course builds upon terms, theories, and techniques studied in middle school and presents advanced concepts of major art movements in the visual and plastic arts. Students will be able to apply basic visual critical thinking and visual literacy techniques, discuss the formal elements and principles used in a work of art, identify the basic media and techniques of two and three-dimensional art forms, distinguish the major art historical periods and stylistic movements of art, and evaluate works of art from aesthetic, formal, technical, and historical points of view.
11th	**Poetry and Creative Writing (Writing III)**	Sierra Prep's Writing III (Poetry and Creative Writing) curriculum engages students in poetry writing in conjunction with the literary study of poetry. Students will study poetry and creative writing as part of an examination of rhetoric. In pursuing the literary tradition, students experience oral poetic performance, memorization, literary study of the masterpieces of the tradition, and instruction in the rational and systematic interpretation of poetic meaning and the wisdom of great poems. Additionally, students will explore the creative processes of short story and dramatic writing through analysis of great works and guided practice for producing their own works. Students will emerge from the year of creative writing –with an expanded perspective, wrought through the repeated attempt to think through images and to find symbols that express significant truths, and an expanded proficiency with the elements of language.
12th	**Speech, Rhetoric, and Drama**	In this course, students will acquire a solid understanding of the major historical trends and genres of theater, an improved stage presence, a heightened sense of self and of the social environment in which he functions, and an intimate familiarity with at least two theatrical great works. The curriculum's sequence functions on two levels: (1) It provides a progression from Greek & Roman theater, through the Shakespearean and Restoration eras, to the modern era, (coordinated with the four-year Humane Letters curriculum); and (2) In this course, students will learn the fundamentals of public speaking in order that all seniors are able to fulfill the graduation requirement of giving a speech to the entire school.