Menu of High School Course Offerings with Titles and Brief Descriptions

Humane Letters

The Great Hearts Humane Letters curriculum is a program in which students are trained in the habits of rational thought about the humanities—history, literature, and philosophy. Although students read primary texts central to the Western tradition, the subject matter of the course is not simply the books on the reading lists, but rather thinking itself. In short, the purpose of Humane Letters is to train students in how to think clearly and critically. Humane Letters trains students in habits of thought by demanding that they engage in three fundamental activities: reading, speaking, and writing. The work of Humane Letters begins with critical, active reading of history, literature, and philosophy from the best of what the Western tradition has to offer. The emphasis is on reading primary rather than secondary texts. The analytical approach taken to these primary texts is primarily a "new critical" approach: the primary text as a self-enclosed document speaks for itself. Secondary source material, whether of a historical, biographical, or literary nature, is extremely limited in order to promote the students' approaching the text without preconceptions and in order to avoid undermining the main focus of Humane Letters: discussing the primary text at hand. The readings are arranged thematically by grade level and students earn credits in both English and History/Geography per grade level in fulfillment of the state graduation requirements.

The 11th grade focuses primarily on some of the key literary, historical, and philosophical contributions of the Greeks to Western Civilization. Shakespeare's Hamlet and a few selections of the Old Testament of the Bible complete the 11th grade reading curriculum. The 12th grade curriculum is the most diverse in its presentation of literary and philosophical works stretching from the founding of the Roman Empire to the 19th 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.

9th Grade Humane Letters

In this two-credit course students engage in an intensive, primary source-based study of American history from the early colonial period to Vietnam and Watergate. Exhaustive study is devoted to the American founding, with study of the Declaration of Independence, the Federalist Papers, the events and arguments of the constitutional convention, and a line-by-line study of the complete Constitution (including all amendments); landmark verdicts of the Supreme Court, from Marbury v Madison to Brown v Board of Education; and major speeches and writings by US presidents and other statesmen. Arizona History is also covered. Students also read a syllabus of great American works of literature by authors including Washington Irving, Steven Crane, Frederick Douglass, Mark Twain, Thornton Wilder, F. Scott Fitzgerald, and Hemingway. Through the daily practice of Socratic seminar method, students are trained in skills of textual analysis, dialectic discussion, and public speaking. Students are also trained in the methods of analytical essay writing on topics from literature, history, and political theory.

10th Grade Humane Letters

In this two-credit course students engage in a critical study of history from the European Reformation through the era of colonialism and the world wars. Special focus is devoted to the rise of European nationalism, the concept of the state, and the development of ideology. Students engage in a comprehensive study of the theory, origins, and development of the three principal forms of government in the modern era: Anglo-American constitutionalism, the centralized, secular European state based upon the revolutionary French model, and the 20th century totalitarian state of Nazi Germany and Soviet Russia. Arizona government is also included. Students also read an extensive syllabus of works of historically relevant literature and political theory by authors including Shakespeare, Jane Austen, Dickens, Dostoyevsky, Solzhenitsyn, John Locke, Edmund Burke, J J Rousseau, and Karl Marx. Through the daily practice of Socratic seminar method, students are trained in skills of textual analysis, dialectic discussion, and public speaking. Students are trained in the methods of analytical essay writing on topics from literature, history, and political theory; they also learn and practice historical and biographical research skills and write one major biographical paper.

11th Grade Humane Letters

In this two-credit course students read an extensive syllabus of complete works of literature, history, and philosophy by ancient Greek authors. The genres of epic and tragic poetry are extensively explored through the study of the Iliad, Odyssey, and Sophocles' Oedipus plays. Students also study the works of the ancient historians Herodotus and Thucydides and thereby gain knowledge of the history of ancient Persia, Egypt, archaic Greece, the Persian invasion of Greece, and the Peloponnesian war between Athens and Sparta. Students devote an entire semester to the study of ancient philosophy and read Plato's *Republic*, *Meno*, *Gorgias,* and *Phaedo*, along with Aristotle's *Ethics* and *Politics.* At the conclusion of the course, students devote a month to the study of Genesis and Exodus from the Hebrew scriptures. Through the daily practice of Socratic seminar method, students are trained in skills of textual analysis, dialectic discussion, and public speaking. Students are trained in advanced methods of analytical essay writing on topics from literature, history, and philosophy, with attention devoted to compare-contrast essays and one major paper involving the analysis of two different readings.

12th Grade Humane Letters

In this two-credit capstone course students study an extensive syllabus of monumental works from the Western tradition, including the genres of tragic drama, epic poetry, autobiography, personal essays, and the novel. Special attention is given to multiple genres of philosophy, including epistemology, metaphysics, and philosophy of right. Authors read include Virgil, Dante, Milton, Augustine, Aquinas, Descartes, Montaigne, Machiavelli, Hegel, Marx, Shakespeare, and Dostoyevsky. Students also read selections from New Testament scriptures. Through the daily practice of Socratic seminar method, students are trained in skills of textual analysis, dialectic discussion, and public speaking. Students are trained in advanced methods of analytical essay writing on topics from literature, history, and philosophy, with special training devoted to the techniques of a multi-textual, original work of analysis.

Economics

10th Grade - Economics

The Great Hearts Economics curriculum is a one semester course in which students read and discuss the writings of key economists and economic thinkers. The primary goals of the course are to provide students with a conceptual understanding of economic theory and the relationship between economics and historical, philosophical, and political thought over time. The course covers the rise of classical economics with Adam Smith, as well as the ideas of Madison, Montaigne, Bastiat, Ricardo, von Mises, Mill, Marshall, Marx and others. Applications and connections of economics to historical circumstances and cultural/moral conditions are explored.

Mathematics

The Great Hearts High School Mathematics curriculum is a four-year program that employs the mission to Socratically lead each student to discover mathematical truth and beauty from geometry through calculus (Algebra I is taught in middle school) by helping him or her to:

1. *Develop fluency in the language of mathematics*
2. *Acquire analytic reasoning and logic skills*
3. *Apply abstract concepts in concrete situations*
4. *Translate problem situations into mathematical models*
5. *Organize and effectively communicate mathematical questions and results*

In the high school honors curriculum, students build an axiomatic system of definitions, postulates and theorems in order to write well developed proofs of geometric propositions. Students continue their advanced study of functions, with a new emphasis on transcendental functions, conic sections, analytic geometry, and trigonometry. Finally, students examine limits, derivatives, and integrals in a full two year exploration of Calculus. Course titles and brief descriptions are:

9th Grade – Honors Geometry

Using *Euclid's Elements* as the text, students explore the development of axiomatic and deductive thought using his original definitions, notions, and postulates. The focus of the course is on using Euclidean proof to study the topics of parallelism, congruent figures, polygons, similarity, circles, area, volume of solids, and transformations. Attention is also given to the application of geometric concepts to solve problems.

10th Grade – Honors College Algebra/Trigonometry

A continuation of the study of algebra that began in middle school, the focus of the course is 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. Attention is also given to the application of trigonometric concepts to solve problems.

11th Grade – Honors Calculus A
An in-depth study of basic calculus, the focus of the course is on limits, derivatives and their applications. Special attention is given to the definition of derivative and the development of the derivatives of algebraic and transcendental functions; the Chain Rule; implicit differentiation; curve sketching; and the application of calculus concepts to solve complex word problems.

12th Grade – Honors Calculus BC
A continuation of the study of calculus, the focus of the course is primarily on integrals and their applications, with some work in introductory differential equations. Special attention is given to using integrals to find measures such as the area under curves and the volume of solids of revolution. Applications of calculus to the sciences and other disciplines are emphasized through the solving of complex word problems from specific fields.

Sciences

The Great Hearts Academies Science curriculum is a four year program that draws the students into an intense observation and exploration of the physical and natural world via a cultivation of their innate curiosity and sense of wonder. We believe that the fields of science are "fruitful ground" for the development of reasoning abilities, as well as an igniting of true passion for the intellectual (and physical) exploration of one's environment. Students will learn to speak and write intelligently about even very complex processes and events, and will gain familiarity with the "language" of science. To this end, the curriculum emphasizes Socratic questioning, guided research, and student interpretation (versus simple recall of memorized facts). Labs in all the courses are designed to solidify a true and long-lasting comprehension of the phenomena studied, and improve the students' own powers of discernment and analysis. Finally, the students will be challenged to see the thematic connections that exist between all of the science courses/disciplines (e.g. forms/changes of energy, properties of matter, cycles, organization in systems), and genuinely perceive the value of a multi-faceted approach to observing and describing the world. While the science courses at Great Hearts Academies certainly have as a primary goal clear and logical thinking about scientific topics, we also work to develop in the student a profound appreciation for the inherent beauty of science and nature.

9th Grade – Honors 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). Microorganisms (bacteria, protists), fungi, plants, genetics and evolution, and comparative anatomy of a variety of animals are covered in the second semester.

10th Grade – Honors Physics I
Physics is the study of the natural world and the creation of models that help predict natural events. In the 10th grade 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.

11th Grade – Honors 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.

12th Grade – Honors Chemistry

The primary goals of the course are to provide 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 acquire small-scale laboratory skills and continue to refine lab reporting skills gained in previous science courses.

Classical Languages

The Great Hearts Classical Languages curriculum is a four year program in which Advanced Latin and Greek classes are elected by students as a four year high school "Classics Track" in language (Latin I, II, and III are mandatory in middle school). It is the mission of the Classics Department to generate enthusiasm for and promote the scholastic benefits of learning the languages and literature of the Ancient Romans and Greeks which have had such a profound impact upon English and Western culture. There are many reasons that Elementary and Intermediate Latin classes are mandatory for our junior high students: learning an inflected language provides the opportunity for increased skill in memorization and attention to detail; it approaches grammar from another perspective- one which usually helps cement the comprehension and correct usage of English grammar; it enriches their vocabulary and understanding of derivations; it gives additional exposure to Classical culture, ancient history, and influential literature which will serve them well in other classes, especially Humane Letters. Students must elect either the study of Classical Languages or a Modern Language in high school.

9th Grade – Latin IV

Utilizing an intensive college-level text, students in this advanced Latin course engage in a comprehensive review of all grammar and vocabulary, with special attention paid to verb flexion throughout all tenses, voices, and moods. While reviewing the fundamentals of noun declension, students also delve into a deeper study of the case system, reviewing basic functions while also learning more specialized uses. Time is devoted to extensive sentence syntax drilling and prose composition exercises in the first semester of the course. Students read short passages of original literature by original authors throughout the course, with increasing length and complexity in the second semester; students also review the fundamentals of Latin versification and quantitative prosody through reading short lyric and satyric poems, as well as epic excerpts, by authors such as Catullus, Martial, and Virgil.

10th Grade – Latin V

Students in Latin V devote an entire year to reading prose and poetry selections from ancient authors, including Caesar, Cicero, Horace, Lucretius, and concluding with extended, continuous selections from Virgil's *Aeneid.* Students employ their advanced knowledge of grammar, syntax, and vocabulary to engage in careful reading and analysis of literary texts, focusing on rhetorical techniques, nuance, historical and mythological allusion, and the lasting influence of canonical Latin texts in the Western literary tradition. Extensive classroom time is devoted to the hermeneutics of translation, and students practice producing English versions of prose and verse according to a variety of literary and literal criteria. Students are also introduced to the practice of philological scholarship and learn to write original papers on grammatical, syntactical, and lexigraphical topics.

11th Grade – Greek I

Students employ a one-semester college-level text in this intensive course that provides an overview of all grammar and basic syntax of the Attic (Athenian) dialect of classical Greek. While students read some short excerpts from original ancient literature, primary emphasis is placed upon developing mastery of all noun and verb paradigms, basic sentence syntax, and a robust working vocabulary. Students devote extensive class time to sentence translation and composition exercises. Advanced knowledge of classical Latin grammar is presupposed in this course, which employs the traditional methods of comparative Indo-European philology.

12th Grade – Greek II

This course combines a one-semester specialized study of the pre-classical Homeric dialect with a semester of readings of original Attic poetry and prose. Students use a college-level text to explore the grammatical, syntactical, and lexigraphical peculiarities of the archaic language of the *Iliad* and *Odyssey*, and read selections from the former throughout the first semester. In the second semester, students apply their knowledge of Attic Greek to read selections from Lucian, Sappho, Pindar, Sophocles, and Plato; they develop their translation skills and produce polished, literary English versions of poems for presentation to peer review and interrogation. Students also develop skills of philological scholarship and must present analytical papers on a variety of text-based topics.

Modern Languages

The Great Hearts Modern Languages curriculum is a comprehensive and accelerated four year program in which students build competency with the grammar and vocabulary of a modern language (French, German or Spanish) in order to be able to read, analyze, and discuss great works of literature written by and for native speakers of that language. We believe that literature allows the students to experience the language in its finest and most beautiful presentation, as well as offering an invaluable window into the cultures and histories of other peoples. To this end, all classes are conducted entirely in the target language, and frequent participation is required of all students, enabling them to build the communication skills needed to interact with authentic literary texts in the given modern language. In the first two years, students learn the essential grammar of the language and work on building vocabulary and communication skills. In the third and fourth years of the language, the courses are conducted almost entirely in seminar style, based on reading, discussing, analyzing, and writing about

authentic literary texts in the target language. Texts include short stories, poems, novels, and plays. At this level, students write five-paragraph essays about the literature that they read; essays are from two to four pages in length. Some grammar review and expansion is carried out in the third and fourth years as needed to refine the students' understanding of the more complex or challenging topics of each modern language. The vocabulary studied in these courses stems from the literary works read. Students must elect either the study of Classical Languages or a Modern Language in high school.

9th grade – 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.

10th grade – 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.

11th grade – Modern Language III (Intermediate 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.

12th grade – Modern Language IV (Advanced Literature and Composition)

In the fourth year of modern language study, the students continue the exploration of the target language's literature. Again, the reading list consists of canonical literary works representative of the relevant countries and authors. These texts will vary in genre, reflecting the progression of literature throughout several centuries, and the students are able to read and comprehend more challenging and lengthy works at this level. In this final year of the modern language, students are expected to draw heavily on their previous encounters with the literature and culture evoked in the readings. They also continue to write five-paragraph essays based in the literature they read.

Fine Arts

The four year high school fine arts curriculum at Great Hearts Academies presents the language of the beautiful as manifested in the principle aesthetic media of the Western Tradition: the visual arts, music, poetry, and drama. The overall goals of the curriculum are to give students a detailed language by which to express the order and logic of these four classical mediums, and allow students to experiment with the ineffable beyond the rational: the epiphanies made possible by symbolic thought. The study of Fine arts beings in middle school and the emphasis in all of the grades is upon the process of creating beauty, not necessarily upon the end product itself. The fine arts are viewed as an essential human experience, as a key part of the liberal arts, instead of as a private realm for specialists and their commodities. Students engage in two different disciplines of fine art each academic year, one each semester, with the exception of 10th grade where one semester is allocated to the study of Economics.

9th Grade and 10th Grade – Chorus/Music Theory

These courses engage the student 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. High school music theory includes a study of triads, grand staff notation, and harmonic analysis of chords with Roman numerals and inversions. The students will often 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 should also come to appreciate the inherent beauty and order which exists in musical forms. There is also a strong emphasis on listening in the music courses. Ear-training and solfege-singing figure prominently in our theory units (e.g., singing and recognizing scales by ear). Occasionally the class period will be spent listening to recordings of hallmark works from various composers, and discussing/reviewing the piece afterward, noting instruments used, compositional techniques, and the historical context (aesthetic period, genre, etc.) of the piece. Choir is the performance focus in the high school and students perform in two concerts per year.

9th Grade - Poetry

Our poetry curriculum engages students in poetry writing in conjunction with the literary study of poetry. 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. After studying the process of writing poetry, a student emerges from the program 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.

11th Grade and 12th Grade Studio Art

In the high school courses, students review and strengthen their skills from the middle school, coming into a fuller awareness of the foundational elements of art (including line, shape, form, value, texture, and color), as well as the principles of composition (unity, emphasis, variety, balance, movement, contrast, and repetition), in order to achieve cohesive, dynamic, and meaningful pieces. Students grow in their artistic endeavors by means of class instruction,

group critiques/discussions, one-on-one direction, and the personal exploration and development of critical thinking skills. Painting and drawing (portraiture, still life, and landscape traditions) are still a focus, as students become more skilled in rendering three-dimensional images on a two-dimensional surface, and various sculptural media are also introduced. An appreciation for art masterworks is cultivated throughout the entire art curriculum, as students explore, discuss, and copy master artists' works from different historic and aesthetic periods in Western art history.

11th Grade and 12th Grade Drama

Students complete one semester of drama in each of the 11th and 12th grade years and emerge from the program with 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/she functions, and an intimate familiarity with at least two theatrical great works. The curriculum's sequence functions on two levels: it provides a progression from Greek & Roman theater, through the Shakespearean and Restoration eras, to the modern era, and it provides a concurrent progression from staging fundamentals to advanced levels of acting, playwriting, and directing.

Great Heart Academies High School Graduation Requirements/Credits

Great Hearts Course	English / Speech	US/AZ History	World History / Geography / Economics	Math	Science	Fine Arts	Foreign Language	Community Service
9th: Humane Letters	1	1						
9th: Geometry				1				
9th: Foreign Language I							1	
9th: Biology					1			
9th: Chorus/Music Theory						0.5		
9th: Poetry I						0.5		
10th: Humane Letters	1	0.5	0.5					
10th: College Algebra/Trig				1				
10th: Foreign Language II							1	
10th: Physics I					1			
10th: Chorus/Music Theory II						0.5		
10th: Economics			0.5					
11th: Humane Letters	1.5		0.5					
11th: Calculus I				1				
11th: Foreign Language III							1	
11th: Chemistry					1			
11th: Drama I						0.5		
11th: Studio Art						0.5		
10th/11th: Community Service								0.25
12th: Humane Letters	1.5		0.5					
12th: Calculus II				1				
12th: Foreign Language IV							1	
12th: Physics II					1			
12th: Drama II						0.5		
12th: Studio Art						0.5		
12th: Senior Thesis and Defense	0.25							
Great Hearts Total Credits	5.25	1.5	2	4	4	3.5	4.0	0.25