



Course Catalog

Below are descriptions of all courses offered over a 4-year high school period:

Area A: History

Ancient World History (CANON)

Course Details: UC/CSU Approved. Required to graduate.

Corequisite: *Literature and Composition: The Ancient World*

Honors Version: N/A

Course Description: This course will explore world history and foundational literature starting in 10,000 B.C.E. through approximately 500 A.D. with a primary focus on the evolution of the major civilizations, including Sumer, Egypt, China, Greece, Israel, Persia and Rome. We will encounter a comparative view of early civilization and will approach the world history course thematically, focusing on geography, storytelling, myth, history, language, politics, lifestyles, war, wisdom, faith, and art. Literature from these civilizations will be further explored through various genres, including poetry, essays, spiritual and political writings, drama, folktales, myths and fables. This course is intensive in reading, writing, discussion, and public speaking. Subject material will be reinforced through a blend of lecture, storytelling, Socratic seminars, research projects, debates, essays, recitations, and various forms of creative expression including poetry, drama, and personal narrative. In this course, students will: Gain a global, context-driven view of ancient history and cultures; improve writing and critical thinking skills; hone classical rhetoric skills through the study of the Progymnasmata; learn to compare and apply ancient history to our modern experience; expand appreciation for the great literary works and artists of the ancient world; engage with myth, story, and legend in a way that brings illumination to our real experiences as human beings. This course will use several texts, including a history spine, primary source documents from an anthology, and supplemental literature. Course is taught to all grade levels, but students are separated by year and content and expectations are scaled for age appropriateness.

Medieval World History (CANON)

Course Details: UC/CSU Approved. Required to graduate.

Corequisites: *Literature and Composition: The Medieval World*

Honors Version: N/A

Course Description: This course will explore the history of the world from 313-1555 CE. (The Edict of Milan to The Peace of Augsburg). The course is earmarked by the events that start and end of the Christian Age: the establishment of state Christianity to the conclusion of the first Reformation Wars. We start with the conversion of Constantine and cover the fall of Western Rome, the rise of Eastern Rome/Byzantium, the Germanic migrations and the Anglo-Saxon invasion. We then cover the rise and expansion of Islam, trade with China along the silk road, the rise of Arabic culture, and the Viking Age. The second part of the course will

focus on the European dynasties of the Middle Ages, the Merovingian and Carolingian dynasties, the Plantagenets, the Norman Conquest of England, and the rise of the University and the German, French, and English literary and academic cultures. The final portion of the class will be devoted to the study of the Crusades, the Black Death, and the 100 Years' War, and their culturally and politically disruptive power in Europe. Our final unit addresses the revival of the European culture, economy, and religious movements that fueled the Renaissance and Reformation. In this course students will: gain a thorough, global, context-driven view of world history during this period; improve writing and critical thinking skills; learn to compare and apply Medieval history to our modern experience; expand appreciation for the great thinkers, writers, and artists of the Medieval and Renaissance world; engage with myth, story, art, and historical documents in a way that brings illumination to the experience of real human beings and enriches understanding of past political, military, religious and cultural movements of the Medieval and Renaissance World; and learn history as an interpretive, rhetorical art. Students will be assessed through socratic discussions, Cornell notes, research projects and presentations, quizzes, and challenging ID / Significance exams. Students will write a final, document-based essay in the spring.

US History and the Age of Enlightenment (CANON & HONORS)

Course Details: UC/CSU Approved. Required to graduate.

Corequisite: *Literature and Composition: Early Modern Europe and America*

Course Description: In this course, students have a choice between Canon and Honors versions of the course. Students will learn about the history of the United States, framed within the context of the Enlightenment. We look at colonial and revolutionary history from 1492-1800. In the first few units, students will explore, read, and analyze primary sources from the European enlightenment and the Age of Exploration. For the remainder of the course, students study American colonial and revolutionary history and the religious, economic, philosophical, and political significances of the settlement of North America studied within a larger, global context. Students will explore, discuss, research, and write about American identity as seen through the lens of a variety of primary source documents. These documents span from 16th Century European thought to first colonial contact, through industrialization and romanticism. We will explore what it means to be an American by reading, discussing, and researching the perspectives of our first immigrants, our founding fathers and mothers, indentured servants, slaves, northerners, southerners, first nations peoples, scientists, ethnic and religious minorities and majorities, artists, businesspeople, farmers, and more. In this course, students will have the opportunity to connect the events, cultural movements, thinkers, social challenges, and conflicts of U.S. history with their own experiences as contemporary Americans. Students will be assessed through traditional written examinations, document-based examinations, map tests, presentations, and a research paper. The Honors version of the course also has a strong research component, and involves library skills training and a Chicago Manual style research paper.

Modern World History (CANON & HONORS)

Course Details: UC/CSU Approved. Required to Graduate.

Corequisite: *Literature and Composition: The Modern World*

Course Description: In this course, students have a choice between Canon and Honors versions of the course. This modern world history course will review the background and context events starting in the 16th and 17th Centuries, and will introduce the histories of Modern Japan, China, Korea, Latin America, and the Middle East during the early modern period, following the developments of these regions up to contemporary times. Key units will focus on conflict and shifting power in Europe, Asia, Africa, Latin America, and the Middle East. Through this course, students will come to recognize patterns of colonialism, nationalistic struggle, decolonization, and the emergence of modern nation states. The course will cover events such as European

colonization, the rise of Tokugawa and Meiji Japan, the Ming and Qing Dynasties of China, 19th century reactionism, 19th century revolutions, the industrialization of Europe and America, the rise of socialism, direct colonization in Southeast Asia, India, and Africa, WWI, the U.S. Progressive Era, the Great Depression, WWII, the Russian Revolution, American Civil Rights, the Cold War, The rise of Chinese communism, and the digital age. This course is intensive in reading, writing and discussion. In this course, students will gain a global, context-driven view of history, improve writing and critical thinking skills, learn proper research methodology, discuss multiple causes of historic events, identify the impact of events in past decades upon contemporary global affairs, and learn to ethically evaluate the major events of modern history. Students will also acquire university library research skills, and will learn how to evaluate and discern quality, scholarly source materials. Honors students will finish the year by writing a formal, Chicago manual style research paper.

Area B: Literature and Composition

Literature and Composition: The Ancient World (CANON & HONORS)

Course Details: UC/CSU Approved. Required to graduate.

Corequisite: *Ancient World History*

Course Description: This course explores the literature that shaped, and was shaped by, the Ancient World, from the earliest cave paintings at Chauvet to roughly the Edict of Milan (313 C.E.). Semester 1 will focus on the Axial Age, with readings from *Gilgamesh*, *The Tao Te Ching*, Chuang Tzu, *The Upanishads*, Homer, Hesiod, The Presocratic Philosophers, The Hebrew Bible/Christian Old Testament, and so forth. Semester 2 will focus on Foundations of Western Thought in Plato, Aristotle, Virgil, Horace, The Stoics, The Christian New Testament, and more. We will also introduce and reinforce the fundamentals of rhetoric and composition, reviewing prior knowledge of grammar and logic. Our major goals are to expand our appreciation for the great thinkers, writers, and artists of the western world; to improve our writing styles, conceived as a marriage of form and content, clarity and complexity, power and grace; to make cross-disciplinary connections between modern literature and science, history, philosophy, visual art, music, and theology; to sharpen our listening, verbal, and rhetorical skills through the analysis of a range of informational and literary texts; to develop our analytical and persuasive skills through writing about literary works of art in different genres (poetry, drama, the novel, the memoir, the lyric essay); to read a number of great books in completion; to engage poetry creatively through composition, memorization, and recitation; to improve our grammar and mastery of the English language, and to define and practice academic integrity. This course is available to all high school age groups, but classes are broken up by grade level, with workload scaled for age appropriateness. Honors students will have an accelerated reading load, advanced final exams, and additional writing assignments.

Literature and Composition: The Medieval World (CANON & HONORS)

Course Details: UC/CSU Approved. Required to graduate.

Corequisite: *Medieval World History*

Course Description: This course is a co-requisite to Medieval European History and will explore literature from Medieval Europe, China, and the Arab world. The course is designed for students of all grade levels, but students are broken up by age and work is scaled to appropriate grade level expectations. In this course, we introduce and reinforce fundamental skills in English composition, grammar, analysis, and rhetoric as we explore the foundational literature of the Western Canon from 600-1600 CE. Students will discuss and wrestle with the ideas of Medieval and Renaissance thinkers, writers, and poets including St. Augustine, Julian of Norwich, Snorri Sturluson, Venerable Bede, Hildegard of Bingen, Thomas Aquinas, Dante, Chaucer, Machiavelli, and Thomas More. We will also focus on Persian and Arabian folktales, Chinese poetry, and travel

writing. Students will study the Norse myths and the mythology of England and France, including Robin Hood, and will participate in an in-depth exploration of the various versions of the Arthurian Legend, spanning from Malory to T.H. White. Honors students will have an accelerated reading load, advanced final exams, and additional writing assignments.

Literature and Composition: Early Modern Europe and America (CANON & HONORS)

Course Details: UC/CSU Approved. Required to graduate.

Corequisite: *U.S. History and the Age of Enlightenment*

Course Description: This course explores the literature that shaped, and was shaped by, the European Enlightenment, roughly the period between 1600-1815 (or, Shakespeare to Waterloo), and the literature of the American Renaissance (1800-1855). We will also introduce and reinforce the fundamentals of rhetoric and composition, marshalling prior knowledge of grammar and logic in pursuit of what Aristotle called "the virtue of style." Our major goals are to expand our appreciation of the great thinkers, writers, and artists of the western world; to improve our writing styles -- conceived as a marriage of form and content, clarity and complexity, power and grace; to make cross-disciplinary connections between Romantic and Enlightenment literature and science, history, philosophy, visual art, music, and theology; to sharpen our listening, verbal, and rhetorical skills through the analysis of a range of informational and literary texts; to develop our analytical and persuasive skills through writing about literary works of art in different genres (poetry, drama, the novel, the memoir, the lyric essay); to read a number of great books in completion; to engage poetry creatively through composition, memorization, and recitation; to improve our grammar and mastery of the English language, and to define and practice academic integrity. This course is available to all high school age groups, but classes are broken up by grade level, with workload and content scaled for age appropriateness. Honors students will have an accelerated reading load, advanced final exams, and additional writing assignments.

Literature and Composition: The Modern Age (CANON & HONORS)

Course Details: UC/CSU Approved. Required to Graduate.

Corequisite: *Modern World History*

Course Description: This course explores the literature that shaped, and was shaped by, the Modern Age in Europe and America, roughly the period from 1815 to the present, progressing in three trimesters through the study of Realism, Modernism, and Postmodernism. We will also introduce and reinforce the fundamentals of rhetoric and composition, reviewing prior knowledge of grammar and logic. Our major goals are to expand our appreciation for the great thinkers, writers, and artists of the western world; to improve our writing styles, conceived as a marriage of form and content, clarity and complexity, power and grace; to make cross-disciplinary connections between modern literature and science, history, philosophy, visual art, music, and theology; to sharpen our listening, verbal, and rhetorical skills through the analysis of a range of informational and literary texts; to develop our analytical and persuasive skills through writing about literary works of art in different genres (poetry, drama, the novel, the memoir, the lyric essay); to read a number of great books in completion; to engage poetry creatively through composition, memorization, and recitation; to improve our grammar and mastery of the English language, and to define and practice academic integrity. This course is available to all high school age groups, but classes are broken up by grade level, with workload scaled for age appropriateness. Honors students will have an accelerated reading load, advanced final exams, and additional writing assignments.

Area C: Mathematics

Algebra 1 (CANON)

Course Details: UC/CSU Approved. 3 full years of any area C required to graduate.

Course Description: Algebra I is a preparatory course that places an emphasis on the systematic development of the language through which most of mathematics is communicated. Although many problems that can be solved by algebra can also be worked out with common sense, their translation into algebraic form generally makes them easier to deal with. Because of this, algebra has become the language of science, and the goal of this course is to learn how to use this language. Topics covered are: graphing and solving equations in two variables, systems of equations, exponents, operational manipulation of polynomials, factoring, radicals, and quadratics. The goal of this course is to develop the mathematical understanding to interact with the topics above, beginning concretely (objects and manipulatives) and moving towards concepts in the abstract (symbols, graphs, expressions), with the goal of applying rules consistently and precisely to foster generalizations and insights beyond the original content. Successful completion of this sequence prepares students for Geometry and Algebra 2.

Algebra 2 (CANON & HONORS)

Course Details: UC/CSU Approved. 3 full years of any area C required to graduate

Prerequisites: Algebra 1, Geometry

Course Description: Algebra 2 builds on the work undertaken in Algebra 1, which we will re-visit during the first semester. Subsequently, many new topics will be introduced, including matrices, functions and their inverses, logarithms, irrational and complex numbers, arithmetic and geometric series, mathematical induction, the binomial distribution and conic sections. Algebra 2 provides students with an essential grounding in foundational mathematical ideas necessary to study advanced mathematics, the natural sciences, economics and engineering. Classroom activities will include interactive lecture, discussion, group work and other tasks designed to elucidate key mathematical ideas. For the rest of the week, students will work on home assignments for roughly two to three hours. Students will give at least one in-class presentation on a mathematical topic of their own choosing. Success in Algebra 2 requires understanding a number of core mathematical concepts, as well the refinement of key skills, especially pertaining to algebraic manipulation, so come prepared to practice. That said, there is plenty of scope for insight and creative thought. Honors Algebra 2 will take an accelerated pace, allowing advanced students work and receive assessment on advanced material.

Geometry (CANON)

Course Details: UC/CSU Approved. 3 full years of any area C required to graduate

Course Prerequisite: Algebra 1

Course Description: Geometry is a one year course that emphasizes the develop of mathematical thought, proof of geometric concepts and historical applications of the discipline that motivated the development of Geometry across the centuries. At the end of the course, a student should be comfortable with common methods of proof as well as know the key theorems in the discipline so that they can apply them in Algebra 2 and Trigonometry. In our thorough exploration of plane Geometry, students will use congruence and similarity of triangles to develop conjectures of length, angles, area, polygons and circles and then prove those conjectures. Students are assessed via examination (two written exams per unit, approximately one per month), homework (for completeness) and class participation (frequency and quality). Written exams are short-answer exams where students over the course of several consecutive questions explore several concepts

within the context of one problem setup. Exams are graded based on student understanding demonstrated by the ability of the student to complete proofs and demonstrate the ability to reason quantitatively and geometrically. Homework questions, in-class discussions and exam answers rarely involve just calculations that arise from a theorem, but instead allow the student to self-discover key concepts.

Trigonometry (CANON & HONORS)

Course Details: UC/CSU Approved. 3 full years of any area C required to graduate

Prerequisites: Algebra 2, Geometry

Course Description: Trigonometry uses the techniques that students have previously learned from the study of algebra and geometry. In this introductory course, the trigonometric functions that we study are defined geometrically – as the ratios of the sides of right triangles - rather than in terms of algebraic equations. Many topics will be covered, including: radians, trigonometric functions and their inverses, trigonometric identities, vectors and polar co-ordinates. Facility with trigonometric functions as well as the ability to prove basic identities regarding them is especially important for students intending to study calculus, more advanced mathematics, physics and other sciences, and engineering in college. Classroom activities on Monday and Wednesday will include interactive lecture, discussion, group work and other tasks designed to elucidate key mathematical ideas. For the rest of the week, students will work on assignments and exercises from the text, as well as undertaking self-directed research activities assigned by the instructor. Honors Trigonometry will take an accelerated pace, allowing advanced students work and receive assessment on advanced material.

Honors Statistics

Course Details: UC/CSU Approved. 3 full years of any area C required to graduate

Course Prerequisites: Algebra 2, Trigonometry

Course Description: Honors Statistics is a year-long course that introduces students to the concepts and tools of Statistics: collecting and analyzing data to answer real-life questions. Course work will include an exploration of data graphically and with numeric summaries, planning a study, elementary probability and statistical inference, including both hypothesis testing and confidence intervals in multiple contexts. Units include: Exploring and Understanding data, Exploring relationships between variables, Gathering Data, Randomness and Probability, Sampling Distributions and Statistical Inference for Proportions, and Statistical Inference for Means. Students are assessed via examination (one or two written exams per unit, approximately one per month), homework (for completeness) and class participation (frequency and quality). Written exams are short-answer exams where students over the course of several consecutive questions explore several concepts within the context of one problem setup. Exams are graded based on student understanding demonstrated by the ability of the student to complete proofs and demonstrate the ability to reason quantitatively and geometrically. Homework questions, in-class discussions and exam answers rarely involve just calculations that arise from an equation in the text, but instead require the student to put results in plain English.

Honors Calculus 1

Course Details: UC/CSU Approved. 3 full years of any area C required to graduate

Prerequisites: Algebra 2, Trigonometry

Course Description: The aim of Honors Calculus is to give students a rich understanding of the origins and developmental history of one-variable calculus - from Archimedes to Leibnitz and Newton and its subsequent role in modern science. Our goal will be for students to understand the essential mathematical ideas of differential and integral calculus so well that they can apply them creatively to solve both standard and novel

problems. Although a high school course, we will endeavor to engage with the course material at the same level of depth and rigor as would be expected of an entry-level college or university calculus course.

Honors Calculus 2

Course Details: UC/CSU Honors approval pending. 3 full years of any area C required to graduate

Prerequisite: Calculus 1

Course Description: Calculus 2 seeks to deepen our understanding of topics introduced in the Foundations of Calculus course, for example, limits, derivatives, definite and indefinite integrals, the Fundamental Theorem of Calculus, rates of change and slope fields, while simultaneously introducing many new topics, such as Euler's method, improper integrals and series, for example, Taylor and Maclaurin series. The course also extends and applies our learning to different types of equations, eg, polar, parametric and vector-valued. This course will help students to approach calculus concepts and problems when they are represented graphically, numerically, analytically, and verbally, and to make connections amongst these different representations. Students will learn how to use technology to help solve problems, experiment, interpret results, and support their conclusions. It is a challenging course, and only suitable for students who have attained a high level of accomplishment in preceding math classes.

Area D: Lab Sciences

Biology (CANON & HONORS)

Course Details: UC/CSU Approved. 3 full years of any area D required to graduate. For UC/CSU, students should take 2 years minimum of chemistry, biology, and/or physics. (Honors recommended).

Prerequisite: Recommended completion of Algebra 1 before taking this course. Concurrent enrollment acceptable.

Course Description: This goal of this course is to have a conceptually based science program where students are active participants in learning; cultivating both personal relevance and connections to the outside world. Additional focus on patterns and connections will be sought out to foster deeper, transferable understanding. Our primary focus will be on the processes of life common to all living things- Cellular Biology, Genetics, Evolution, Environmental interactions, and Physiology. Special attention will be given to historically significant events, and the influences of science and technology on society. Coursework is completed in class and at home and includes labs, tests, and projects which will be used as tools to impart and solidify factual knowledge and develop the skills needed to apply biological principles and the scientific method. Multiple opportunities are provided to develop content in biology through readings, videos, discussions, assignments, labs, and other interactive experiences.

Earth Science (CANON)

Course Details: UC/CSU approved. 3 full years of any area D required to graduate.

Course Prerequisite: Recommended completion of Algebra 1 before taking this course. Concurrent enrollment acceptable.

Course Description: Earth Science is a laboratory science that will take an in-depth look at the natural world and its processes. Its curriculum will focus on matter, energy, origin and evolution of the Earth and its solar system, geology, meteorology, oceanography, and the cycles that circulate energy and material through the biosphere. The objective and purpose of this course is to have students master a broad curriculum that gives them a comprehensive understanding of the universe and the natural world. Inquiry-based and data-driven labs and activities are the cornerstone method on which the curriculum is introduced and taught in this

course. Additional assignments and in-class activities are also incorporated throughout the week, which reinforce the material taught.

Chemistry (CANON & HONORS)

Course Details: UC/CSU approved. 3 full years of any area D required to graduate. For CSU/UC, students should take 2 years minimum of chemistry, biology, and/or physics

Course Prerequisite: Algebra 1

Course Description: This general chemistry class will satisfy college entrance requirements for a laboratory science, especially for those who expect to study a branch of medicine or science for teaching, research, or as a technician in industry. The course covers the basic principles which determine the composition of matter and which govern processes of form to produce new substances. Topics include the science of chemistry, nuclear processes, atomic structure, the Periodic Table, chemical bonds, nomenclature, formulas, the conservation of matter, stoichiometry, the properties of gases, acids, bases, solutions, thermodynamics, reaction rates, equilibrium, organic and biochemistry.

Honors Physics

Course Details: UC/CSU Approved. 3 full years of any area D required to graduate. For CSU/UC, students should take 2 years minimum of chemistry, biology, and/or physics

Course Prerequisite: Algebra 2

Course Description: In this course, students develop an in-depth understanding of the world around us by studying the laws of physics. Students recognize and understand the concepts, mathematics, equations, and assumptions that exist in our world. Laboratory investigations incorporate hypothesis generation followed by the collection and analysis of complex information. The main content areas of focus are mechanics, sound, electricity and light. Students will continue to develop their skills of reading, writing, discussion, technology, and analysis through lab reports, essays, and individual and group research projects. The ultimate course goal is to demonstrate scientific knowledge and skills as students work toward the school-wide goals of becoming self-directed learners who can identify a task and complete it, complex thinkers who can determine solutions to problems, and community contributors who can work collaboratively.

Honors Anatomy and Physiology

Course Details: UC/CSU Approved. 3 full years of any area D required to graduate.

Course Prerequisite: Biology, Algebra 1, Recommended: Chemistry

Course Description: Anatomy and Physiology is a year-long elective science course that follows an introductory biology class. It provides students an opportunity to explore the relationship between structure and function in the human body. Topics covered will include the basic organization and biochemical composition of the body, and cover all the major body systems, including the impact of diseases on certain systems. The interrelationships between body systems are a focus throughout the course. Students will engage in many topics and learn through reading materials, study guides, unit worksheets, group work, projects, and labs. Laboratory activities reinforce concepts and principles presented in the course. Our 2 reference texts will be anatomy & physiology portion of a college level biology text, and Barron's "The Anatomy Self Test Coloring Book". Students will acquire skills used in the classification of data, experience in oral and written communication of data, and skills in drawing logical inferences and predicting outcomes.

Area E: Language Other Than English (LOTE)

Spanish 1

Course Details: UC/CSU approved. 3 full years of any area E required to graduate. For CSU/UC, courses should be from one language in sequential order, with advanced (Level 4) courses desired.

Course Description: At the high-school level, Spanish 1 is designed to give the learner a strong foundation of the Spanish language on which he or she will continue to build in Spanish 2, 3, and 4, while always applying the acquired language skills out in the world, beyond just the confines of the classroom. Students will begin studying level 1 grammar (e.g. infinitives, present indicative, preterite, present progressive, imperative of tú), making connections with other subject areas, making comparisons with their own language and culture, participating in various cultural activities (e.g. preparing meals, learning various songs in Spanish, research projects about Spanish-speaking countries, participating in Skype calls with Spanish-speaking students), and beginning to use and recognize Spanish in their community. Students completing this course will be able to read, write, speak, and understand Level 1 literacy works, while accuracy in speaking and writing are emphasized to foster a high standard of oral and written communication. There is homework on a regular basis to keep students immersed outside of the classroom, weekly quizzes, and exams which test written, oral, and auditory abilities.

Spanish 2

Course Details: UC/CSU approved. 3 full years of any area E required to graduate. For CSU/UC, courses should be from one language in sequential order, with advanced (Level 4) courses desired.

Course Prerequisite: Spanish 1

Course Description: At the high-school level, Spanish 2 is designed to further build upon the foundations of Spanish 1 and to prepare the learner for real Spanish conversation and another step closer to fluency. As students continue their life-long study of the Spanish language, they make connections with other subject areas, make comparisons with their own language and culture, participate in various cultural events (e.g. preparing meals, learning various songs in Spanish, research projects about Spanish-speaking countries, participating in Skype calls with Spanish-speaking students), and use Spanish in their community. Students completing this course improve their ability to speak using level 2 vocabulary and grammar (e.g. preterite, imperfect, subjunctive, tú and usted commands), comprehend Spanish spoken by people from various Spanish-speaking countries, read, write, and understand certain literary works in Spanish. To help deepen their understanding and keep them on track, there is homework and quizzes on a regular basis and exams at the end of each chapter which test written, oral, and auditory ability as well as reading comprehension.

Spanish 3

Course Details: UC/CSU Approved. 3 full years of any area E required to graduate. For CSU/UC, courses should be from one language in sequential order, with advanced (Level 4) courses desired.

Course Prerequisite: Spanish 2

Course Description: A person who speaks two languages is worth two people. At the high-school level, Spanish 3 is designed to further build upon the foundation of Spanish 1 and 2 to prepare the learner for real Spanish conversation, another step closer to fluency, a further developing of that second self with a multicultural perspective on the world. As students continue their life-long study of the Spanish language, they make connections with other subject areas, make comparisons with their own language and culture, participate in various cultural events (e.g. preparing meals, learning various songs in Spanish, research projects about Spanish-speaking countries, participating in Skype calls with Spanish-speaking students), and use Spanish in their community. Students completing this course are able to read, write, speak, and understand level III literary works. Accuracy in speaking and writing are emphasized to foster a high standard of oral and written communication. There is homework on a regular basis to keep students immersed outside of the classroom, weekly quizzes, guest speakers, and exams which test written, oral, and auditory abilities.

Honors Spanish 4

Course Details: 3 full years of any area E required to graduate. For CSU/UC, courses should be from one language in sequential order, with advanced (Level 4) courses desired.

Course Prerequisite: Spanish 3

Course Description: Course description coming in 2019/2020.

Latin 2B

Course Details: UC/CSU approved. 3 full years of any area E required to graduate. For CSU/UC, courses should be from one language in sequential order, with advanced (Level 4) courses desired.

Course Prerequisite: Latin 2A or Equivalent

Course Description: A Students will continue to develop translation skills and build vocabulary through reading increasingly complex stories set in Aquae Sulis and Rome circa 84 A.D. They will complete Stage 29 of the Cambridge Latin Course. In doing so, they will practice and master grammatical concepts specified in the Unit descriptions below, with an emphasis on the subjunctive mood in subordinate clauses, participles, and the passive voice. While the goal of our Latin program is reading classical literature in Latin, students will have the opportunity to practice oral language through reading aloud, recitation, vocab practice, and classroom conversation. Each week, students may contribute to Latin in Our World with instances of Latin or Greek language or cultural references which they have noticed in other classes or the world at large. Also weekly, students will add to a chronology of Roman history with an entry from Historia Romana, covering major events and figures in Roman history while contributing to their understanding of the division of Roman history into three major periods (monarchy, republic, empire). Students will also consider the place of legend and myth in history, especially when looking at origin stories. This prepares them well for understanding the context of works read in our literature cycle.

Latin 3

Course Details: UC/CSU Approved. Area E, 3 full years any area E required

Course Prerequisite: Latin 2B or Equivalent

Course Description: Students will continue to develop translation skills and expand vocabulary through reading increasingly complex stories set in Roman Britain and Rome circa A.D. 84. They will complete Stage 34 and selected stages from 35-48 of the Cambridge Latin Course. Students will also make the transition to reading original Latin literature with selections from Catullus, Horace, Ovid, and Vergil. In the cultural arena, students will study the patronage system in Roman society; religious beliefs in the second half of the first century A.D., Roman entertainment; freedmen and freedwomen, emperor's council/senatorial career, marriage, Roman law courts, governance of Roman provinces, Latin poetry, et al. While the goal of our Latin program is reading literature in Latin, students will have the opportunity to practice oral proficiency through reading aloud, recitation, vocab drills, and classroom conversation in Latin. They will also have a weekly opportunity to contribute to "Latin in Our World" as they present instances of Latin or Greek language or cultural references in their other course or the world at large. Also weekly, students will read in Latin and discuss thought-provoking quotations from the great Roman writers. In addition to vocab quizzes, students have exams at the end of each stage. They consist of translation, grammar forms, cloze sentences, short answer, parsing, and occasionally short essays based on cultural topics.

Honors Latin Literature: Ovid and Horace (Level 4)

Course Details: UC/CSU Honors Approved. Level 4 Latin Literature rotates through 3 different courses, and can be taken up to 3 times for credit. 3 full years of any area E required to graduate. For CSU/UC, courses should be from one language in sequential order, with advanced (Level 4) courses desired.

Course Prerequisite: Latin 3 or Equivalent

Course Description: In this course students will read in Latin selected stories from Ovid's *Metamorphoses* and selected Odes of Horace. Students will deal with the literature in a variety of ways including sight translation, prepared translation, reading for sense, grammatical analysis, and reading aloud/reciting in meter. The poetry will be considered in the historical context of the Augustan Age and in the literary context of the so-called Golden Age of Latin Literature. Through discussion and essay-writing, students will consider such aspects as these works' influence on later literature (as well as the influences of earlier Latin literature on these works), if and how these works reflect their contemporary political situation, what eternal truths might be found in these works, what choices translators must face, how Ovid's stories have been represented in the visual arts, et al. Students will learn how to scan and recite Latin meters including dactylic hexameter, Sapphic, Alcaic, and Asclepiad systems 1-4. They will also learn to recognize and understand the writers use of such figures of speech as allegory, alliteration, anaphora, antithesis, apostrophe, assonance, asyndeton,, chiasmus, ellipsis, enjambment, "golden line," hendiadys, hyperbaton, hyperbole, hysteron proteron, synchysis, irony, litotes, metaphor, metonymy, onomatopoeia, oxymoron, personification, pleonasm, polypoton, polysyndeton, prolepsis, simile, synecdoche, transferred epithet, tricolon crescendo, and zeugma. Students will be assessed in a variety of ways including tests requiring translation, scansion, parsing, comprehension questions, and essays. So that the bulk of class time may be devoted to literature, students will keep their grammar muscles in shape through weekly independent assignments from *Latin deMystified*. Each class period as we translate, we will also focus on pertinent grammar points and parse.

Honors Latin Literature: Vergil's Aeneid

Course Details: UC/CSU Honors Approved. Level 4 Latin Literature rotates through 3 different courses, and can be taken up to 3 times for credit. 3 full years of any area E required to graduate. For CSU/UC, courses should be from one language in sequential order, with advanced (Level 4) courses desired.

Course Prerequisite: Latin 3 or Equivalent

Course Description: Students will read selections from Vergil's *Aeneid* in the original Latin. At the same time, students will learn to scan and recite Latin poetry in dactylic hexameter. They will also consider the *Aeneid* as the national epic of Rome, and a product of the Augustan Age. They will look at the *Aeneid* as the final ancient expression of the genre of epic as well as the model for later epics such as Dante's *Divine Comedy* and Milton's *Paradise Lost*. Students will learn to identify major figures of speech (e.g. metonymy, synecdoche, anaphora, simile, et al.) and discuss their effect in the poetry. Students will become familiar with the enduring themes of the *Aeneid* and be able to discuss them in class, portray them in art, and explore them in essays. Any sections of the *Aeneid* not read in Latin, students will read in English and present to the class in a variety of ways both in groups and individually. Students will also grapple with the art of translation and experiment with finding the perfect balance between literal meaning and poetic expression. There will be unit tests throughout the year made up of translation, interpretation, short answer, parsing, and essay. Work will consist primarily of sight-reading and discussing the literature, parsing, reading aloud in dactylic hexameter, and writing translations. At the same time, students will review grammar independently as part of their weekly homework. In addition to weekly or bi-weekly vocabulary quizzes, students will do at least one essay and/or art project each semester.

Honors Latin Literature: Caesar and Cicero

Course Details: UC/CSU Honors Approved. Level 4 Latin Literature rotates through 3 different courses, and can be taken up to 3 times for credit. 3 full years of any area E required to graduate. For CSU/UC, courses should be from one language in sequential order, with advanced (Level 4) courses desired.

Course Prerequisite: Latin 3 or Equivalent

Course Description: Students will read selections from Caesar's *De Bello Gallico* and *De Bello Civili* and Cicero's *De Amicitia*. In preparation for each selection, students will complete grammar and vocabulary assignments designed to help them read and analyze the Latin prose. Each selection will be considered in its political and historic context. Traditionally, Caesar's prose has been judged the most lucid of all Roman writers. Through reading, projects, research, lecture, and discussion, students will gain an understanding of the major political events and people of this dynamic and well-documented period in Roman history--the fall of the Republic. Students will also read selections from another major prose writer of this time period, Cicero. *De Amicitia* will give students the opportunity to consider a philosophical work. At the same time, students will review grammar. In addition to weekly or bi-weekly vocabulary quizzes, students will do a variety of unit tests, projects, presentations, and essays each semester. While the goal of our Latin program is reading classical literature in Latin, students do have the opportunity to practice oral proficiency through reading aloud, recitation, and classroom conversation. Students also have the weekly opportunity to contribute to Latin in Our World with instances of Latin or Greek language or culture which they have come upon in other classes or the world at large. Also weekly, students will read in Latin and discuss thought-provoking quotations from the great Roman writers. In addition to vocab quizzes, students will have an exam at the end of each unit in Latin Lit. Exams combine translation, short answer based on grammar, rhetorical, devices, context, etc, and essay questions. Students also have weekly translation quizzes which include questions on grammar, devices, and context.

Area F: Visual and Performing Arts

Art 1

Course Details: UC/CSU Approved. 1 full year of any area F required to graduate.

Course Description: Art 1 is a survey class in multiple art genres as preparation for independent research in Art 2. Students are introduced to the basics of Photography, Graphic Design, Rendering, and the Studio Arts over the course of a year. Semester 1 includes work in photography and graphic design, and Semester 2 includes the fundamentals of rendering and studio art in 2 different mediums selected by the class. Students have the option to take either semester of the course, or both. Classroom experiences include written and oral peer review of student work in addition to studio time. From the beginning of the course, the arts are presented as a language with cultural impact. Course curriculum integrates art history and design theory with studio practice. By analyzing professional works and student works in a group critique setting, students research how artistic decisions influence personal meaning and social communication. Students engage in the creative cycle: researching, experimenting, executing, evaluating and then recreating in discipline and genre specific class projects with the goal of developing a personal style within the context of the discipline. Classical curriculum presents world history, art history, and art theory parallel to developing art skills. Students engage in articulating visually, verbally, and textually how the terminology and concepts interrelate and can be used as a means of exploration and evaluation of their works. Through the above curricular engagements, students are being prepared to engage with artwork and visual culture outside of the classroom setting. Course assignments also direct students to find, interpret and evaluate artworks which are currently engaging the world at large and share their findings with their class community. Our Classically Integrated curriculum highlights the arts as a personal endeavor, a professional endeavor, and an academic endeavor. World history, literature and economics are woven into lectures, research, and projects. In Classical Education, we

also have the privilege of the visual arts being included in the curriculum of other courses. In this way the arts are presented as an integrated part of culture.

Art 2: Independent Art

Course Details: UC/CSU Approved. 1 full year of any area F required to graduate. Art II can be taken multiple times for credit.

Prerequisite: Art I

Course Description: In this independent course, students will research and produce art objects in the student's own selected genre. Student's pen three independent contracts per semester with the instructor, outlining learning goals and art object designs. Directions for exploration include two dimensional and three dimensional works. Unit projects are assessed according to the following Student Learning Objectives: Media Craftspersonship, Image Craftspersonship, Composition, Experimentation, and Artist Research. Course can be taken up to six semesters for credit.

Advanced Art

Course Details: UC/CSU Approved Integrated Course. 1 full year of any area F required to graduate.

Advanced Art can be taken multiple times for credit

Prerequisite: Art 2, must be a junior or senior

Course Description: This course is intended for graduating Seniors intending to apply for higher education art programs and scholarships, or for a career in the visual arts, but can be taken by juniors who want to get a head start on their application portfolios and the college research process. The course is one semester long, but can be taken up to twice for credit. The instructor will work with the student to research and select national art programs, create and select documenting artwork, and construct application portfolios. Students will read, research, explore and discuss different art programs and varying avenues for careers in the visual arts. To succeed in this class, students must be prepared to demonstrate full engagement in the process of learning, demonstrating a committed work ethic and open experimentation with intention to improvement. They must also demonstrate awareness of historic and contemporary artists and showcase their ability to articulate their own artistic and career goals. As a course meant to integrate both career preparation and technical advancement, Advanced Art will cover Industry Research, Portfolio Development, and Statement Development.

Film Studies

Course Details: UC/CSU Approved. 1 full year of any area F required to graduate. Students must have access to basic movie editing software, such as iMovie, Adobe Premier, or Final Cut Pro. Note: Curriculum includes watching classic/foundational films, some of which may include mature content. Contact teacher for film list.

Course Description: In this course, we will focus on the fine art of film as we view and discuss the motion pictures, directors, actors, and writers that have shaped our media landscape. We will watch and analyze films, read about the history of the film industry, explore different "schools" in filmmaking, write scripts, and produce, direct, and act in student-made short films. Students will work on individual and group projects, will read scripts and articles, and will watch and review films independently. As the vast majority of our class time will be spent viewing films and discussing them, there will be work to do, both creative and academic, during the week, amounting to 2-3 hours per class period. This includes the times during the semester that you will be asked to watch specific films on your own at home.

Fundamentals of Drama

Course Details: UC/CSU Approved. 1 full year of any area F required to graduate.

Course Description: The Fundamentals of Drama is an introductory class with a focus on foundational theater knowledge and skills. Many topics will be covered, including: the history of theater, script analysis, building a character, performance skills, and costume and set design. Classroom activities will include interactive lecture, discussion and participation in a variety of improvised and scripted scenes designed to explicate key concepts in drama. Students will practice in-depth script analysis and guided study of filmed and live plays (including several visits to the theater, with backstage tour and meeting with theater professionals.) Students will develop and perform their own material, as well as scenes from a variety of genres and historical periods, leading to a staged one act play at the end of the term. For any students not wishing to perform, there will be opportunities to develop technical knowledge and skills, specifically in set and costume design.

Area G: College Preparatory Electives

Creative Writing: Beginning Fiction Workshop

Course Details: UC/CSU Approved. 1 full year of any area G required to graduate.

Course Recommendation: Reads at a 10th grade level or higher, strong grasp on English grammar.

Course Description: This course is a college-style fiction writing workshop. Students will write and critique literary short stories in a peer-based discussion group under the guidance of a master teacher. Each week will include a craft lesson, writing exercises, and a required reading of at least one modern short story from the selected anthology. In this course, students will: learn about craft elements such as plot, character development, tone, setting, conflict, and style/diction; complete fun, generative writing exercises; improve knowledge of and skill in traditional and contemporary narrative principles; practice “the habit of art” by keeping an observation notebook throughout the semester; develop their own creative voices; practice giving and receiving constructive and respectful critical feedback; learn and practice the discipline of revision; and read and discuss some of the most highly anthologized, foundational short stories of the 19th and 20th Centuries. Students will also participate in curating the campus literary magazine, Hanging Lantern Review, and will either serve on staff, or submit their own work for publication. Two students per week will have the opportunity to have a draft of a personal short story read, evaluated, and discussed in a round-table, peer reviewed workshop. Workshop will include the use of Socratic questioning, an articulation of the author's goals, statements of meaning, and encouraging, non-prescriptive feedback geared at helping students reach their narrative goals, and pushing writers toward excellence in and mastery of craft elements. Students are guided by the instructor through this process.

Honors Advanced Creative Writing: Special Topics

Course Details: UC/CSU Approved. 1 full year of any area G required to graduate.

Prerequisite: Creative Writing: Beginning Fiction Workshop

Course Description: This course is a college-level creative writing workshop for experienced writing students who have taken the beginning fiction workshop prerequisite. While the beginning course focuses on mastering the basic fundamentals of fiction writing, in this course students will explore advanced topics in modern writing, will participate in the publication of a campus literary review, and will submit their own work for publication in the larger marketplace. Our primary text will be John Gardner's classic work, *The Art of Fiction*, with units centered around each major section of the book. Students will work in their respective genres of choice, mastering craft techniques and studying 2-3 literary works of their own choosing. Each week will include a craft lesson, a Socratic seminar discussing a chapter in Gardner's book, and a seminar-style workshop for a participating artist's short story or novel chapter. Each student will be working on a longer, ongoing project throughout the term, in addition to practicing techniques through various weekly exercises.

In this course, students will study aesthetic theory; perform fun, generative writing exercises; improve knowledge of and skill in traditional and contemporary narrative principles, practice “the habit of art” by keeping an observation notebook throughout the semester, and develop their own distinct literary voices in the genres of their preference. Finally, students will engage with the real world publishing industry by researching the fiction marketplace, participating in staff roles for our campus literary journal, Hanging Lantern Review, and by formatting and submitting their own written work to literary journals for potential publication.

Food: The Art, Science, and History of What We Eat

Course Details: UC/CSU approved. 1 full year of any area G required to graduate.

Course Description: This course will consider an important topic that many of us take for granted: the cultivation, preparation, and consumption of food. Through a variety of disciplinary lenses--ecology, economics, nutritional science, history, ethics, politics, and aesthetics--we will reflect on how food shapes our lives as individuals and as communities. We will also get our hands dirty (quite literally) designing, planting, and maintaining a small garden on the new SLOCA high school campus. While humanists have for millennia discerned strong connections between culture and agriculture (Genesis, Homer, Virgil's Georgics, etc.), these connections have been largely severed in our day, when only four percent of the population works in food production. (As the Kentucky agrarian poet Wendell Berry is fond of pointing out, many advanced graduate students who can chart the course of the stars, or parse a line of Greek hexameter, could not grow a potato to feed themselves.) In several senses, then, this class will be a return to roots and origins. It should create some opportunities for us to eat together as well.

Inner and Outer Nature

Course Details: UC/CSU Approved.

1 full year of any area G required for UC/CSU and recommended for all college-bound students.

Course Description: This course ponders the creative interrelation between the human heart and the natural world. By exploring and reflecting on the natural beauty of California's central coast and engaging with related literature, we will consider how we shape, and in turn are shaped by, our natural surroundings. With the aim of more fully inhabiting and appreciating both these “inner” and “outer” natures, we will organize our time around the Latin motto *Cogitare, Agere, Esse* (To Think, To Do, To Be)... Students will read and ruminate upon a variety of classic nature writings (by John Steinbeck, Annie Dillard, John Muir, Loren Eiseley, Aldo Leopold, John J. Rowlands, Rebecca Solnit, RW Emerson, William Wordsworth, Robert MacFarlane, etc.); research and present on a nearby natural landscape (a beach, mountain, hiking trail, etc.); and write a reflective paper due at the end of the course. Students will disconnect from devices and get to know their local natural surroundings, going on approximately five one-hour long hikes, gaining confidence in their basic outdoor exploration skills. (This is the “outer” nature part.) Students will put to the test John Muir’s idea that “going out... was really going in.” Through a variety of creative writing and mindfulness exercises, we will gain a greater understanding of and appreciation for how wilderness sustains us as whole human beings. (This is the “inner” nature part.)

Music Appreciation

Course Details: UC/CSU approved. 1 full year of any area G required to graduate.

Course Description: After taking this course, students will be able to recognize and examine the defining characteristics of music from various eras and regions around the world. Although we will cover many eras of western music (e.g. Renaissance, Baroque, Ragtime, Blues, Jazz), our scope is a global one, studying music from all around the world (e.g. Africa, Central and South America, Asia, and Europe). We will also focus on understanding certain key elements of music (e.g. melody, rhythm, harmony, swing, improvisation, dynamics)

as well as being able to identify certain musical instruments based on their sound and/or appearance. Finally, we will read about and study definitive people that have changed the history of music. Students will be expected to listen to assigned pieces throughout the week and read excerpts about music history, both of which will be discussed each week.

Psychology

Course Details: UC/CSU Approved. 1 full year of any area G required to graduate.

Course Description: This psychology course is designed to be a hands-on introduction into the science of psychology. It will be a survey of the essentials of psychology from classical theories to current trends with an emphasis on self-discovery through experiments and projects. The course will give students the opportunity to examine and reflect upon their beliefs, attitudes and feelings about themselves and their ideas of what people are like and why they behave as they do. Also included are topics such as: personality, intellectual abilities and adjustment, learning skills, perception, emotions, motivation, personality disorders, thinking and biological influences on behavior. The course will consist mostly of in-class projects with approximately an hour homework completion per week.

Introduction to Philosophy: Why is there Something rather than Nothing?

Course Details: This new course will be submitted for UC/CSU A-G approval in 2018. Please contact Sarah Shotwell msshottwell@sloclassical.org for updates.

Course Description: SLOCA students will not only learn about philosophy, but also to philosophize, exploring such philosophical topics as epistemology, logic, the problem of evil, faith and reason, the mind and body relationship, and ethics. Through rigorous discussion and debate; class presentations, debates, and group activities; formal critical essays and dialogues—and, most importantly, through their own philosophizing!—SLOCA students will learn how to analyze and interpret their own personal experience in light of classic philosophical texts; to recognize, assess, and construct philosophical arguments using logical rules and philosophical principles; and to employ the tools of critical analysis and argumentative evaluation in their own thinking, speaking, and writing. Students also gain an understanding of the historical development of philosophical thought, from the ancient Greek philosophers, such as Plato and Aristotle, modern thinkers such as Descartes and Nietzsche, and contemporary thinkers such as Alasdair MacIntyre and Peter Kreeft. They will also be introduced to the perennial debates in philosophy: rationalism vs. skepticism, idealism vs. empiricism, relativism vs. absolutism, and theism vs. atheism. This is not a lecture class, for philosophy is best learned by practice, which means Socratic discussion—and lots of it! Each weekly class will consist of: 1) a seminar discussion of a philosophical text read the week before, and; 2) small-group, creative and fun activities, such as inventing a “world without evil,” participating in a formal debate on an important philosophical controversy, and discovering Plato’s Cave in our world, e.g., where might we find “prisoners staring at shadows on a cave wall” in 21st Century America? Estimate two hours of homework weekly, consisting of reading and some writing. Over the semester, you will complete three take-home projects: a philosophical dialogue, a philosophical essay, and debate preparation.

Moral Philosophy: What’s Good? Who’s Right?

Course Details: This new course will be submitted for UC/CSU A-G approval in 2018. Please contact Sarah Shotwell msshottwell@sloclassical.org for updates.

Course Description: Regardless of our differing beliefs and values, we all want to be happy. But what is happiness? Is it just getting what we want? What if what we want isn’t good? What is “good”? Can we rationally justify claims about what we value, about good and evil and right and wrong? Are there objective standards of morality by which we can accurately prescribe and judge actions, or is right and wrong or good

and evil only in the eye of the beholder, or the culture? SLOCA students will address these issues by reflecting upon their commonsense intuitions about human happiness, the Good, and how we ought to live our lives. They will revisit their initial thoughts by applying analytical reasoning to their own insights, and they will examine differing philosophical attempts to develop coherent and compelling moral theories capable of guiding moral decisions and ways of life. Among these are classical and medieval views such as virtue ethics, eudaimonism, and divine command; and modern conceptions, such as utilitarianism, deontology, and moral skepticism. Throughout the course, students will investigate how different ethical theories affect judgments on current ethical dilemmas such as capital punishment, animal rights, and war. As they wrestle with ethical issues, students will consider primary philosophical works, participate in discussions, debates, and skits, and write analytical essays and creative dialogues. This is not a lecture class, for philosophy is best learned by practice, which means Socratic discussion—and lots of it! Each weekly class will consist of: 1) a seminar discussion of a philosophical text read during the week before class, and; 2) small-group, creative and fun activities, including role-playing a variety of ethical scenarios, participating in a formal debate on an important ethical controversy, and creating and performing skits exemplifying moral theories. Estimate two hours of homework weekly, consisting of reading and some writing. Over the semester, you will complete three take-home projects: a dialogue, essay, and debate preparation.

Oral Rhetoric

Course Details: This new course will be submitted for UC/CSU A-G approval in 2018. Please contact Sarah Shotwell msshottwell@sloclassical.org for updates.

Course Description: Was Shakespeare just a demi-god we can only admire? Was Cicero simply an unrepeatable genius? How did American politicians, from Jefferson to Obama, inspire action and support? Is rhetoric magic, genius, flattery, or an art? Students taking Oral Rhetoric learn the art and philosophical underpinnings of spoken rhetoric; they aim to achieve both forcefulness and clarity of expression, and by studying diction, kinds of argument, and modes of delivery, practice the building blocks of Greek oratory (Progymnasmata). At the same time, they are inoculated against the false uses of rhetoric through briefly considering Plato's and Aristotle's critique of the sophists. They analyze great masterpieces of persuasion, and they discern the difference between persuasion and propaganda. They learn to convert emotion into eloquence, as Kenneth Burke explains the alchemy of persuasion. Students will need to purchase a packet of materials from the school store. Student goals: Use a variety of rhetorical styles; Construct rhetorically sophisticated sentences, using variety to create interest and dictate pace; Recognize and deploy the rhetorical figures of speech; Analyze the style of a piece of prose; Consider the philosophical, rhetorical, and political implications of style; Produce short speeches drawn from the Progymnasmata; Deliver an extemporaneous speech; Develop basic delivery skills for public speaking: body language, projection, pace of speech, enunciation, etc.; Students will read excerpts and some speeches (taking about 1 hour a week); we will do analysis in class. They will need to prepare short speeches (taking about an hour or so over a week's time).

Stem Electives

Data Science

Course Details: Approved as an Area C Math Course by CSU/UC. As an elective, Data Science does not fulfill SLOCAHS's 3 year math requirement, and does not fulfill the Area G requirement.

Course Prerequisite: Algebra 1

Course Description: SLO Classical Academy's Data Science course has one primary goal and two sub-goals. We want students at the end of the course to be able to understand the story data wants to tell us in context.

The students will need to use elementary statistical concepts (percentages, averages, graphs, etc.) to describe and computational techniques to collect and process the data that might speak to any given story. Frankly, life gives us questions. Data often helps get answers. We want students who can identify, collect and think critically to analyze appropriate data to answer those questions. In the Data Science course we will develop the principles, tools and techniques for thinking about these questions with real-world data. For some questions one needs data from more than one source and to merge those data into one dataset. For other questions, we will need to use multiple analyses to fully answer a question. This course is distinct from a Statistics course in that we will be emphasizing the computational aspects of questions; the collection of data from the internet via using APIs, the creation of standard rectangular data structures from irregular data, the visualization of these data and simulation. The bulk of the programming will be in Python, but students may choose to use R instead for some of their work. Mathematically, we have an Algebra 1 prerequisite and students will be learning elementary Probability, simulation and basic statistical inference (confidence intervals and hypothesis testing) to achieve course goals. This course is an introduction to the practice of data science: reasoning about the world with data. The course applies concepts from statistics and probability, alongside computation and visualization, as a means of processing data to learn about the world. An emerging academic discipline, data science creates a basis for thinking about and with data and understanding the ways in which data operate to shape our world.

Coding and Computer Science

Course Details: This new course will be submitted for A-G approval in 2018 as an Integrated Area G elective. Please contact Sarah Shotwell msshottwell@sloclassical.org for updates related to A-G certification.

Course Description: This course will be offered at two levels, beginner and advanced. Beginning CS will teach the foundations of computer science and basic programming in JavaScript, with an emphasis on helping students develop logical thinking and problem solving skills. Topics covered include: graphics, animation and games, data structures, and more. Advanced CS is for students with some prior programming experience, and will introduce students to the foundational concepts of computer science and explores the impact computing and technology have on our society. Students learn about the internet, digital information, programming, data, and apply these concepts through creative projects, while building their portfolio. The web-based curriculum is made up of a series of learning modules that cover the fundamentals of programming. Each module is made up of short video tutorials, example programs, quizzes, programming exercises, challenge problems, and unit tests. The course is designed for a year long class that meets 5 days per week. We will meet for 30 hours over the course of the semester, with an additional 15 hours expected from home. (You will have access to the course materials for the full academic year, and so you welcome to work independently once the course has come to an end. If you wish to take the advanced level course and would like to take the AP Computer Science Principles test, you will be responsible for completing the rest of the course work on your own time.)

Other Electives

Occasionally, SLOCA High School also offers additional electives for SLOCA credit that are not considered college preparatory and therefore are not certified/approved for CSU and UC college applications, but do fulfill SLOCA's elective graduation requirements. These electives include Life Skills ("Beyond SLOCA"), Printmaking, and Woodworking.