



High School Course Catalog 2023-2024

Welcome to the Dayspring Christian Academy High School Course Catalog. Here you will find the available courses in the various disciplines Dayspring offers, all of which represent the rich and elevated curriculum commensurate with a Principle Approach® education. Dayspring Christian Academy is committed to continue to *excel still more* and to *redeem the time* in every arena of our school. Our desire is to prepare our students to be lifelong disciples of Jesus Christ who are equipped to lead in their area of calling, whether through College and Career or Honors courses.

The Honors High School Honors (HHS) is a distinct entity within the school, with honors courses typically featuring additional studies and assessment strategies beyond the College and Career courses. See the documents “Honors High School Program Overview” and “Honors Course Overview” for details. Students in the Class of 2026 now have the opportunity to apply for admission into our HHS Program. Additional information is available from the office of the Director of Curriculum and Instruction (DCI).

PLEASE NOTE

Dayspring Christian Academy participates in the College Board’s Advanced Placement® (AP) program. Taking an AP exam in the springtime is an opportunity by which our students may launch their college careers. Many of our students seek to accelerate their college placement by taking the exam in any of our four AP courses: Calculus AB, Calculus BC, Statistics, Studio Art: 2D Art and Design.

Additionally, Dayspring partners with Cairn University, Grand Canyon University, Harrisburg Area Community College, and Pennsylvania College of Health Sciences, all fully accredited, to offer students additional opportunities to build their college transcript while completing high school. Students who take dual credit courses can earn college credits at a discount, so there is great potential for savings while further preparing themselves with college-level thinking and coursework. Dayspring dual credit courses include Honors Biology, Honors Chemistry, AP Calculus AB, AP Calculus BC, Honors English Language and Composition, Honors British Literature, Honors Psychology, Honors U.S. History, and AP Statistics. Dual credit and AP courses are so designated in the heading of those courses, along with the number of credits granted. Because not all colleges accept dual credit and/or AP scores, students should check with their colleges of choice to be certain of their policies.

If you have questions about any of the courses contained in the catalog, please contact the Director of Curriculum and Instruction.

Sincerely,

Dan Stone, M.Ed.
Headmaster, Dayspring Christian Academy

Table of Contents

<u>Bible</u>	3
<u>Classical</u>	4
<u>English</u>	5
<u>EL English</u>	6
<u>Fine Arts: Art</u>	7
<u>Fine Arts: Music</u>	8
<u>History</u>	9
<u>Languages</u>	11
<u>Mathematics</u>	13
<u>Physical Education</u>	15
<u>Science</u>	15
<u>Extra-Departmental Subjects</u>	17

BIBLE

Christology & Soteriology

GRADE NINE

FOUR QUARTERS; 1.0 CREDIT

The definition of *Christology* is the study of the person of Christ. *Soteriology* is the study of His work. This course seeks to develop an understanding of Christ's eternal existence as one of the persons of the triune Godhead as well as His dual nature (full deity and full humanity); His incarnation; His earthly life and ministry, including His death, resurrection, ascension; His current ministry; and His future return and reign. His preeminence in history and in the life of a believer is emphasized. Significant time is invested in the use of apologetics arguments pertaining to the reliability of Scripture and Jesus' historical reality, deity, crucifixion and resurrection.

Christian Doctrines

GRADE TEN OR ELEVEN

FOUR QUARTERS; 1.0 CREDIT

This course presents an in-depth look at the ten major doctrines found in the Holy Bible. These include Bibliology, Paterology, Christology, Pneumatology, Anthropology, Hamartiology, Soteriology, Angelology, Ecclesiology, and Eschatology. The students consider what a worldview is through a study of the book of Ecclesiastes. Ten disciplines – theology, philosophy, ethics, biology, psychology, sociology, law, politics, economics, and history – are viewed from a secular humanist, Marxist/Leninist, Hindu, Islamic, Cosmic Humanist, and Postmodern perspectives and are compared with biblical Christianity. Solutions to life's challenges are searched out in Scripture, and the strength and power of a truly biblical worldview is verified.

Hermeneutics

GRADE TEN OR ELEVEN

FOUR QUARTERS; 1.0 CREDIT

Students learn disciplines of biblical hermeneutics (interpretation). Students apply studies of surface meaning, science, geography, history, culture, literature, and language, including a word study in the original language (Hebrew or Greek), to their treatment of a chosen Bible passage, with a view to unlocking a depth of meaning and a breadth of application. Upon the studies on the passage, students compose an essay of interpretation and application, and they present it orally or online.

Worldviews Analysis

GRADE TWELVE

FOUR QUARTERS; 1.0 CREDIT

This course provides a biblical basis for student understanding of the key concerns addressed by Nehemiah Institute's PEERS test. Students further develop and demonstrate a biblical worldview and a facility for general worldview dialogue by reviewing and analyzing key documents and other media from Western history, with a focus on modern—especially visual—media, and by engaging in discussion and debate with those of differing worldviews. The primary worldviews include a review of Islam, Cosmic Humanism and its many related religions (such as Hinduism, Buddhism, New Age), Postmodernism, Marxism, Secular Humanism, Rationalism, and biblical Christianity.

CLASSICAL

Logic

GRADE TEN

TWO QUARTERS; 0.5 CREDIT

Students study the biblical foundation of logic and begin the critique and construction of logical arguments. Students study and compose propositions, syllogisms, and sophisms (fallacies) from Isaac Watts' approach; another, more modern, approach to argument analysis (including the discovery of fallacies) will also be followed. The Lincoln-Douglas debate structure is presented. Students prepare and engage in a formal debate.

Rhetoric

GRADE TEN

J-TERM; 0.5 CREDIT

Students develop "the art of speaking with propriety, elegance and force" (Webster, 1828). Students follow biblical models of composition, then practice techniques of effective delivery, with attention given to volume, enunciation, articulation rate and pause, inflection, facial expression, eye contact, and gesture.

ENGLISH

American Literature I (Colonial Period – Federal Period)

GRADE NINE

FOUR QUARTERS; 1.0 CREDIT

Students engage in the reading and study of American literature spanning the Colonial Period to 1865. This literature is fiction, including prose and poetry, and non-fiction, including sermons and essays. The course also includes writing (oration and literary analysis) and speaking and listening (orations and memorized poetry) supported by the formal study of grammar and vocabulary.

American Literature II (Civil War Period – Twentieth Century)

GRADE TEN

FOUR QUARTERS; COLLEGE AND CAREER, 1.0 CREDIT

HONORS COURSE, 1.3 CREDITS

Students engage in the reading and study of American literature spanning 1865 through the Twentieth Century. This literature is fiction, including prose, drama, and poetry. The course also includes writing (oration and literary analysis) and speaking and listening (orations and memorized poetry) supported by the formal study of grammar and vocabulary. Whereas all focus on comprehension, interpretation, and a biblical evaluation of the works they read, the honors level of this literature course is designed for academically motivated students who are prepared to develop their writing techniques and use discussion-driven classes to probe deeper into the themes, form, technique, and ideas present in each piece of literature.

English Language and Composition

GRADE ELEVEN

FOUR QUARTERS; COLLEGE AND CAREER, 1.0 CREDIT

DUAL CREDIT HONORS COURSE, 1.3 CREDITS [SUMMER REQUIREMENT]

Students read and analyze a wide variety of non-fiction and fiction literature; they develop discernment in their appreciation of authors' ideas and the expression of those ideas. They examine the strategies that authors use to achieve their purposes. Students compose in a variety of modes, applying principles of logic, grammar and rhetoric. The course also includes speaking and listening (orations and memorized poetry) supported by the formal study of grammar and vocabulary. Students in the honors section—a dual credit, 100-level college course—find greater emphasis on developing more sophisticated writing techniques and the use of discussion-driven classes to probe deeper into the themes, form, techniques, and ideas present in each piece of literature.

British Literature

GRADE TWELVE

FOUR QUARTERS; COLLEGE AND CAREER, 1.0 CREDIT

DUAL CREDIT HONORS COURSE, 1.3 CREDITS [SUMMER REQUIREMENTS]

Students study British literature, including poetry, essays, drama, and the novel from the Anglo-Saxon Period through the Twentieth Century. Students in the honors section—a dual credit, 300-level college course—launch their understanding of literary theory and criticism, both of which are essential to the study of literature. Here they find greater emphasis on developing more sophisticated writing techniques, as well, and the use of discussion-driven

classes to probe deeper into the themes, form, techniques, and ideas present in each piece of literature.

EL English Courses (EL/International Students)

English Foundations

ALL GRADES

FOUR QUARTERS; 1.0 CREDIT

This entry-level course is specifically designed for international high school students. It emphasizes the development of the foundational communication skills, particularly speaking and writing, with the goal that students will speak and write excellently in a manner that glorifies God. The course includes instruction in English grammar, composition, reading, oral presentation, vocabulary acquisition, as well as basic research strategies and practices. The course also contains a study of the elements of literature within one classic novel. The instructor addresses specific writing tendencies of English language learners and how to avoid common errors.

English Grammar and Composition

ALL GRADES

FOUR QUARTERS; 1.0 CREDIT

This second-year course is designed to further develop the skills of listening, speaking, reading, writing, and critical thinking requisite for effective communication of information, ideas, and concepts in a manner that glorifies God. This ESL course includes instruction and practice in English grammar, composition, vocabulary, and research strategies. In this course students refine their study skills of outlining, listening, note-taking, paraphrasing, and summarizing, and they apply these to research projects and specific Bible readings. Students also identify elements of literature in one classic novel.

Rosetta Stone American English

ALL GRADES

TWO-FOUR QUARTERS; 0.50 TO 1.0 CREDIT

This is a computer-based immersive language-learning online program offered by Dayspring Christian Academy to the English learner. It is designed to support the student in acquiring English as a second language through the modalities of speaking, listening, reading, and writing. Students schedule to take this 0.5- or 1.0-credit course during the school day in addition to taking English Foundations and/or English Grammar and Composition.

Foundations for ESL/International Students: Course Specific

ALL GRADES

Courses for which the international or ESL student's English language ability warrants course modifications beyond the first quarter transition period will be identified on the transcript as a foundations course for that specific course and will be identified as such on the report card comment.

FINE ARTS: ART

Art: Culture, History, and Design

GRADE TEN OR ELEVEN

FOUR QUARTERS; 1.0 CREDIT (ONE 1.0-CREDIT ART COURSE IS A PREREQUISITE FOR ADVANCED ART/AP STUDIO ART)

Students study the rise and fall of ideas, artistic expressions, and values evidenced in the major art eras from Rome to the present. Special consideration is given to the cause-effect relationship between art and environment, as well as worldview impact on each era and transition. Students are directed toward art as a career, as a ministry, or as an expression of personal creativity and develop a portfolio for art school, if applicable. Students gain a biblically founded, articulate view of a selected art (or related) term via a word study and artistic response, and they create projects that reveal Christian excellence, biblical thinking, clarity of thought, and relevance to the individual art based upon each studied era. Special emphasis is given to selected art movements and associated key characteristics. This course will rotate with *Art: Artistry, Aesthetic, and Composition* on a biennial basis.

Field study: ACSI Fine Arts Festival (1 day; by invitation)

Art: Artistry, Aesthetics, & Composition

GRADE TEN OR ELEVEN

FOUR QUARTERS; 1.0 CREDIT (ONE 1.0-CREDIT ART COURSE IS A PREREQUISITE FOR ADVANCED ART/AP STUDIO ART)

Students explore the various domains of art: commercial art; fine art; craft art.

They survey the Bible and God's mandates for the careful and artful work of craft. Students develop their artistic skills as they work on a variety of subjects. This course presents an opportunity for students to explore their creativity in art. Various art media are used, and students learn how to manipulate these for the purpose of aesthetics and compositional design. This course rotates with *Art: Culture, History, and Design* on a biennial basis.

Field study: The Philadelphia Museum of Art (1 day); ACSI Fine Arts Festival (1 day, by invitation)

Advanced Art (previously known as Art II)

GRADE TWELVE

FOUR QUARTERS; 1.0 CREDIT (PREREQUISITE: A 1.0-CREDIT ART COURSE)

Students develop their art skills through detailed instruction and practice of selected media. The impact of the Enlightenment is examined through the shift of worldview in society as the fruit and thorns of such changes in thinking are identified. Specifically, the development of art is traced from "Luncheon on the Grass" and Impressionism through Dadaism to contemporary modern art. Historical responses, like the PRB, and their role in the art world today are studied and discussed. Key movements are scrutinized as case studies and various projects serve as experiential study. After a historical backdrop to the state of the arts today has been laid, the impactful relationship between relativism and Modern and Postmodern art is examined. Students grapple with the appropriate response and/or integration into the contemporary art world and deduce their Christian role and response to art today.

Field study: Lancaster City/Gallery Row; ACSI Fine Arts Festival (1 day; by invitation)

AP Studio Art: 2-D Art & Design

GRADE TWELVE (PREREQUISITE: A ONE-CREDIT ART COURSE AND TEACHER APPROVAL)

FOUR QUARTERS; AP COURSE, 1.3 CREDITS [SUMMER REQUIREMENTS]

This course for advanced art students follows the prescribed College Board Advanced Placement (AP) curriculum and promotes artistic development as students explore the process of sustained investigation in art and its documentation. Students develop mastery (i.e., “quality”) in concept, composition, and execution of 2-D design. Students develop a coherent plan of action—a concentration—from which to craft a cohesive body of work involving the investigation of a strong underlying visual design idea. Students also explore a variety of concepts and approaches in 2-D design so that they are able to demonstrate versatility in techniques through one or more media. The course includes student analysis of their own artwork and that of their peers. Students consider artistic integrity and what constitutes plagiarism as they develop a portfolio.

Field Studies: Lancaster City/Gallery Row (1 day); ACSI Fine Arts Festival (1 day; by invitation)

FINE ARTS: MUSIC

Choir

ALL GRADES

FOUR QUARTERS; 1.0 CREDIT

This is a non-auditioned, elective course; all interested students are encouraged to join. Students rehearse and perform music from a variety of genres including sacred, contemporary, classic choral literature, and spirituals. Students learn basic sight reading with solfege and rhythm reading with counting. They also learn to sing in foreign languages, practice good vocal technique, and perform in four-part harmony with some divisi. High school choir performs at school concerts and other events including the Patriot's Celebration Dinner and Remember America Speaker Series. Students are typically required to purchase choir attire in their first year in high school choir, a cost of approximately \$100.

Field Study: ACSI Fine Arts Festival (1 day)

Musicianship

GRADE TEN OR ELEVEN

FOUR QUARTERS; 1.0 CREDIT

This elective course is designed to build students’ practical musical skills. It focuses on reading and writing musical notation, development of musical aural skills through solfege and musical dictation, sight-singing, drumming, and substantial class time devoted to playing keyboards. It is designed to be accessible to students with limited previous musical experience, but is individualized so that students with strong musical backgrounds may continue to advance their keyboard and singing skills. This course rotates with *Music Composition and Culture* on a biennial basis.

Music Composition and Culture

GRADE TEN OR ELEVEN

FOUR QUARTERS; 1.0 CREDIT

This elective course is designed to help students explore the fundamentals of music composition and to think deeply about how music relates to culture. Students review the elements of music such as melody, rhythm, and form through composition projects that are designed to channel their creativity and to teach how to manipulate these musical building blocks. These projects will use music writing/mixing software and classroom instruments. Because the emphasis is on arranging musical sounds rather than the technicalities of writing musical notation, this course is accessible to students with limited background in reading/writing musical notation. Students also examine historical examples of musical compositions written to address specific cultural issues and consider these from a biblical worldview. This course rotates with *Musicianship* on a biennial basis.

Performance Choir

GRADES TEN, ELEVEN, TWELVE

FOUR QUARTERS; 0.2 CREDITS (IN ADDITION TO THE 1.0 CREDIT FOR HIGH SCHOOL CHOIR)

This is auditioned choir designed for students with more advanced musicianship skills. Students in Performance Choir also participate in High School Choir. This group rehearses one period per 6-day cycle. Students are required to log individual practice time at home, usually 45 minutes per week. Students rehearse and perform more challenging literature with an emphasis on vocal blend, divisi and jazz harmony, diction, and a cappella singing. Performance choir performs at school concerts and other events including the Patriot's Celebration Dinner, Remember America Speaker Series, and Christmas caroling. Field Studies: ACSI Fine Arts Festival (1 day); Christmas caroling in local retirement communities (1 day)

HISTORY

Rudiments of American History

GRADE NINE

FOUR QUARTERS; 1.0 CREDIT

A rudiment is a *first principle or element; that which is to be first learned* (Webster, 1828). The “Rudiments Course” is a study of history from the providential view, seeking to discern the internal, causative nature of events, thereby to identify God’s Hand in history. The course follows the development of liberty and law, identifying the main documents of liberty and their historical settings as well as examining the impact of both Christian and pagan character in the founding of this nation. As students learn to think governmentally, they see the purpose and plan of God for America as a nation and for themselves as American Christians. Students develop an awareness of the role they have to play in the restoration of America to its biblical foundation and Gospel purpose.

Field Study: Boston (4 nights)

World History

GRADE TEN

FOUR QUARTERS; COLLEGE AND CAREER, 1.0 CREDIT

HONORS COURSE, 1.3 CREDITS

This course highlights the beginning of human civilization from tribal communities to the consolidation of empires to the advent of nation-states. The impact of a society's understanding of God on the view of the individual, government, education, work, and commerce is traced. Students think governmentally in order to understand current events and issues of today's world, deducing historical and worldview causes as they seek biblical answers to the complex problems that modern societies face. The honors level of this history course is designed for academically motivated students who are inclined to engage in research and a high level of self-directed academic scholarship.

Field Study: Washington, D.C. (1 night)

U.S. History

GRADE ELEVEN

FOUR QUARTERS; COLLEGE AND CAREER, 1.0 CREDIT

DUAL CREDIT HONORS COURSE, 1.3 CREDITS [SUMMER REQUIREMENTS]

Beginning with Columbus' discovery to the present this course is a study of the first Christian Constitutional Republic. The study traces the growth, development, and deterioration of the American Republic. Emphasis is placed on the westward expansion, slavery and racism, the Civil War, the growth of capitalistic business, immigration, progressivism, the ascendancy of the United States to a world power, the World Wars, the infiltration of socialism and the welfare state, the Cold War, and the decline of the influence of Christianity. In addition to the American Presidents, emphasis is given to key political, religious, business, and cultural figures in American history. There are additional requirements for the honors section of this 200-level college history course, which is designed for academically motivated students who are inclined to engage in research and a high level of self-directed academic scholarship.

Field Studies: New York City (1 night); Philadelphia (1 day, honors section only)

Economics

GRADE TWELVE

J-TERM; 0.25 CREDIT

The science of economics is studied from a position of discerning a biblical model for scarcity, choices, private property, work, stewardship, production and the distribution of goods, services, and wealth. Monetary systems and markets as well as the government role in the economy are also examined. Practical economics suggests an actual use of previously learned mathematical knowledge and theories as they relate to life skills. Students discern wise, biblical practices related to personal finance. Specific subtopics include saving, budgeting, debt, career planning, consumer awareness, investing and retirement, insurance, taxes, giving, and the effects of money on relationships.

History of Christianity

GRADE TWELVE

TWO QUARTERS; 0.5 CREDIT

This course is an introduction to the 2000-year history of the Christian Church. The course offers a general overall understanding of the major people and events in the history of the

Church of Jesus Christ. At the feast of Pentecost, the Christian Church was instituted with the coming of the Holy Spirit, which Peter said was a fulfillment of the prophecy of Joel. From this humble beginning with 120 disciples (Acts 1.15), the Church eventually spread to cover the whole earth, fulfilling Jesus' injunction to take the Gospel to the ends of the earth (Acts 1.8). As the history of the Church unfolds over the period of 2000 years, students differentiate between the human institution of the church from the divine institution of the body of Christ whose head is the Incarnate Son of God, Jesus Christ, and whose directives are through the divine authority of the Holy Scriptures, God's written revelation to mankind. This historical journey of both the human and the divine is deemed significant by God's direct intervention, the intrigue of human history, and the ultimate triumph of the church.

U.S. Government

GRADE TWELVE

TWO QUARTERS; 0.5 CREDIT

Understanding the foundations of the U.S. Constitution as well as the purpose of federalism among national, state, and local governments is vital to being able to understand the role of government in today's society as well as the role it plays in a citizen's daily life. This course is designed to investigate the circumstances surrounding the formation of the U.S.

Constitution, the role Biblical foundations played in our nation's formation, and the change in our democratic republic over the course of the last 250 years. Students will study the three branches of government, the purpose of federalism, the process in which individuals engage when seeking election through campaigning, the roles of political parties in the formation of platforms and planks, the purpose of lobbyists, and, most importantly, the process by which government governs.

LANGUAGES

ASL I

GRADE NINE

4 QUARTERS; 1.0 CREDIT

American Sign Language (ASL) is in the top 10 of languages used in the United States. Students are introduced to a new culture and a language cherished by people who are Deaf and Hard of Hearing. Students are able to hold a basic conversation in ASL as well as have a vocabulary of over 500 words. Students are able to ask and answer questions in ASL. They demonstrate their knowledge of Deaf culture as well as Deaf History and the people who are important to that history. Progress videos are made of each student throughout the course. Texts used in the course include *Signing Naturally Level 1* and Elaine Costello's book, *Signing: How to Speak with Your Hands*. The class is taught in English for the culture and history lessons and in ASL for the language teaching. Space is limited.

ASL II

GRADE TEN

4 QUARTERS; 1.0 CREDIT

American Sign Language (ASL 2) takes the students to the next level in the language. They continue to learn vocabulary, grammar, and culture. Most (85%) of this class is taught in ASL, and students are required to respond in ASL. Students are videoed to show progress in expression. The curriculum *Signing Naturally Level 2* is utilized along with supplemental materials. By the end of the year students who work hard are well on their way to learning a second language.

Field Study: local restaurant lunch, with signing only

Spanish I

GRADE NINE

FOUR QUARTERS; 1.0 CREDIT

This course develops a knowledge of Spanish pronunciation and introductory Spanish vocabulary and grammar and provides practice in basic conversation. Vocabulary themes include greetings and farewells, get-to-know-you dialogues, times and weather, clothing, family, and common regular and irregular verbs. Grammar concepts include number and gender of nouns, sentence structure, and present tense verb conjugations. Students memorize a passage of Scripture in Spanish, do various group projects and presentations throughout the year, and complete an individual research project on a Central American country.

Spanish II

GRADE TEN

FOUR QUARTERS; 1.0 CREDIT

This course includes a review of Spanish I and continues to develop a knowledge of basic Spanish vocabulary and grammar and to provide practice in basic conversation. Vocabulary themes include items in and around the house, food and meal words, the world around us, body words, religion and worship, travel and recreation, and additional regular and irregular verbs. New grammar concepts include direct and indirect object pronouns and past tense verb conjugations. Students memorize a passage of Scripture in Spanish, do various group projects and presentations throughout the year, and complete an individual research project on a South American country.

New Testament Greek

GRADE TWELVE

FOUR QUARTERS; 1.0 CREDIT

Students learn the Greek of the New Testament (Koine, or “common” Greek), with occasional reference to Classical (Attic) and Homeric Greek. After a foundation in Greek phonetics, students learn the three noun declensions, and all tenses, moods and voices of verbs. Students learn the more common grammatical constructions and they develop some familiarity with high-frequency New Testament vocabulary (those words used 42+ times in the NT). Students translate a class-chosen chapter or more from the New Testament. They practice reading from the New Testament, analyzing word forms, and learning exegesis as a tool to further biblical understanding. Students consider God’s choice of Greek as the language for His New Testament.

MATHEMATICS

Algebra I

ALL GRADES

FOUR QUARTERS; 1.0 CREDIT

In this course in the methodology of Algebra I, teaching methodologies vary but center around involve three-pronged hybrid instruction that includes small group teacher interaction, project and problem collaboration, and independent practice, often online. Students solve algebra problems including the following: equations and inequalities containing variables, powers, and exponents; absolute value; proportions and percents; scientific notation; linear functions; polynomials; systems of linear equations; and quadratic functions and equations. Students also clarify how God can be known—at least in part—and honored through the study of algebra. This course is intended to prepare the student for Algebra II. Calculators are provided by the school, if needed.

Geometry

ALL GRADES

FOUR QUARTERS; 1.0 CREDIT

Students study the features and properties of the various subsets of lines, planes, and space, prove congruence theorems using deductive reasoning, use simple tools to construct various plane figures, and apply theorems and elementary trigonometry principles to problems and real-life scenarios. Students also consider how God can be known—at least in part—and honored through the study of geometry. A scientific calculator is provided for student use.

Algebra II

ALL GRADES

FOUR QUARTERS; 1.0 CREDIT

In this continuing course in the methodology of Algebra, students learn to work extensively with functions, including linear, quadratic, polynomial, logarithmic, and exponential functions. They work with real, imaginary, rational and irrational numbers. In working with various types of functions, students create models for the real world and solve inequalities in the context of application problems. In conjunction with linear functions, students are also introduced to matrix operations. They work with concepts and applications in probability, sequences, and series, in addition to an introduction to trigonometry. Students also determine how God can be known—at least in part—and honored through the study of algebra. A graphing calculator is provided for student use.

Precalculus

ALL GRADES

FOUR QUARTERS; 1.0 CREDIT

Students review arithmetic and geometric sequences, as well as the Cartesian coordinate system, and they analyze and utilize the following types of functions and equations: polynomial, exponential, logarithmic, trigonometric, parametric, and polar. Students explore logarithms, study trigonometry, analyze conic sections, preview matrices and probability, and develop a foundation for differential and integral calculus. All of these are accomplished with an emphasis on mathematical modeling and application of techniques to real-life scenarios. Throughout the course, students also determine that God can be known—at least in

part—and honored through this preparatory study of calculus. In this course students supply their own TI-83 or higher graphing calculator.

Liberal Arts Mathematics

GRADE ELEVEN OR TWELVE

FOUR QUARTERS; 1.0 CREDIT

In this high school mathematics elective, students focus on developing problem-solving skills and critical thinking, which are critical to understanding and impacting today's society. They work with logic and sets, measurement and conversions, basic geometry, number systems, financial math, probability, statistics, and voting systems. Elements of consumer math will be present throughout the course, as students focus on connections and applications to the real world. Students also determine how God can be known—at least in part—and honored through the study of mathematics. This course blends online and face-to-face instruction. Liberal Arts Mathematics is intended as an alternative to precalculus in the junior year for students pursuing a non-STEM major in college. A calculator is provided for student use.

Calculus AB (AP)

ALL GRADES

FOUR QUARTERS; AP COURSE AND DUAL CREDIT, 1.3 CREDITS

This course provides a rigorous exploration of the first year in calculus. Students calculate limits, define continuity and its relationship to differentiability, calculate derivatives using the limit definition and derivative rules, and solve problems related to both contextual and analytical applications of derivatives and rates of change. Students also calculate integrals and solve problems related to accumulation of change, differential equations, area between curves, and the volume of solids. Throughout the course, students determine how God can be known—at least in part—and honored through the robust study of 200-level college-level calculus. Students supply their own TI-83 or higher graphing calculator.

Calculus BC (AP)

ALL GRADES (PREREQUISITE: CALCULUS AB)

FOUR QUARTERS; AP COURSE AND DUAL CREDIT, 1.3 CREDITS

This course provides a review of Calculus AB, including limits, derivatives, integrals and antiderivatives, and function analysis. Students extend their knowledge of integration to include integration by parts, linear partial fractions, improper integrals, logistical models with differential equations, and the arc length of a curve. The study includes coverage of surface area and volume of solids of revolution, slope fields, infinite series (including power series and Taylor series), convergence and divergence, and parametric, vector, and polar functions. The course continues with conic sections and ends with a study of hyperbolic functions. Students also determine how God can be known—at least in part—and honored through their deepening study within this 200-level college calculus course. Students supply their own TI-83 or higher graphing calculator.

Statistics (AP)

GRADE ELEVEN OR TWELVE [PRIMARILY A PACED, INDEPENDENT STUDY]

FOUR QUARTERS; AP COURSE AND DUAL CREDIT, 1.3 CREDITS

In this 200-level college math coursework, students explore and understand data, examine the relationships between variables, learn about gathering data, explore randomness and probability, relate statistics to the real world, and work with inference. Statistics is “a

collection of facts respecting the state of society, the condition of a people in a nation or country, their health, longevity, domestic economy, arts, property and political strength, the state of the country” (Webster). Statistics utilizes tools and methods that lead to particular calculations to help us draw conclusions about the world.

PHYSICAL EDUCATION

High School Physical Education

GRADE NINE

FOUR QUARTERS; 1.0 CREDIT

Students learn the importance of maintaining an active lifestyle by which they can glorify God in their best possible health. Team concepts and good sportsmanship are highlighted as students learn life lessons through the competitiveness of sports and physical games, including basketball, volleyball, soccer, handball, and dodgeball.

SCIENCE

Biology

GRADE NINE

FOUR QUARTERS; 1.0 CREDIT

Biology is the study of living organisms existing in the natural realm. Since the creation of Adam, man has been involved in the naming, dominion, and care of God’s plants and animals. The creatures of the earth were designed as a benefit to man and are therefore worthy of observation and study. Because of man’s fall, students also study life and its processes in order to survive the resultant diseases, infestations and harmful organisms. Since God is the Creator of all things, He is the one most qualified to set guidelines for understanding and interpreting His creation. This course is designed to introduce foundational concepts of biology while instilling an appreciation for the power of God, which is displayed through the creatures He has made. Throughout the course, students are exposed to secular views regarding life’s origin and development as well as the biblical and scientific problems with these views. Areas of study include the nature of science, taxonomy, cytology, genetics, zoology, botany and basic ecology. This course includes a study of origins (J-term).

Field Study: Application is made annually for a field study (1 day) with the Chesapeake Bay Foundation.

Chemistry

GRADE TEN

FOUR QUARTERS; COLLEGE AND CAREER; 1.0 CREDIT

DUAL CREDIT HONORS COURSE; 1.3 CREDITS

This course serves as an introduction to the foundation of science through biblical analysis of the fundamental principles of chemistry. Students explore the concepts of the nature of matter, atomic structure and theory, dimensional analysis, chemical reactions, stoichiometry

and applying the Scientific Method in a laboratory setting, establishing clear and concise hypotheses and thorough analysis and conclusions. Mastery of the vocabulary of chemistry is emphasized. The students make practical applications of chemical principles to many areas of life and living and appreciate the complexity of God's design at the molecular level. The honors level of this 200-level, 4-credit college course is designed for academically motivated students who are inclined to engage in research and a high level of self-directed academic scholarship. It includes additional studies, experiments, and a demonstration of the Scientific Method.

Biology (Honors)

GRADE ELEVEN OR TWELVE

FOUR QUARTERS; DUAL CREDIT HONORS COURSE; 1.3 CREDITS [SUMMER REQUIREMENTS]

AP Biology is a 300-level college articulated course designed to offer students a solid foundation in introductory college-level biology. By structuring the course around the four big ideas, enduring understandings, and science practices, students develop an appreciation for the study of life, which helps them to identify and understand unifying principles within a diversified biological world. The process of inquiry in science and developing critical thinking skills is the most crucial part of this course, providing students opportunities to distinguish between facts and interpretations and to relate those findings to the conflicting ideas of naturalism and creationism.

Field Study: Application is made annually for a field study (1 day) to the Penn State Hershey Biomedical Research Center.

Anatomy and Physiology

GRADE ELEVEN OR TWELVE

FOUR QUARTERS; COLLEGE AND CAREER; 1.0 CREDIT

HONORS COURSE; 1.3 CREDITS

This A & P course examines the intricate design of the human body through the study of the structural and functional arrangement of its various components. The structural study includes the identification and examination of the physical design and the arrangement of the various systems and organs comprising the human body and how they work together in unity, emphasizing the economy of God. The functional study examines and explores the chemical and cellular processes that coordinate within the body as a whole and are necessary for maintaining the proper performance of all body functions. In addition, the course looks at common pathologies and proper care of the various systems and the body as a whole. Students learn the biblical basis for the origin of man and study problems with modern evolutionary claims. The honors level of this A & P course is designed for academically motivated, curious students who will meet for an additional period, where they will engage with further detailed anatomy, additional current pathology-related findings, and several supplementary labs.

Physics (Honors)

GRADE ELEVEN OR TWELVE (PREREQUISITE: ALGEBRA II)

FOUR QUARTERS; 1.3 CREDITS

Physics is the study of the fundamental laws of nature as they pertain to the properties and interaction of matter and energy. Students use a hands-on approach during regular lab time to experiment with and observe learned concepts. They encounter the laws of motion,

gravitational attraction, and thermodynamics. Students identify and apply the relationships among force, mass, velocity and acceleration, identify properties of sound waves and of fluids and electromagnetic radiation, construct basic electrical circuits, and briefly look at nuclear and quantum physics. Students complete the year with a final project. In this course students must supply their own scientific (or graphing) calculator.

STEAM: Applied Technologies

GRADE TWELVE

FOUR QUARTERS; 1.0 CREDIT

This course focuses on the application of STEAM (Science, Technology, Engineering, Arts, and Mathematics) with the goal of developing technological literacy. The course is tailored to the needs and interests of the individual student and may include manufacturing technology, CAD, 3d printing and CNC milling, Arduino programming and electronics, robotics and energy technology. Teaching methodologies center around practical, logical problem-solving skills used in the engineering design process as students apply STEAM skills to solving challenges related to real-world applications. Much of the class time is invested in doing hands-on projects in a small group setting. Students also are made aware of STEM- and Field study: Harley Davidson Manufacturing Plant (1 day)

EXTRA-DEPARTMENTAL SUBJECTS

Apprenticeship

GRADE ELEVEN

FOUR QUARTERS; 1.0 CREDIT

This course is designed to prepare students for a successful transition to college and/or a career path after high school. Students focus on spiritual, academic, aptitude, and personality strengths and align them with career possibilities and interests. Students typically participate in a three-day shadowing experience in May. They also engage in a unit study of entrepreneurship during J-term. SAT/ACT preparation and an understanding of the college application and acceptance process are included in this course, as well. Students use the information to design a path of further study or training. They prepare a personalized college and career portfolio to share with parents and to use for senior year plans and college visits. Field Studies: College visit and campus tour, with College and Career research project (1-2 days); Job Shadowing (individualized, 2 days-no overnights)

Computer Science

GRADE NINE, TEN, ELEVEN, OR TWELVE

FOUR QUARTERS; 1.0 CREDIT

Students explore the field of computer science, learn the role of the basic components of a computer, and practice developing software to control the behavior of the computer as well as the correct practices to implement it. This course is offered on a biennial basis.

Psychology (Honors)

GRADE TWELVE

FOUR QUARTERS; DUAL CREDIT HONORS COURSE; 1.3 CREDITS

This 100-level college articulated course emphasizes how scientific studies have advanced the understanding of human growth and behavior. At the same time, students learn that while solid studies have provided insights, these studies have also led to questions and theories that conflict in their conclusions. Students are challenged to evaluate the insights gained through proper scientific inquiries described in the text and lecture presentations in light of their biblical worldview. Critical thinking rather than blind acceptance is expected. Whatever field the student ultimately enters, this ability to use ethical, scientific thinking will be an asset.