

CHRIST CLASSICAL ACADEMY
10th Grade Course Offerings:

	Course Number	Course Name	Duration (yr)	Credit	Textbook	\$/textbook
	1200340 or (1211300 Trig, ½ credit)	Algebra II or Pre-Calculus	Full Year	1 credit		
H	2003350	Chemistry I Honors	Full Year	1 credit		
	0703380	Classical Greek I	Full Year	1 credit		
H	2100460 1020830	Eastern and Western Heritage Honors Classical Literature Honors (Omnibus IV)	Full Year Full Year	1 0.5	<i>The Annals of Imperial Rome, The Bacchae, Cicero's Selected Works, The Iliad of Homer, The Landmark Thucydides, Plato's Republic, Introduction to Aristotle, Josephus: New Complete Works, Theogony by Hesiod, Tearing Down Strongholds</i>	
H	1001350	English Honors 2	Full Year	1		
H	0400350	Theater History and Literature (FA)	Full Year	1		

	Credits Required	Credits Earned Thus Far	Remaining Credits
Total Credits Needed to Graduate	24	13.5	10.5
Math	4	2	2
Science	3	2	1
History (Social Science)	3	2	1
English Language Arts	4	2	1
Physical Education	1	0	1
Foreign Language	0		0
Fine Art/Practical/Performing	1	1	
Electives	8	2.5	5.5
Online Course	1		1

Course: #1200340 Algebra 2 Honors (1)

In this course, students learn to expand their view of algebra and geometry to include non-linear motion and non-linear functions. Circular motion receives special attention, which naturally leads to trigonometric functions and curves (sine waves and tangent graphs). The notion of exponential growth is brought to the forefront, and with it, a look at geometric sequences and series and the development of logarithms.

Building on their work with linear, quadratic, and exponential functions, students extend their repertoire of functions to include polynomial, rational, and radical functions.² Students work closely with the expressions that define the functions, and continue to expand and hone their abilities to model situations and to solve equations, including solving quadratic equations over the set of complex numbers and solving exponential equations using the properties of logarithms. The Mathematical Practice Standards apply throughout each course and, together with the content standards, prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations. The critical areas for this course, organized into four units, are as follows:

Unit 1- Polynomial, Rational, and Radical Relationships: This unit develops the structural similarities between the system of polynomials and the system of integers. Students draw on analogies between polynomial arithmetic and base-ten computation, focusing on properties of operations, particularly the distributive property. Students connect multiplication of polynomials with multiplication of multi-digit integers, and division of polynomials with long division of integers. Students identify zeros of polynomials, including complex zeros of quadratic polynomials, and make connections between zeros of polynomials and solutions of polynomial equations. The unit culminates with the fundamental theorem of algebra. A central theme of this unit is that the arithmetic of rational expressions is governed by the same rules as the arithmetic of rational numbers.

Unit 2- Trigonometric Functions: Building on their previous work with functions, and on their work with trigonometric ratios and circles in Geometry, students now use the coordinate plane to extend trigonometry to model periodic phenomena.

Unit 3- Modeling with Functions: In this unit students synthesize and generalize what they have learned about a variety of function families. They extend their work with exponential functions to include solving exponential equations with logarithms. They explore the effects of transformations on graphs of diverse functions, including functions arising in an application, in order to abstract the general principle that transformations on a graph always have the same effect regardless of the type of the underlying function. They identify appropriate types of functions to model a situation, they adjust parameters to improve the model, and they compare models by analyzing appropriateness of fit and making judgments about the domain over which a model is a good fit. The description of modeling as “the process of choosing and using mathematics and statistics to analyze empirical situations, to understand them better, and to make decisions” is at the heart of this unit. The narrative discussion and diagram of the modeling cycle should be considered when knowledge of functions, statistics, and geometry is applied in a modeling context.

Unit 4- Inferences and Conclusions from Data: In this unit, students see how the visual displays and summary statistics they learned in earlier grades relate to different types of data and to probability distributions. They identify different ways of collecting data— including sample surveys, experiments, and simulations—and the role that randomness and careful design play in the conclusions that can be drawn.

Unit 5- Applications of Probability: Building on probability concepts that began in the middle grades, students use the languages of set theory to expand their ability to compute and interpret theoretical and experimental probabilities for compound events, attending to

mutually exclusive events, independent events, and conditional probability. Students should make use of geometric probability models wherever possible. They use probability to make informed decisions.

Text:

Algebra II, John Saxon

Course: #2003350 Chemistry I Honors (with Lab) (1)

Chemistry explores the physical nature of matter and energy. Students gain a broad introduction to changes in materials with a creative approach to problem-solving. They investigate the properties and structure of matter, bonding and the associated energy-flow. Through laboratory work, they develop unifying principles of chemistry. With these principles they begin to measure amounts of atoms and molecules in chemical reactions and to find patterns among elements and compounds. They learn to explain solution, behavior, energy changes, and chemical bonding. Emphasis is placed on investigation, experimentation, and the reading of historical and primary source material.

While the content focus of this course is consistent with the Chemistry I course, students will explore these concepts in greater depth. In general, the academic pace and rigor will be greatly increased for honors level course work. Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

Text:

Chemistry, Holt and Reinhart

Course: #0703380 Classical Greek 1 (1)

This course acquaints student with Classical (Attic) Greek, the form of the language in which the great philosophical, historical and literary works of Ancient Greece were written. After learning the Greek alphabet and its proper pronunciation, attention turns to acquiring knowledge of the vocabulary, grammar and syntax of the language itself. The course employs the traditional analytic method of memorizing paradigms and of parsing and declining words, but special focus is given to the inductive method of speaking, reading and translating the language aloud in class.

Classical Greek 1 introduces students to the target language and its culture. The student will develop communicative skills in all 3 modes of communication and cross-cultural

understanding. Emphasis is placed on proficient communication in the language. An introduction to reading and writing is also included as well as culture, connections, comparisons, and communities.

Special Note: Classical Greek students will focus more on reading and interpreting written passages rather than using oral modes of communication.

Text: *Athenaze, An Introduction to Ancient Greek, Book I*, Maurice Balme and Gilbert Lawall; *Athenaze, A Student Workbook*

Course: Theology II

Length: Year

Credit: .5

Course Description:

This course teaches the student the language and basic truths of the Christian faith within the Reformed tradition. Throughout the year, students interact with these doctrines and develop an understanding of the doctrinal distinctions embraced by the larger Protestant and Reformed traditions.

Text:

A Sure Thing: What We Believe and Why, Cornelius Plantinga

Course: Writing II

Length: Year

Credit: .5

Course Description:

The student will continue to employ the classical writing canons of invention, arrangement and elocution as applied to the writing of the persuasive, comparative, narrative and definition essay. Contents will include the three elements of communication, the three kinds of persuasive speech, and the three modes of persuasion. Students will also study the elements of virtue, the four kinds of government, and the rudimentary elements of traditional psychology.

Text:

Lost Tools of Writing, Andrew Kern

Classical Rhetoric, Martin Cothran

Classical Rhetoric for The Modern Student, Edward Corbett

Diogenes: Maxim, Classical Writing

Course: Omnibus IV:

This course seeks to integrate the Bible, history, and literature through a study of the Great Books of the ancient world. Students will read both primary and secondary

readings. The primary readings are the cornerstone of the class and accordingly take up most of the class time. Several readings are assigned for outside of class from which the student will complete summary and comprehension cards.

Primary Readings Include but are not limited to: *The Annals of Imperial Rome*, *The Bacchae*, *Cicero's Selected Works*, *The Iliad of Homer*, *The Landmark Thucydides*, *Plato's Republic*, *Introduction to Aristotle*, *Josephus: New Complete Works*, *Theogony by Hesiod*, *Tearing Down Strongholds*.

Incorporates the following two courses:
#21004600 Eastern and Western Heritage Honors
(Ancient History) (1)

The grade 9-12 Eastern and Western Heritage course consists of the following content area strands: World History, American History, Geography, and Humanities. The primary content emphasis for this course pertains to the study of the world's earliest civilizations to the ancient and classical civilizations of Africa, Asia, and Europe. Content will include, but is not limited to, the birth of civilizations throughout the world, including the origins of societies from Mesopotamia, Africa, China, India, and Mesoamerica from the perspective of cultural geography, growth, dissemination, and decline of four classic civilizations of India, China, Greece, and Rome, the role of isolation and interaction in the development of the Byzantine Empire, African and Mesoamerican civilizations, India, China, Japan, and Europe, and the emergence of social, political, economic, and religious institutions and ideas.

Mathematics Benchmark Guidance - Social Studies instruction should include opportunities for students to interpret and create representations of historical events and concepts using mathematical tables, charts, and graphs.

#1020830 Classical Literature Honors (0.5) ??

The purpose of this course is to enable students, using texts of high complexity, to develop knowledge of classical literature through advanced integrated educational experiences of reading, writing, speaking and listening, and language. Emphasis will be on representative classical literature, with its varied cultural influences, highlighting the major genres, themes, issues, and influences associated with the literary period.

Honors and Advanced Level Course Note: Academic rigor is more than simply assigning to students a greater quantity of work. Through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted, students are challenged to think and collaborate critically on the content they are learning.

Course: Media Studies

Length: Year

Credit: .5

Course Description:

Coming from our Teacher Karen Hill