

*Providence Extension Program*  
**Course Descriptions**  
2019-20 Academic Year



## **Humanities – Core A**

### **Geography**

This foundational course provides a survey of every country of the world through a regional approach as well as geographic principles. Students will learn (and learn to spell!) the location, cultures, landforms, climates, resources, economy, religions, and government of each country. This course is missions focused and will evaluate the spread of the gospel throughout the world.

### **Composition and World Literature – A**

Students will focus on learning the fundamentals of writing. They will begin with grammar, sentence structure, and the formation of paragraphs. Students will also be exposed to different types of writing such as persuasive, expository, narrative and descriptive. A poetry unit will also be included. Although some review of grammar will be included in this course, students should already have a strong foundation beforehand. Literature selections, which complement World Geography, will be analyzed for basic literary elements and worldview.

### **Old Testament Survey (Florida)**

The goal of this foundational Old Testament study is to help the students know and love the Word better, know and love God better, and help to see themselves as part of God's story. This course is a chronological journey of how God has worked through the Jewish nation, emphasizing the fact that the entire Old Testament prepares for the coming of Christ, the eternal King. The revelation of Jesus Christ is studied in each book and the students are introduced to the inductive method of Bible study.

### **New Testament Survey (Ohio)**

The goal of this foundational New Testament study is to help the students know and love the Word better, know and love God better, and help to see themselves as part of God's story. They will learn the central events, places, and themes of the ministries of Jesus and Paul. As in Old Testament Survey, they trace the historical development of God's work of redemption and the students are introduced to the inductive method of Bible study.

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## **Humanities – Core B**

### **World History**

This foundational course analyzes the civilizations of the world through the lens of a Christian worldview. It begins with Creation and progresses in a chronological journey

around the world studying empires, cultures, Christianity, and world religions, concluding with an examination of the trends of the emerging 21st century. Principles of freedom will be interwoven throughout the course, helping students to understand the past as well as their role today.

### **Composition and World Literature – B**

This class will prepare students for success in the high school literature courses by guiding them through the foundational elements and devices of literary analysis with an emphasis on Christian worldview. In addition to learning literary elements, the students will learn to write an effective literary analysis essay. Students will improve their writing skills as they complete descriptive and narrative writing assignments, a persuasive research paper and several other essays based on the literature read.

### **New Testament Survey (Florida)**

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### **Old Testament Survey (Ohio)**

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## **Humanities – Core C**

(One year of Logic is suggested for Cores C or D; pre-requisite for Cores E & F)

### **American History**

The students will trace and analyze a thorough survey of America's History from Colonial times to the present, emphasizing the philosophies behind the founding of America as well as the prevailing philosophies, which have determined national events throughout our history.

### **Composition and American Literature – C**

This composition class covers several different types of writing such as persuasive, expository, and descriptive essays, along with a poetry unit and a persuasive research paper. The focus is on improving student writing by concentrating on content and technical areas. Students will also learn to identify the four major eras of American

literature. Complementing the *Starting Points* class, American and other literature will be studied and used as a basis for improving writing techniques.

### **Starting Points**

After students learn the basics of a Biblical worldview, they will apply their knowledge and understanding by examining and evaluating the ideas contained in books and movies. Then they will study three approaches for talking to non-Christians in the 21st century (apologetics). Finally, through a study of American History, students will consider the ideas of the Founding Fathers used to write the Declaration of Independence.

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## **Humanities - Core D**

(One year of Logic is suggested for Cores C or D; pre-requisite for Cores E & F)

### **Ancient History**

The students will trace God's providence from creation through the progression of ancient western cultures from Ancient Egypt to the Middle Ages and will analyze the corresponding historical events, culture, and literature.

### **Composition and Ancient Literature – D**

This advanced writing class covers several different types of writing such as persuasive, expository, and narrative essays. It also includes a persuasive research paper, poetry, and a journalism unit. The focus is to improve writing by concentrating on content and technical areas. The literature selected represents the time periods studied in the Ancient History course and the ideas studied in Western Thought.

### **Western Thought I**

(Culture/Philosophy/Theology/Apologetics/Literature/Political Theory)

This interdisciplinary worldview study is designed to give the student: 1) the ability to stand against the thoughts and ideas of a secular culture, 2) an adequate and logical defense for the hope they have within them, and 3) the ability to take the truth of Christianity into various disciplines. In this first year of Western Thought, students analyze and trace the progression of ideas from Greco-Roman, Byzantine, Medieval, and Scholastic thought as well as compare and contrast them with the teachings of the Bible.

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## **Humanities - Core E**

(One year of Logic is a pre-requisite for Cores E & F)

### **Medieval to Early Modern History**

The students will trace God's power and sustaining providence in the progression of western culture from the Middle Ages through the revolutionary era and will analyze the corresponding historical events, culture, and literature.

### **Rhetoric/Comp & Lit Analysis I**

Rhetoric is the art and science of persuasion. Students study and analyze great speeches and essays of the past. They will critically analyze persuasive discourses by the “greats” and “not-so-greats” from all ages, while developing and applying a biblical worldview to their reading. This is also an advanced writing class that covers several different types of writing, such as persuasive, compare/contrast, research, literary analysis, and more. Literature will be selected from the Medieval/Early Modern time period to tie in with the history course and the ideas being studied in Western Thought II.

### **Western Thought II**

(Culture/Philosophy/Theology/Apologetics/Literature/Political Theory)

This interdisciplinary worldview study is designed to give the student: 1) the ability to stand against the thoughts and ideas of the secular culture, 2) an adequate and logical defense for the hope they have within them, and 3) the ability to take the truth of Christianity into various disciplines. In this second year of Western Thought, students will analyze and trace the progression of ideas from the Renaissance, the Reformation, and the Revolutionary eras.

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## **Humanities - Core F**

(One year of Logic and Rhetoric/Comp & Lit Analysis I are pre-requisites for Core F)

### **Modern History**

The students will trace the progression of western culture from the 19th century through the present and witness how God's principles led to freedom while the rejection of His principles led to oppression. Students will analyze the corresponding world history, culture, and literature. Presentations will be included in preparation for college and/or any business or church settings.

### **Rhetoric/Comp & Lit Analysis II**

Rhetoric/Comp & Lit Analysis II builds upon the principles and persuasive techniques studied in Rhetoric/Comp & Lit Analysis I. This course adds the elements of public speaking to the analysis of discourse and literature, culminating in an oral presentation related to a formal research paper. Students will be challenged to communicate clearly and credibly, equipped to reach today's world with biblical Truth. It is also an advanced writing course to prepare students for the types of writing they will encounter in college, with a focus on college entrance essays. Literature will be selected from the Modern/Postmodern time period to tie in with the Modern History course and the ideas being studied in Western Thought III.

### **Western Thought III**

(Culture/Philosophy/Theology/Apologetics/Literature/Political Theory)

This interdisciplinary worldview study is designed to give the student: 1) the ability to stand against the thoughts and ideas of the secular culture, 2) an adequate and logical defense

for the hope they have within them, and 3) the ability to take the truth of Christianity into various disciplines. In this final year of Western Thought, students will discuss the proper response to politics and social issues. They will discuss questions such as, do absolutes and, if so, how do we determine which absolute to uphold? What is a Christian's position on ethical problems such as divorce and remarriage, care for the environment, capital punishment, and other controversial issues? When is culturally contextualizing an orthodox Christian faith appropriate? All of this will be done through discussion, presentations, and analysis.

## **Other Essential Courses**

### **ACT Prep (Florida)**

Students will be guided through an ACT prep course in order to help prepare for the ACT. The course uses the Kaplan ACT Prep text and will focus on general ACT strategies as well as strategies for the Math, Reading, Science, and Writing sections of the test. Students will take several sample ACT tests during the course. Note: This course is a general test prep course; students will need to spend additional hours on their own studying for the ACT.

### **ACT/SAT Math Lab (One Semester only)**

During ACT/SAT Math Lab, a tutor will be available to help students review math concepts commonly tested on the ACT or SAT. Once classes begin, students will have the option to sign up for an ACT/SAT math lab session in half-hour increments, as needed. The session fee will be auto-charged to the student's PEP account.

### **Computer | Applications & Design (Ohio)**

Students will acquire basic to intermediate knowledge of Microsoft's office software: Microsoft Word, PowerPoint, and Excel, along with other common applications. Students will also learn the basics of graphic and web design, working to create their own branding, logos, and a class website. We will discuss computer hardware, computer safety, and social media and the Christian worldview. Each student is required to have a laptop (either PC or MAC) with Microsoft Office installed on it. Towards the end of the course, our graphic and web design work will not require any software installed in advance. The goal is not only to learn the applications, but also to practically apply those skills while adding the unique style of each student.

### **Drama Club**

This lively, one-day-per-week club will focus on theater and drama techniques and include an introduction to theater history. Students will actively participate in studying voice expression and projection, body movement, improvisation, character analysis, and monologue delivery while learning theater and stage vocabulary. Performance opportunities including short skits and monologues will be offered throughout the year during the student lunch hour. No books/supplies will be required.

### **Drawing – Any Level (Florida)**

This class is for any student (beginner or beyond) who has a desire to develop his or her drawing skills. Students will be introduced to the basics of shading techniques, proportion, foreshortening, perspective, and contrast. Projects will include still life & hand studies, portraits, landscapes, indoor perspective, and will move on to other more creatively driven projects as the year progresses. Everyone works at his or her own ability level. Effort is stressed more than skill at the beginner level. In addition to more formal assignments, regular sketchbook work is also encouraged through fun, informal assignments. Students progress year after year, picking up where they left off to allow more experienced artists to explore advanced methods and mediums to further hone creativity and artistic skill. In addition to delving deeper into previously learned subjects, color theory will also be explored as well as more advanced mediums such as ink and watercolor.

### **Drawing – Any Level (Ohio)**

This class is for any student (beginner or beyond) who has a desire to develop his or her drawing skills. Students who are new to drawing will be introduced to the basics of drawing what they see and shading techniques. The first 8-10 weeks will be an introduction to drawing basic shapes and shading simple forms. This is followed by five finished drawings (fruit, mug, stuffed animal, shoe, and drapery). Everyone works at his or her own speed, so the time that these are executed depends entirely upon the student. Skill is stressed at this level, not artistry. Students progress year after year, picking up where they left off. After the initial five drawings, students may choose to either continue with pencil, or try a new medium (pen & ink, charcoal, colored pencil, etc.). At this point, the student can bring in his or her own still life object(s) or work from photo reference. As they advance, especially if they take this class for several years, creativity and artistry are stressed more in their choices.

### **Economics (Ohio) (One Semester only)**

The fundamental issue of Economics is scarcity. Humans have unlimited wants, but our resources are limited. Given these conflicting realities, how can this issue of scarcity be resolved? Who decides? Individuals? Businesses? Governments? Based on which principles and through which mechanisms? How an individual answers these questions determines not only their political positions, but also their everyday choices in the economy. Though it is sometimes called "the dismal science," through readings, videos, social science field research as well as lively discussion of history and current events, students will realize that economics as a discipline offers not only an understanding of fiscal policy and the factors of production, but can also equip them with the tools to make better choices in their own daily lives. At its foundations, this course will prepare students to be informed citizens and responsible economic agents with scripture as the guiding framework. This semester-long course is offered to juniors and seniors and covers Microeconomics and Macroeconomics as well as the economic theories that shape them.

### **English Grammar**

The goal of this course is to provide students with a thorough understanding of English grammar and mechanics (capitalization and punctuation). Beginning with the basics and building into advanced concepts, this course will benefit students of all levels and students

of all grades are encouraged to enroll. The course uses sentence diagramming to demonstrate the nuances of sentence structure and uses workbook exercises to enforce the concepts and integrate them into students' writing. Not only does this course help students succeed in writing, speech, foreign language, and logic classes, it helps them grasp the structure of the language they speak and prepares them to communicate clearly and correctly. This is an elective to bolster grammar competency and will not suffice as a high school English credit.

### **General Art (Ohio)**

This course will explore different projects in drawing, painting, and design, using a variety of media (example: acrylics, watercolor, ink, colored pencils, charcoal, pastels, etc.) while introducing the student to different styles, artists, and approaches. Projects are different each year, which allows students to enroll in this elective throughout all their years at PEP.

### **Government & Economics (Florida)**

Government and Economics is a yearlong course covering the most fundamental concepts regarding the structure of the United States government and economic theory. The first semester of this course covers basic government structure and an in depth understanding of the constitution and how it applies to the different branches. Students will learn the intricacies of the local, state, and national government and how they relate to each other. The second semester we will be covering Economics, the study of what and who determines how an unlimited amount of wants and a limited amount of resources are distributed within a society. By the end of the school year, students should have a solid understanding of microeconomics, macroeconomics, government economic policy, and the most influential modern economists and economic theories. This course is offered to juniors and seniors only.

### **Intro to Theology: To Know and Love God (Florida)**

To Know and Love God is an elective theology course for juniors and seniors. This course is designed to take students into the depths of God's Word. The course will introduce students to the two primary ways to study theology, biblical theology and systematic theology. The first semester will focus on biblical theology, which seeks to understand the storyline of the Bible by tracing the development of themes throughout the Old and New Testaments. The second semester will focus on systematic theology, which seeks to categorize and organize the doctrines of the Bible. Students should expect to spend a significant portion of time reading and observing the biblical text and interacting with theological texts.

### **Introduction to Writing Software (Florida) (One Semester only)**

Students will be introduced to the basics of writing software through lecture and hands-on labs with web-based code. They will gain exposure to multiple languages while learning how to build a web-based application. Students will need to have their own computer with full permission to install required software. This semester-long class will meet one day a week and will be for 10th-12th graders.

**Logic** (Pre-requisite for Cores E & F)

The first semester of logic is an introductory course in formal logic. The course work will introduce students to an understanding of the Christian theory of knowledge and present an in-depth study of the classical syllogism. The second semester of logic is an advanced formal logic course. It covers the four figures of the traditional syllogism, the three forms of rhetorical arguments (called enthymemes), hypothetical syllogisms, relational arguments, and informal fallacies and argumentation. In-class discussion will augment the “what and how” with opportunities to “do.” Learning to think well and to think critically is the goal.

**Math Lab**

During Math Lab, a tutor will be available to help students review math concepts, seek help on homework questions, receive assistance preparing and reviewing for math quizzes and tests, cover in-class concepts missed due to absence, as well as work through test corrections. Once classes begin, students will have the option to sign up for a math lab session in half-hour increments, as needed. The session fee will be auto-charged to the student's PEP account.

**Personal Finance (Ohio)** (One Semester only)

This one semester course uses Dave Ramsey's Foundations in Personal Finance Digital curriculum. Students will learn how to responsibly manage the resources God has entrusted to them as we explore topics such as savings and investing, credit and debt, insurance and taxes, life after high school and consumerism, income and careers, as well as budgeting and having a giving spirit. The class discussions will be based on and taught from a biblical perspective. This course is bound to make a lasting impact on your student's future! As this is an online course, no textbook is required.

**Study Skills and Strategies** (One Semester only)

This course focuses on equipping and empowering students in this digital age with the tools to help them thrive academically and to faithfully do the work for which God has called them. Throughout the semester, students will learn strategies for improving attention, focus, and memory. With guided assistance, they will design and implement task management, time management, and productivity workflow strategies into their daily lives. They will learn media literacy skills in order to understand and analyze the veracity and legitimacy of articles, news, social media, and scientific studies. All of this and more will build toward how to effectively study for any class as well as prepare students for both understanding and mastering standardized tests like the ACT and SAT. This is a once a week semester long course offered for 9th to 12th graders.

**U.S. Constitution (Gov't) (Ohio)** (One Semester only)

If you make a reasonable effort to obtain a working knowledge of the Constitution, you will challenge questionable federal regulations while gaining a new perspective on current events when they are presented in the media. You will be able to test the constitutional literacy of new candidates and legislators alike when the need arises. This one semester course will use the original definitions and resources the founders used. Strict construction study of the Constitution is void of opinion on the function and scope of our federal

government. This course is a study of the fixed principles that are embedded in the Constitution as the founders intended by the use of their own words and writings.

### **Writing Lab**

During Writing Lab, a tutor will be available to help students brainstorm and formulate theses, assist with outlining and drafting papers, and review drafts prior to submission. Once classes begin, students will have the option to sign up for a writing lab session in half-hour increments, as needed. The session fee will be auto-charged to the student's PEP account.

### **Yearbook Club**

PEP publishes a 60 to 80-page yearbook, which is hardbound. It is professional and well done. The yearbook class is a time where students, along with the editor, meet to brainstorm, plan, design, and create our yearbook. It takes hard work and commitment, but it is so fun! The club will meet once a week at PEP until the book is completed. Each student is required to bring a laptop to class or receive permission from an advisor if they do not have access to one. In addition, students will be required to work on their assigned pages in the yearbook at home, as we have hard deadlines to submit pages to the publisher. This is an amazing experience that looks really great on your transcript! The fee enables us to have a designated tutor to advise the yearbook staff. This is a high school level club. Permission must be granted by the administrator or the advisor for a middle school student to participate.

## **Languages**

### **French I**

This course presents the basics of the French language as spoken in Europe. The step-by-step approach to learning grammar builds on previously learned principles as the student progresses. The student learns greetings, verb conjugations, basic survival vocabulary, pronunciation rules, grammatical structures, and cultural highlights. They develop basic reading and conversational abilities, learning to understand and apply practically what they learn rather than simply memorizing facts and rote phrases.

### **French II**

This course strengthens the student's comprehension of the spoken and written language. They will learn how to respond in real-life situations while expanding their vocabulary and improving listening, reading and grammar skills.

### **Latin I**

This course is an engaging Latin study that will truly make the Latin language come alive, both for students who have studied Latin at an introductory level and for those who have not been introduced to Latin. This course also creates student enjoyment by illustrating the relevance of Latin in history, ancient, and contemporary culture, the Romance languages, English derivatives, and the grammatical structure of English. Students will see

multiple benefits in the study of Latin. By providing training in Roman culture, myths, and history, it also prepares students well for the National Latin Exam I and is a full language credit for their transcript.

## **Latin II**

Latin II students continue the relevant, rigorous, and incremental Latin instruction begun in Latin I. This course features original Latin writings and access to the works of great Latin authors. Students will advance their grammatical studies by reviewing grammar from Latin I. This course will introduce the passive voice in all tenses; past, present, and future participles; deponent and irregular verbs; and comparative and superlative adjectives and adverbs. Extensive study of Latin derivatives and stories of Roman culture, myths, and history make Latin come alive.

### ***Why study Latin?***

*Latin is a foundational course to education. As a major source of our English vocabulary, Latin improves our working vocabulary, helps to understand English grammar, increases our ability to understand difficult reading material, and provides knowledge of the vocabulary in advanced mathematics and science courses. A Latin background provides a logical framework to education, simplifies study, and develops attention to precision and detail. Latin advances writing skills and contributes to the pleasure of a difficult task accomplished and provides a firm foundation across the curriculum.*

## **Spanish I**

\*Computer access with internet, email, audio, and printing capabilities required.

In this course, students learn basic skills in listening, speaking, reading, and writing Spanish. The primary focus of class time is to build listening comprehension by providing students with large amounts of comprehensible input in Spanish via a variety of in-class activities. These activities are all done through the lens of Hispanic culture. The class also includes formal grammar instruction, which focuses heavily on the present tense of high frequency verbs. Since exposure and practice are vital to learning a second language, students will have assignments to complete on every weekday that they don't have class.

## **Spanish II**

(Spanish I is a pre-requisite for Spanish II)

\*Computer access with internet, email, audio, and printing capabilities required.

In this course, students continue to build and improve their skills in listening, speaking, reading, and writing Spanish. As in Spanish I, class time is focused on building listening comprehension through large amounts of comprehensible input, but at a higher level. In-class activities are all done through the lens of Hispanic culture. The class also includes formal grammar instruction, which focuses heavily on the preterite and imperfect tenses of high frequency verbs. Since exposure and practice are vital to learning a second language, students will have assignments to complete on every weekday that they don't have class.

### **Spanish III**

Spanish III students will master past and future tense verb conjugation forms. They will begin to work with many other verb conjugation forms, including conditional and superlative. The class will be conducted mostly in Spanish and the students will have much interaction with speaking and understanding it. With the use of stories, songs, verses, and sayings, they will begin to speak it more fluently and communicate well in their target language.

## **Mathematics**

(Diagnostic exams are available upon request)

### **Saxon 8/7**

This course offers a good transition for students not 'quite' ready for Pre-Algebra. Saxon 8/7 reviews arithmetic calculation, measurement, basic geometry, and other foundational concepts and then introduces a range of upper-level topics. The curriculum emphasizes skills necessary for advancement in mathematics including fractions, decimals, percentages, ratios, perimeter, circumference, area, volume, exponents, scientific notation, signed numbers, and problem-solving techniques using word problems. Using Saxon's distinctive approach with spiraling review, this program not only produces acquisition but also retention of essential math practices.

### **Math 7**

This course offers a good transition for students not quite ready for Pre-Algebra. Math 7 reviews arithmetic calculation, measurement, basic geometry, and other foundational concepts and then introduces a range of upper-level topics. The curriculum emphasizes skills necessary for advancement in mathematics including fractions, decimals, percentages, ratios, perimeter, circumference, area, volume, exponents, scientific notation, signed numbers, and problem-solving techniques using word problems.

### **Pre-Algebra**

The McDougal Littell series of math provides an excellent curriculum for students. There are varied levels of problems for each lesson, as well as practice tests, standardized test practices, and real-world problem solving in each chapter. Online helps include quizzes throughout the chapters and a PowerPoint for each lesson that the teacher discusses in class. Topics of study prepare the student for more advanced studies in Algebra and include the following topics: basic algebraic manipulation and equation solving, inequalities, exponents, rational equations, ratios and percentages, linear functions, and planar geometry with an emphasis on right triangles.

### **Algebra I**

The McDougal Littell series of math provides an excellent curriculum for students. There are varied levels of problems for each lesson, as well as practice tests, standardized test practices, and real-world problem solving in each chapter. Online helps include quizzes throughout the chapters and a PowerPoint for each lesson that the teacher discusses in class. This course will begin with a review of Pre-Algebra skills and will progress to include

translating words into algebraic expressions, equations, and inequalities; working with signed numbers; solving, graphing, and writing linear equations and inequalities from given conditions; solving systems of equations and inequalities; polynomials and factoring; and exponential, quadratic, radical and rational functions. It is foundational to a study of Geometry or Algebra II.

### **Geometry**

The McDougal Littell series of math provides an excellent curriculum for students. There are varied levels of problems for each lesson, as well as practice tests, standardized test practices, and real-world problem solving in each chapter. Online helps include quizzes throughout the chapters and a PowerPoint for each lesson that the teacher discusses in class. This course will begin with learning the basic terminology and concepts used in Geometry, followed by reasoning and proofs; parallel lines; triangles and right triangles; trigonometry; similarity; quadrilaterals; circles; length, area and volume; and properties of transformations.

### **Algebra II**

The McDougal Littell series of math provides an excellent curriculum for students. There are varied levels of problems for each lesson, as well as practice tests, standardized test practices, and real-world problem solving in each chapter. Online helps include quizzes throughout the chapters and a PowerPoint for each lesson that the teacher discusses in class. This course will begin with a review of Algebra skills and will progress to include solving, writing, and graphing linear equations and inequalities; systems of equations and matrices; solving, writing, and graphing quadratic functions; polynomial functions; rational and radical functions; exponential and logarithmic functions; conic sections; elementary statistics; sequences and series; and trigonometry. It is foundational to a study of Pre-Calculus.

### **Statistics**

(Algebra II is a pre-requisite for Statistics)

This is an introductory course designed to give students an initial exposure to fundamental statistical concepts. The overall goal of the class is to prepare students to be intelligent consumers of commonly published statistical information. Students will need to be familiar with basic algebraic concepts as taught in a typical high school Algebra I and II series. The course will first consider visual and numeric methods for describing data, then move on to basic probability concepts, and finally introduce several methods used for statistical inference. Emphasis is placed on proper interpretation leading to empirically sound decisions. The use of statistical software will require each student to have her/his own laptop computer to use in the classroom and at home.

### **Pre-Calculus**

Pre-Calculus covers topics in four main areas of mathematics: functions, systems of equations and inequalities, analytic geometry, and probability. Under the heading of "functions," many different types are discussed: linear, polynomial, exponential, logarithmic and trigonometric. Analytic geometry examines circles, parabolas, ellipses, hyperbolas, and polar coordinates. Real life applications of these topics are introduced

consistently throughout the text and the graphing calculator is used extensively to enhance the students' abilities to solve more labor-intensive mathematical challenges.

### **Calculus**

Topics in the Calculus course include limits, differentiation and its applications, and basic integration, along with its techniques and applications. In addition, logarithmic, exponential, and transcendental functions are discussed as well as differential equations. If time allows, infinite series, conics, parametric equations, and polar coordinates will also be taught.

## **Sciences**

### **Life Science**

This hands-on class introduces the living world with all of its wonders. Topics covered are classification, cellular biology, genetics, and the differences between creation and evolution. These provide a firm foundation for the chapters on microbiology, botany, zoology, ecology, and human anatomy. This course is considered a lab science.

### **Earth Science**

This course is designed to proclaim God's handiwork through the study of the physical universe. During this study, students will find that Earth Science is also a battle of worldviews. This text and class clearly introduce students to the secular theories of where everything they see came from. They critique these theories. For each secular theory, the text affirms the conservative biblical view of Earth's history shaped by Creation, the Fall, and the Flood. Students' Christian worldviews will be shaped and strengthened as they learn about tectonic processes, landforms and earth materials, fossils, the oceans and oceanography, rivers and lakes, the atmosphere, weather and storms, climate and environmentalism, the solar system, the universe and cosmology, and space science. This is considered a lab science.

### **Conceptual Physics**

(Must be enrolled in Algebra I or higher for Conceptual Physics)

Like a three-legged stool, a thorough science education requires a solid foundation in three disciplines: physics, chemistry, and biology. The knowledge of physics is essential to fully understanding the other two disciplines. This course is designed to be an introduction to physics and to lay a foundation for the upper sciences. Students will study laws of motion, matter and energy, electricity, magnetism, vibrations, waves and sound, and light and optics. This course is considered a lab science.

### **Biology**

(One year of high school science is a pre-requisite for Biology)

This course covers topics such as: cellular biology, genetics, taxonomy, microbiology, botany, zoology, and introductory human anatomy. When studying topics such as Creation and evolution, human cloning, abortion, and stem cell research, students are pointed to

Scripture as the ultimate authority and are encouraged to develop a biblical perspective about these topics. Students will complete a science project during the first semester and participate in many hands-on labs throughout the year, including several dissections. This course is considered a high school lab science.

## **Chemistry**

(Must be enrolled in Algebra II or higher for Chemistry)

This is a first-year college preparatory chemistry course, which covers measurements and units, energy and heat, atoms and molecules, classification of matter, naming and writing chemical formulas, the periodic table, the mole concept, stoichiometry, atomic and molecular structure, molecular geometry, ionic and covalent bonding, acids and bases, solutions, the gas laws, thermodynamics, kinetics, chemical equilibrium, and reduction/oxidation reactions. The course will include lab experiments to learn basic lab skills, practice experiment procedures, and write lab reports. This course is considered a lab science.

## **Organic Chemistry**

(An Introductory Chemistry course is a pre-requisite for Organic Chemistry)

Organic Chemistry is the study of carbon-based compounds, such as found in biological systems, polymers, petroleum-based products, and pharmaceuticals. This course is designed for students interested in pursuing majors in biology, chemistry, chemical engineering, medicine, and forensics. This introductory course will cover major aspects of carbon chemistry, such as the nature and consequence of covalent bonding, molecular geometry, Lewis structures, basic nomenclature, aromatic compounds, stereochemistry, acid-base chemistry, chemical kinetics, thermochemical considerations, chemical equilibria, and reaction mechanisms. This course is considered a lab science.

## **Advanced Physics**

(Algebra II is a pre-requisite for Advanced Physics)

This college-prep physics course is an algebra-based course. It provides a detailed introduction to the methods and concepts of general physics. It provides the student Newton's Laws of Motion and Gravity, Thermodynamics, Electricity and Coulomb's Law, Waves and Fields, Einstein's Theory of Special Relativity and General Relativity, Quantum Mechanics, and Biophysics and Complex Systems. This course is considered a lab science.

## **Anatomy & Physiology**

(Biology is a pre-requisite for Anatomy & Physiology)

This advanced high school course covers both the anatomy and the physiology of the human body and its eleven organ systems. We will focus on basic anatomical terminology and the organization of the body as a whole, as well as the structure and function of the various organ systems and how these systems work together. The course will include microscope observations and specimen dissections. In addition to the textbook work, students will complete coloring and workbook exercises, review case studies pertinent to each system, examine disorders of each system, and write reviews of current articles related to the subject matter. This course is considered a lab science.