

# Calvary Baptist School

## Secondary Course Offerings

### 7<sup>th</sup> Grade Class Offerings

English: A comprehensive study of grammar, spelling and vocabulary, composition, literature, and research. Students will study an overview of literature as well as a novel-based approach. The research paper process is introduced and begun at this level.

Earth Science: This course is a study of God's universe. It provides a wide range of subject areas pertaining to the natural world. After developing a Christian framework, topics in the sciences of geology, hydrology, meteorology, and astronomy are covered. Students will be able to gain an understanding of God's creation and the endless attributes that make the earth so unique. Areas of interest for the student range from earthquakes, volcanoes, and weather on earth, to stars and galaxies in the universe.

Pre-Algebra: Introduction to algebra, reviews 6<sup>th</sup> grade material and the basics of algebra

Algebra 1: The course covers 12 core topics, including Algebra Foundations; Functions and Relations; Equations: Linear, Quadratic, Systems of, and Absolute Value; Expressions: Rational, Radical; Inequalities; Probability and Data Analysis

World Studies: This course covers major events, philosophies, and cultural themes from the beginning of history to the present day. Ancient through modern civilizations, as well as how they are interconnected, are discussed in detail. This course equips students with the skills they need to study world events as well as infer cause-effect relationships between past and current events. Christian worldview will be emphasized in this course.

### 8<sup>th</sup> Grade Class Offerings

English: A comprehensive study of grammar, spelling and vocabulary, composition, literature, and research. Students will study an overview of literature as well as a novel-based approach. The research paper process is continued and advanced at this level.

Life Science: This course is a study of God's living creation. Before learning about specifics, the students will learn about the Christian worldview. Students need to understand that all living things were created by God. After this introduction, students will learn about cells, genetics, microscopic organisms, plants, the animal kingdom, our relationship with the environment, and the human body. At the conclusion of the course, students will see just how breathtaking God's living creation is.

Algebra 1: The course covers 12 core topics, including Algebra Foundations; Functions and Relations; Equations: Linear, Quadratic, Systems of, and Absolute Value; Expressions: Rational, Radical; Inequalities; Probability and Data Analysis

Geometry: The topics included in this course are tools used in Geometry: reasoning and proofs, parallel and perpendicular lines, congruent triangles & relationships within triangles, area, volume, similarity and the study of circles as well as right triangle trigonometry. Geometry uses many algebraic ways to solve problems but also encourages more logical and analytical thinking. This course helps prepare students for more involved problems that they will learn in Algebra 2, which is the course that follows.

American Republic: This course provides an overview of America from its beginnings to present day. Throughout the course, students will gain an understanding of why American history is so important. It teaches life lessons, shows that God is constantly at work, and helps give us all a sense of who we are. Furthermore, the course focuses on the four main values of an American. These are freedom, individualism, equality and growth. Students will be able to see these values in each topic covered. The topics include the discovery of America, the American

## 10<sup>th</sup> Grade Class Offerings

Revolution, the growth of our nation, the Civil War, industrialism, and the events of the 20<sup>th</sup> century.

### 9<sup>th</sup> Grade Class Offerings

English: A comprehensive study of grammar, spelling and vocabulary, composition, literature, and research. Students will study an overview of literature as well as a novel-based approach. The research paper process is continued and advanced at this level.

Physical Science: This course is a study of the basic principles of physics and chemistry. Due to the problem solving nature of this course, Algebra skills are needed or highly suggested. The students will first learn a Christian worldview of science, which sets the tone for the course. Topics dealing with physics include matter, measurement, mechanics, and electromagnetism. The chemistry portion of the course focuses on atoms, elements, the periodic table, and chemical reactions. Students will gain a better understanding of why and how things happen or work in God's universe.

Geometry: The topics included in this course are tools used in Geometry: reasoning and proofs, parallel and perpendicular lines, congruent triangles & relationships within triangles, area, volume, similarity and the study of circles as well as right triangle trigonometry. Geometry uses many algebraic ways to solve problems but also encourages more logical and analytical thinking. This course helps prepare students for more involved problems that they will learn in Algebra 2, which is the course that follows.

Algebra 2: This course covers topics including linear functions, matrices, sequences, logic, polynomials, exponential and logarithmic functions and the unit circle. Algebra 2 builds a better background in algebra and helps prepare the students for Pre-Calculus or a higher math by introducing beginning concepts used in those courses.

PA History/Geography: A study of the history of Pennsylvania (state required); principles of geography, including a detailed study of each region/country of the world.

English 10 and English 10 Honors--We study core grammar such as parts of the sentence, parts of speech, phrases, clauses, capitalization, punctuation, essay writing, and two research papers that are 6-8 pages each. We use the ABeka vocabulary, and Abeka American Literature. In literature, we study *Julius Caesar*, *Our Town*, and an overview of American Literature. We also read *The Scarlet Letter*. If we have time, we may also read *The Hobbit* or *Silas Marner*.

Biology: This class covers the processes, structures and functions of living organisms. Creation is the underlying basis for all biology. Our goal is to increase appreciation of and faith in God while studying what He designed. Laboratory experience and demonstrations supplement classroom discussion. Lab work includes microscope use and animal dissections.

Geometry: The topics included in this course are tools used in Geometry: reasoning and proofs, parallel and perpendicular lines, congruent triangles & relationships within triangles, area, volume, similarity and the study of circles as well as right triangle trigonometry. Geometry uses many algebraic ways to solve problems but also encourages more logical and analytical thinking. This course helps prepare students for more involved problems that they will learn in Algebra 2, which is the course that follows.

Algebra 2: This course covers topics including linear functions, matrices, sequences, logic, polynomials, exponential and logarithmic functions and the unit circle. Algebra 2 builds a better background in algebra and helps prepare the students for Pre-Calculus or a higher math by introducing beginning concepts used in those courses.

Trigonometry/Pre-Calculus: Preview the Fundamental Concepts of Algebra, Functions and Graphs, Exponential and Logarithmic Functions, Trigonometric Functions, Analytical Trigonometry, Additional Topics in Trigonometry (includes polar coordinates and vectors), Systems of Equations and Inequalities, Matrices and Determinants, Conic Sections and Analytic Geometry, Sequences, Induction, and Probability, Introduction to Calculus.

World History and Honors World History: This course is a comprehensive study of God's work from Creation until modern day throughout the world. We will study the course of human events with a biblical worldview of God's work in every culture around the world.

## 11<sup>th</sup> Grade Class Offerings

English and Honors English: This course reviews grammar concepts while continuing a more intensive study of vocabulary, writing, literature, and research. The study in literature includes an overview of British literature, as well as a study of *The Merchant of Venice*, *David Copperfield*, and *The Count of Monte Cristo*. Students will also write two research papers, one on the biblical view of a current issue and one on a British author.

Biology 2: Lab work includes microscope use and animal dissections. Projects include a science experiment, leaf collection and writing a children's book about an animal. Topics include botany; genetics and biotechnology; arthropods; fish; reptiles; minor chordates; ecology; human anatomy and physiology; and integumentary, muscular, skeletal, circulatory, respiratory, digestive, circulatory, lymphatic, and excretory systems.

Anatomy and Physiology: This course covers an introduction to A&P, Histology, Integumentary System, Skeletal System, Muscular System, Nervous System, Endocrine System, Cardiovascular System, Endocrine System, Lymphatic System, and Respiratory System. The material is presented from a Christian perspective that respectfully honors the human body a marvel of God's creation.

Chemistry: This course covers topics such as matter, measurement, atomic structure, elements, bonds, chemical composition and reactions, stoichiometry, states of matter, solutions, kinetics, equilibrium, acids and bases, and oxidation and reduction. Weekly labs are for reinforcement and illustration of principles taught and for enrichment. A working knowledge of algebra is necessary for the math aspects of this class.

Trigonometry/Pre-Calculus: This course will preview the Fundamental Concepts of Algebra, Functions and Graphs, Exponential and Logarithmic Functions, Trigonometric Functions, Analytical Trigonometry, Additional Topics in Trigonometry (includes polar coordinates and vectors), Systems of Equations and Inequalities, Matrices and Determinants, Conic Sections and Analytic Geometry, Sequences, Induction, and Probability, Introduction to Calculus.

Consumer Math: This course covers personal finance topics: income, budgeting, personal banking, borrowing money, transportation, food, clothing, acquiring housing, maintaining a home, life and health insurance, income taxes, and vacations.

Algebra 3: We start by reviewing the following concepts, Exponents and Radicals, Polynomials and Special Products, Factoring polynomials, Rational Expressions. Then the following topics are taught; Equations, Inequalities, and Mathematical modeling; Functions and their graphs; Polynomial Functions; Rational functions and conics; Exponential and logarithmic functions, Trigonometry, Analytical Trigonometry; Additional Topics in Trigonometry (includes Vectors in a Plane, Vectors and Dot Products, The Complex plane); Systems of Equations and Inequalities, Matrices and Determinants; Sequence, Series and Probability.

AP United States History: This advanced placement course covers the Colonial Era through the post-Cold War era of United States History. Students will use the AP textbook and will follow the course work necessary to prepare them to take the AP U.S. History test at the end of the school year.

United States History: This course is a chronological survey of American history from European discovery to the present. Students will be able to expand upon knowledge gained in the American Republic course; identify continuity and change with emphasis on the six spheres of human activity in politics, economics, religion, society, science, and arts; identify continuity and change with emphasis on foreign relations, including past wars and the roots of modern foreign policy; identify core values of Americanism—the American dream, limited government, popular culture, and the free enterprise economy; and evaluate

historical narratives and original documents for accuracy and historic perspectives.

## 12<sup>th</sup> Grade Class Offerings

AP English: We study analysis, synthesis, and sound argument. Students write 8 major papers. Per the AP guidelines, students write a rough draft which I mark carefully in order to conduct a personal conference with each student before completion of the final draft. We also study *Macbeth*. Students are prepped to take the AP English test at the end of the school year.

English: This course reviews grammar concepts while continuing a more intensive study of vocabulary, writing, literature, and research. The study in literature includes *Macbeth*, *Hamlet*, *A Tale of Two Cities*, *Animal Farm*, and *Les Miserables*. The students will do two research projects consisting of a world literature author and an occupation project.

Biology 2: Lab work includes microscope use and animal dissections. Projects include a science experiment, leaf collection and writing a children's book about an animal. Topics include botany; genetics and biotechnology; arthropods; fish; reptiles; minor chordates; ecology; human anatomy and physiology; and integumentary, muscular, skeletal, circulatory, respiratory, digestive, circulatory, lymphatic, and excretory systems.

Anatomy and Physiology: This course covers an introduction to A&P, Histology, Integumentary System, Skeletal System, Muscular System, Nervous System, Endocrine System, Cardiovascular System, Endocrine System, Lymphatic System, and Respiratory System. The material is presented from a Christian perspective that respectfully honors the human body a marvel of God's creation.

AP Physics: Using the college text, *Physics-Principles with Applications* by D. Giancoli, we study 3 broad subject areas: Newtonian mechanics, waves and sound, and electricity. Weekly laboratory experiments and algebra/trigonometry based problem solving are an integral part of the course work.

Trigonometry/Pre-Calculus: This course will preview the Fundamental Concepts of Algebra, Functions and Graphs, Exponential and Logarithmic Functions, Trigonometric Functions, Analytical Trigonometry, Additional Topics in Trigonometry (includes polar coordinates and vectors), Systems of Equations and Inequalities, Matrices and Determinants, Conic Sections and Analytic Geometry, Sequences, Induction, and Probability, Introduction to Calculus.

Consumer Math: This course covers personal finance topics: income, budgeting, personal banking, borrowing money, transportation, food, clothing, acquiring housing, maintaining a home, life and health insurance, income taxes, and vacations.

Algebra 3: We start by reviewing the following concepts, Exponents and Radicals, Polynomials and Special Products, Factoring polynomials, Rational Expressions. Then the following topics are taught; Equations, Inequalities, and Mathematical modeling; Functions and their graphs; Polynomial Functions; Rational functions and conics; Exponential and logarithmic functions, Trigonometry, Analytical Trigonometry; Additional Topics in Trigonometry (includes Vectors in a Plane, Vectors and Dot Products, The Complex plane); Systems of Equations and Inequalities, Matrices and Determinants; Sequence, Series and Probability.