

EAST RANKIN ACADEMY

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EAST RANKIN ACADEMY

Course Descriptions for Subjects Earning High School Credits

BIBLE DEPARTMENT

Bible 9

Grade 9

¼ unit

This course consists of a comprehensive overview of the Hebrew Scriptures. The foundational concepts for the Bible, the plan of salvation as it is unfolded in the Old Testament, and the means, people, places and events that span the time preceding the advent of Christ—fostering a deep respect and passion for God's Word and a desire to know both the book and its Author more deeply.

Bible 10

Grade 10

¼ unit

The aim of this course is to give students an overview of the twenty-seven books of the New Testament. Major themes included are salvation through Christ, grace versus works, justification by faith, the Kingdom of God, Scriptures as God's inspired word, and future judgment and reward. Special emphasis is placed on the parables of Jesus, the miracles of Jesus, and the Gospel Armor.

Bible 11

Grade 11

¼ unit

Bible 11 is a curriculum that provides a comprehensive, systematic study of the Bible, designed to help students build a foundation of biblical knowledge, develop critical thinking skills, and form a biblical worldview. The course offers engaging lessons with features like dramatic segments of biblical heroes and application stories to teach students how to apply biblical principles to their lives. The curriculum aims to promote personal interaction with Scripture, developing skills in Bible study, and encouraging students to defend a biblical worldview and engage with their culture

Bible 12

Grade 12

¼ unit

Bible 12 is a course in ethics which helps students to grow in virtue and to think like Christ so that they can make wise ethical choices and defend the faith from a biblical worldview. Students will learn to compare and contrast various ethical systems, relate biblical wisdom to a variety of ethical situations, and defend biblical Christianity in a culture of competing truth claims and diverse lifestyles. This course emphasizes a biblical view of common cultural issues and Christlike character development. Multiple case studies, doctrinal dilemmas, and ethical issues will guide students through assessing individuals' choices along with the pressures of cultural situations.

BUSINESS DEPARTMENT

Computer Applications

Grade 8

1 unit

This course provides hands-on instruction of Pages/Word, Keynote/PowerPoint, and Numbers/Excel as well as integration among these applications. Essential computer concepts and file management are covered. The course begins with a review of the "touch method" of Keyboarding. In Pages/Word the course includes the formatting of reports, outlines, bibliographies, tables, newsletters, and calendars. Some of the desktop publishing projects include greeting cards, invitations, and programs. In Numbers/Excel the course includes numerous projects using spreadsheets with formulas and tables. Some of the Keynote/PowerPoint projects include Bible, History, Science, Getting to Know Me, and Holidays. Animation and drawing tools are included in the Keynote/PowerPoint projects.

Information Technology

Grade 9-10

½ unit

This course presents basic principles and concepts about information technology while helping the students become more valuable employees, better citizens, and knowledgeable consumers. Hardware, software, file management, office applications, presentation software, spreadsheet software, advanced spreadsheet uses, and database software are some of the topics included in the course. Internet, web page design, networking fundamentals, electronic communication, internet security, and careers in information technology are covered in the course.

Accounting

Grade 11

1 unit

This course covers the Accounting Cycle where students analyze, journalize transactions and post transactions from a journal to a ledger, complete a worksheet, and prepare financial statements such as Income Statements, Balance Sheets, and Net Income Distribution statements. Journalizing and posting adjusting and closing entries using a worksheet as well as a Post-Closing Trial Balance are part of the course. Some of the life skills included in the course are career training, accounting career opportunities, personal resume, and preparation of a 1040 and quarterly tax reports. An Accounting Cycle poster project and Reinforcement Activities are completed to reinforce the Accounting Cycle concepts and procedures.

ENGLISH DEPARTMENT

English 9

Grade 9

1 unit

This course provides a study of grammar, writing skills, vocabulary, and a technical study of literature. Oral presentations and a research paper are also required. Major works include *The Miracle Worker* and *Romeo and Juliet* with excerpts from *Jane Eyre*, *Great Expectations*, *The Adventures of Tom Sawyer* and *Evangeline*. The literature portion exposes the student to short stories, dramas and poetry. The philosophical content of literature is evaluated in light of God's truth. Student exercises in grammar also include Biblical truths.

Honors English 9

Grade 9

1 unit

Honors English 9 is designed for those students who are gifted in the areas of reading and writing. These highly motivated students explore all of the classics listed above in traditional English 9. In addition, students will study *Little Women* or *Little Men* and *A Christmas Carol*. An extensive research project is required using William Shakespeare as the subject. A more comprehensive study of literary terms and application is observed. Honors students move at a faster pace than traditional students and are expected to work more independently. The Christian perspective pervades all study of grammar, composition, literature, and research.

English 10

Grade 10

1 unit

This course provides a study of grammar and usage skills, formal composition, vocabulary, the research paper, and literature. Through the perspective that God is Supreme Creator, students explore the world of poetry, drama, the novel, non-fiction, and the short story. Completed literary works include *Julius Caesar* and *Silas Marner*, with excerpts from the *The Iliad*, *The Odyssey*, *Antigone*, *The Republic*, *Metamorphosis*, and *The Divine Comedy*. Students will complete an author project that includes a biographical research paper and a critical review of one of the author's works.

Honors English 10

Grade 10

1 unit

Tenth grade Honors English is a course designed for those students who are gifted in this area. These students explore all the classics listed above in traditional college preparatory English 10. In addition, students will examine *To Kill a Mockingbird*. Honor students experience a more in-depth more intense study of grammar, vocabulary, poetry, literature, and research. A stronger emphasis is placed on writing assignments such as paragraphs, précis, outlines, book reviews, and the development of expository writing skills.

English 11**Grade 11****1 unit**

This course focuses on American literature. The students study this literature both chronologically and thematically. Completed major works include *The Scarlet Letter*, with excerpts from *The Innocents Abroad*, *Rip Van Winkle*, *Ben-Hur*, *Moby Dick*, and *Walden*. Grammar skills and vocabulary are reinforced. Major research papers are emphasized. Writing assignments may include journals, short stories, poems, and essays. All literature is thoroughly explored through a thematic, Christian approach.

Honors English 11**Grade 11****1 unit**

This course is designed for the student who is academically talented in English. The emphasis is on literature and literary analysis from a Christian perspective. In addition to the classics listed above, students will also study *My Dog Skip* and *Our Town*. The poetry of several great American poets including Poe, Dickinson, Bryant, Whitman, Frost, Sandburg, and others is examined. A strong emphasis is on all forms of analysis from oral interpretation to the research paper. Grammar and vocabulary are reinforced. Writing, poetry, personal narratives, and journals are included. The course is designed to give the student exposure to college level work.

English 12**Grade 12****1 unit**

In this course, students study the major periods of British literature, beginning with the Anglo-Saxon period and ending with twenty-first century literature. Exploring the influence of the Bible on literature is a major emphasis. Works studied include classics such as *Beowulf*, *the Canterbury Tales*, *Macbeth*, *Paradise Lost*, *Pilgrim's Progress*, *Robinson Crusoe*, *The Rime of the Ancient Mariner*, *Pygmalion*, and many other short works. Vocabulary, research, and grammar are emphasized. Students are given frequent writing assignments and oral interpretations dealing with the themes of literature. This course is designed to prepare students for college English.

Honors English 12**Grade 12****1 unit**

This course is for the student who is academically talented in English. Major works studied include classics such as *Beowulf*, *The Canterbury Tales*, *Morte Darthur*, *Macbeth*, *Paradise Lost*, *Pilgrim's Progress*, *The Works of John Wesley*, *The Rime of the Ancient Mariner*, *Ivanhoe*, *The Importance of Being Earnest*, *David Copperfield*, and *Pygmalion*. Research and analytical writing are emphasized. Major British poets are explored including Donne, Shakespeare, Milton, Burns, Wordsworth, Shelley, Tennyson, Browning, the King James Bible, and many others. Vocabulary and grammar are reinforced. This course is designed to prepare students for college English. Each piece of literature is interpreted from the Christian perspective.

Dual Credit Honors Composition I**Grade 12****½ unit**

This course is designed to teach essay organization, development and style in exposition (process analysis, comparison and contrast, definition, division and clarification, causal analysis), argumentation, description, and narration. Students earn 3 hours college credit through Hinds Community College.

Dual Credit Honors Composition II**Grade 12****½ unit**

This course provides continued practice in genres mastered in Composition I. The students practice critical thinking and composition through analyzing both fiction and nonfiction works by writing multiple expository essays. Each student will complete a poetry project which will include writing and analyzing his or her own poetry, writing and analyzing the poetry of an approved author, and a documented research paper about the same author. Students earn 3 hours college credit through Hinds Community College.

Dual Credit Honors Public Speaking**Grade 12****½ unit**

This course provides study and practice in making speeches for a variety of public forums. Major emphasis is placed on effective speech preparation and delivery. The student will understand the role played by each of the basic factors involved in the communication process and be able to apply this understanding to the public speaking situation. Also, students will select and create effective presentation aids for use in public speaking and demonstrate the ability to communicate orally and /or expressively in clear, coherent, and persuasive language appropriate to purpose, occasion, and audience. Students earn 3 hours college credit through Hinds Community College.

FINE ARTS and Electives DEPARTMENT

Music Appreciation

Grade 9

½ unit

This course covers a Christian musical perspective while learning about basic sound producers, elements of music, and history of the different eras of music. Students are asked to engage in active, experimental learning. This course combines a traditional approach, as well as group projects to enhance the learning process. Music choices are analyzed from a Biblical perspective using Philippians 4:8 as a guide.

Art Appreciation

Grade 9

1/2unit

This course introduces the origins and historical development of art. Emphasis is on the relationship of design principles to various art forms including sculpture, painting, and architecture. The course content deals with understanding why and how artists create and also the important role culture and history play in the purpose and meaning of art. It includes an overview of the creative process, changes in art over time, and the relationship of the arts and society.

Art I

Grade 9

1 unit

Art I is designed to provide a foundation and emphasis on understanding the Elements of Art and Principles of Design as a basis for composition. Students will explore a variety of artists, art processes and materials such as drawing, painting, printmaking, and two and three-dimensional design. Willingness to get involved in the creative process is a more important requirement than the student's talent or previous experience.

Art II

1 unit

A second year course that provides an opportunity for students to expand on the drawing and painting concepts introduced in Studio in Art. Emphasis is placed on experiences with design principles, drawing techniques and painting skills leading to the development of abilities that are necessary for advanced art courses. Students are given more in depth problems to solve creatively while becoming more adept through a broad exposure to various media. A lab fee is required.

Theater I**Grades 10-12****1 unit**

Designed as a survey course, Theatre I provides students with an intense sampling of all facets of theatre. The subject matter will range from stage terminology, other forms of theatre, the structure of plays, and early theatrical history to vocal and movement training for the actor. Also included will be acting (improvisation, character analysis) and stage design and construction, lighting, costuming, and makeup. Students will also expand their appreciation of theatre through attending and participating in theatrical events. This proficient-level course examines the correlation and development of theatre history, structure, literature, acting, production and criticism. Theatre I and II are often taught back-to-back as one complete introductory high school course. The content aligns with Mississippi CC Arts Learning Standards.

Theater II**Grades 11-12****1 unit**

Theatre II emphasizes advanced study in two areas: acting and design. Course units will include the study of advanced acting techniques and the application of design elements for the stage through group and individual projects. Students will also expand their appreciation of theatre through attending and participating in theatrical events. Building on Theatre I, students continue to increase their knowledge of designing, creating, producing, performing, and critiquing original and published works.

ACT Prep**Grades 10-12****1 unit**

The ACT Prep course will emphasize ACT test-taking strategies, specifically math skills, grammar and punctuation skills, reading skills and science-reasoning skills. Students will study and practice test taking strategies, information retrieval, recognition of test patterns, reading in the content areas, and vocabulary development with the central goal to increase both subtest scores and composite scores. All four ACT subtests will be reviewed: English, Math, Reading, and Science Reasoning. Students are required to register and take the ACT twice during this course to meet course requirements. Note: Students will be assessed based on the improvement model.

Broadcast Journalism**Grade 12****1 unit**

Broadcast Journalism teaches students how to research, write, and produce news and information for television, radio, online platforms., and our school's live stream media productions. Students develop practical skills in camera operation, scriptwriting, editing, interviewing, and directing, as well as a strong understanding of journalistic ethics, media criticism, and the technical aspects of broadcast production. Project-based learning and hands-on experience are central to the curriculum, culminating in students creating broadcasts for our school's live stream media program.

FOREIGN LANGUAGE DEPARTMENT

Spanish I

Grade 8

1 unit

This course provides an introduction to the Spanish language and its cultures. A heavy emphasis is placed on learning basic vocabulary, verbs and grammar and on communications on a basic level. Students apply what they learn in class through student-to-student and student-to-teacher interactions relevant to situations in real life. Students are also required to memorize Scripture in Spanish to help with pronunciation and to illuminate understanding of the Bible.

Spanish II

Grade 9

1 unit

Spanish II offers a continuation of basic/intermediate grammar structures and a more in-depth study of vocabulary. Students in Spanish II work toward proficiency in listening comprehension, speaking, reading and writing skills, as well as continuation of the study of Spanish-speaking cultures. More intensive grammar study and vocabulary building, combined with further practice in spoken Spanish, provide a basis for achieving a solid working knowledge of the language. Students are required to make presentations individually and in groups, and reading comprehension is expanded through articles and short stories. This course includes Biblical integration with the language.

MATHEMATICS DEPARTMENT

Algebra I

Grade 8

1 unit

Algebra I begins with the four fundamental operations on real numbers and their use in solving equations and related problems. Polynomials, factoring, inequalities, and functions are explored. Graphing straight lines is included, as well as work with irrational numbers and quadratic functions. The school provides a **TI-Nspire** calculator for classroom use.

Honors Algebra I

Grade 8

1 unit

Honors Algebra I begins with a review of the basic math operations and then moves into the four fundamental operations on real numbers and their use in solving equations and related problems. Polynomials, factoring, inequalities, and functions are explored. Graphing straight lines is included, as well as working with irrational numbers and quadratic functions. The school provides a **TI-nspire** calculator for classroom use.

Geometry

Grade 9

1 unit

This course covers geometric principles of reasoning and proof, relationships within triangles and basic tools of geometry. Using these tools, the student is able to search out scientific and mathematical laws that govern our world and glorify the Architect of the universe. Various projects are assigned to reinforce topics. A scientific calculator is required for this course.

Honors Geometry

Grade 9

1 unit

Honors Geometry is an in-depth study of college preparatory geometry topics with an emphasis on proofs and problem solving. Topics include trigonometry, solids, circles, and polygons, with algebra skills integrated. Chapter projects are assigned to help reinforce concepts learned and include activities such as building a bridge, origami, pop-up books, and commercial design. Students are encouraged to purchase a **TI-84 Silver Edition Plus** calculator.

Algebra II

Grade 10

1 unit

Algebra II is designed to extend the concepts and skills developed in Algebra I. The emphasis is on simplifying expressions, equation solving and its application to modeling, and gaining a mature analytical thought process. Topics covered include linear equations, quadratic equations, functions, and graphing techniques.

Honors Algebra II**Grade 10****1 unit**

This course covers the algebra topics of functions, equations, graphs, and linear systems. Students are introduced to matrices, graphing and solving polynomials and the inverse relationship between exponents and logarithms. In addition, this course allows a study in quadratic relations and conic sections, discrete math, periodic functions and trigonometric concepts. Introductory math labs and a research project are introduced to help reinforce algebraic concepts. Students must have a **TI-84 Silver Edition Plus** calculator.

Algebra III**Grade 11****1 unit**

This course is designed to prepare students for college-level mathematics courses. It should help meet the needs of students who have completed Algebra II, but require another year of mathematics to better be prepared for credit-bearing courses in college. Topics include a review of real numbers and basic algebra, linear equations, inequalities, absolute value equations, inequalities in one variable, solution set, and interval notation. Students will also work with linear, quadratic, and higher-degree polynomial functions; the absolute value and other piecewise linear functions; the greatest integer function, square root functions, rational functions, exponential and logarithmic functions; and trigonometric and inverse trigonometric functions. Students will also become proficient in both drawing and interpreting graphs.

Honors Pre-Calculus**Grade 11****1 unit**

This course covers upper level algebra and an in-depth study of functions and graphs. Emphasis includes fundamental coverage of basic, analytical, and applications of trigonometric concepts. Students learn how to conduct and analyze mathematical experiments and also learn the basics of mathematical modeling. In studying the mathematical laws of basic functions, students understand how each law reflects the character of God. Students must have a **TI-84 Silver Edition Plus** calculator.

Honors Calculus**Grade 12****1 unit**

This course is designed to reinforce advanced algebra and trigonometry skills while building an understanding of elementary concepts of calculus and statistics. The calculus topics covered include the mechanics and some applications of finding limits, derivatives, and integrals. The statistics topics include exploratory analysis, planning a study, probability, and statistical inference. The intent of this course is to fully prepare the high school student to succeed in any freshman level college math course. Students must have **TI-84 Silver Edition Plus** calculator.

Senior Algebra**Grade 12****1 unit**

Senior Algebra is the final step in preparing students to take college algebra at the post-secondary level. The course covers topics such as equations; inequalities; polynomial equations; the rectangular coordinate system; graphs of equations; functions, exponential and logarithmic functions; linear systems; conic sections and quadratic systems; natural-number functions and probability; and the mathematics of finance.

Dual Credit College Algebra**Grade 12****½ unit**

This course includes inequalities; functions; linear and quadratic equations, circles and their graphs; applications; polynomial and rational functions; logarithmic and exponential functions; and systems of equations. Students earn 3 hours college credit through Hinds Community college.

Dual Credit College Trigonometry**Grade 12****½ unit**

This course includes trigonometric functions and their graphs; functions of composite angles; fundamental relations; trigonometric equations; radian measurement; solutions of right and oblique triangles; inverse trigonometric functions; and applications. Students earn 3 hours college credit through Hinds Community College.

SOCIAL STUDIES DEPARTMENT

Mississippi History

Grade 8-9

1/2 unit

This course is designed to help students understand Mississippi's place in the world, its geography, how it is affected by weather, and its history, economy, literature, art, architecture, famous people, and music. The study of history begins with early exploration and settlers of the region covering the Civil War, both World Wars, the Great Depression, the fight for Civil Rights, and continues to the present. Integrated in this course is a study of national, state, and local government. Students learn about the State's Constitution, U.S. Constitution, jobs in government, agriculture, and industry. This course is taught from a Christian perspective, stressing caring for God's natural resources and realizing His blessings all throughout our history. The curriculum is enhanced by resource materials, map work, videos, guest speakers, and projects.

World Geography

Grade 9

1 unit

This course provides a tour of eight cultural and geographic regions through the study of the earth, its people, and its resources as God created them. This course allows students to explore and discover the processes that shape the earth, the relationships between people and environments, and the links between people and places. Students also gain an understanding of connections between global and local events. Students learn and practice skills covering geographic literacy, visual analysis, critical thinking and reading, and communication by answering critical thinking questions on maps, pictures, charts, and graphs

World History

Grade 10

1 unit

This course is designed to help students understand God's active participation in the history of all nations. Beginning with ancient civilizations, the course moves to the present showing the complex development of nations. By integrating geography, economics, the cultural arts, and anthropology, the course emphasizes where people lived, their cultural characteristics, problems and contributions. Students are exposed to various leadership styles and political entities. Students learn to use resources to apply their knowledge through parallel reading and creative projects.

Honors World History**Grade 10****1 unit**

Starting with “In the beginning God created the heaven and the earth—” this course broadens students’ intellectual horizons by offering an in-depth study of the past. Beginning with a survey of ancient civilizations through the development of nations and states, and concluding with the complexity of modern times, the course also incorporates the study of geography, religion, art, science, and culture. Through the course study, students will see the hand of God in the affairs of nations and the success and failure of civilizations in accordance to their submission to or defiance against God’s will.

United States History**Grade 11****1 unit**

United States History covers U.S. history from its discovery to present. The course addresses motivations of men in our development as an industrial nation and world leader. Considered throughout this study is how God is involved in the affairs of our country. Relevant to students are examples of how God is active in shaping our history. Outside reading is a required part of this course.

Honors United States History**Grade 11****1 unit**

In this course, students will uncover our nation’s history through a comprehensive survey rich in Christian insight beginning with the period of exploration and concluding with the present. Geography and government are also integrated throughout this study as a means of aiding students’ understanding and awareness of how our nation has developed from a young country to a major world leader. This course highlights God’s divine hand in the development of our great nation and students also gain an understanding that God oversees the course of U.S. history. This course seeks to increase higher level thinking in students through document analysis and in-depth class discussion.

American Government**Grade 11****½ unit**

This course discusses the principles and mechanics of a constitutional republic with emphasis on helping the student to become a responsible citizen. Topics included in the course include the Constitution, political parties, elections, pressure groups, and citizenship. The course presents from a Christian perspective the six basic principles of the Constitution which include popular sovereignty, limited government, separation of powers, checks and balances, judicial review, and federalism. Throughout the study, students are made aware of the duties and responsibilities we have as American citizens to our God and to our country

Economics**Grade 12****1/2 unit**

This course provides a study of the history and principles of economics. It includes a study of entrepreneurship, supply and demand, competition, money, government involvement, business cycles, and the world economy. The curriculum stresses free-market ideals and Christian values that build the moral foundation of economics at home, in business, in financial markets, and in government. For a portion of the course, *Foundations in Personal Finance*, by Dave Ramsey is included in the curriculum. This course is supplemented by resource materials, guest speakers, and videos.

Psychology Dual Credit**Grade 12****1 unit**

Students develop their critical thinking skills through practical and creative scientific problem solving, psychological reasoning and perspective. Topics include history and psychological approaches, research methods, physiological and biological bases of behavior, sensation and perception, states of consciousness, learning, cognition, motivation and emotion, developmental psychology, personality testing and individual differences, abnormal psychology, treatment of psychological disorders and social psychology. Students earn 3 hours college credit through Hinds Community College.

SCIENCE DEPARTMENT

Physical Science

Grade 9

1 unit

The course provides an overview of chemistry and physics. Students are introduced to the concepts of chemistry and physics including states of matter, periodic table, chemical bonds, chemical reactions, acids, bases, carbon chemistry, motion forces, fluids, machines, energy, thermal energy, waves, sound, electromagnetic spectrum, light, and electricity. Laboratory demonstrations are used to reinforce major concepts. Students discover the natural laws and intricacies of a Supreme Designer and Organizer of all things.

Biology

Grade 10

1 unit

The primary emphasis in this course is on physiology and functions of living things, the interrelationships of all organisms, and God's and man's place in the scheme of things. Basic topics include biochemistry, cellular structure, genetics, plant form and function, animal form and function, and ecology. A specific section on Evolution vs Creation is presented.

Honors Biology

Grade 10

1 unit

Honors Biology is for the serious science student. Subject matter is similar to Biology, but is covered in greater depth and at a faster pace. Understanding the concepts of biology will help the students become more familiar with the working of God's creation and will help the student to make sound decisions about controversial issues in the world. Laboratory techniques are also taught in this course. Special projects add to the learning process.

Health

Grade 11

1 unit

This course provides students a thorough understanding of all important physical, mental and social health issues. The text used presents a moral basis for a healthy lifestyle based upon scriptural principles. Anatomy, body systems, food choices, exercise, diseases, stress, emergencies, responsibility, and relationships are all discussed within the framework of Biblical teaching.

Environmental Science**Grade 10****1 unit**

In this course, students will study how the natural world works, and how humans and the environment affect each other. The course strives to help students understand that interactions between humans and the environment is an important step toward solving environmental problems. Topics presented in the course include ecology, biomes, aquatic ecosystems, biodiversity, conservation, forestry, resource management, soils, agriculture, mineral resources, mining, water resources, the atmosphere, global climate change, waste management and renewable energy.

Introduction to Health Science**Grades 11-12****1 unit**

This course presents the five career pathways within the Health Science Career Cluster. These career-cluster pathways focus on the healthcare career options available to students, allowing for exploration of a wide variety of occupations. The career pathways presented include health informatics, therapeutic services, diagnostic services, support services, and biotechnology research and development.

Introduction to Medical Terminology**Grades 11-12****1 unit**

This course focuses on the essential concepts of human anatomy and physiology and the common medical terms related to the body systems. Students are presented with patient case studies that highlight the real-world application of medical terminology. Content covered in the course includes medical word parts, an anatomy and physiology overview, and coverage of diseases and conditions, diagnostic procedures, surgical and therapeutic treatments and drug therapies.

Chemistry**Grade 11****1 unit**

Chemistry is a course which offers elementary theory and application. Students are instructed in and experiment with atomic theory, bonding, gases, solids, liquids, solutions, and acid-base chemistry. Students understand the creativity and organization of God's world down to the atomic level. The **TI-84** Silver Edition Plus calculator is required for this course.

Honors Chemistry**Grade 11****1 unit**

This course is designed for serious, self-motivated science students who wish to continue on into work or study in a scientific field. Subject matter is similar to Chemistry, but is covered in greater depth and with greater use of mathematical models. Students must have a **TI-84** Silver Edition Plus calculator for this course.

Advanced Biology**Grade 12****1 unit**

This course offers an overview of all life forms from the simplest microbes to the most complex animals. While focusing on God as the Creator, students gain knowledge that will give them greater awareness for the care and preservation of the environment. Other major topics of study include plant form and function, cellular structure, ecology, human anatomy and physiology, and genetics. Laboratory exercises are included in this course.

Honors Advanced Biology**Grade 11****1 unit**

This course explores all life from molecules to ecosystems while emphasizing God as the Creator. Students gain knowledge of how science works while exposing them to important research breakthroughs. Knowledge gained from this course should enable students to have proper dominion over creation and to make more informed decisions that would affect their health or the environment. Major topics include classification, biochemistry, cell structure and function, DNA structure and function, genetics, plant form and function, animal form and function, eleven body systems, ecology, biotechnology, evolution, population dynamics and conservation. Laboratory exercises are included in this course.

Honors Anatomy and Physiology**Grade 12****1 unit**

The aim of this course is to introduce the specialized terms, basic concepts and principles to understanding the human body. Students learn basic anatomy (structure of the body) and physiology (how the body and its parts function) for the eleven body systems. This course points to God as the ultimate Designer and emphasizes the Biblical concept of being marvelously and wonderfully made.

Honors Physics**Grade 12****1 unit**

Honors Physics is a practical science of the world around us. Students in this class explore the concepts of Physics in depth. They learn concepts which can be used in preparation for the study in other fields such as engineering, chemistry, and medicine. Students learn the principles and mathematics behind mechanics, electricity, and optics applying these to real world situations. This course requires the completion of several labs and a portfolio project. Students must have a TI-84 Silver Edition Plus calculator.

Biotechnology**Grade 12****1 unit**

This introductory course teaches the concepts and hands on lab procedures required for entry-level careers in the rapidly growing biotechnology industry. Thorough coverage of the concepts and processes of biotechnology research and manufacturing in the areas of pharmaceuticals, agriculture, industrial products, and instrumentation is presented. Students will be exposed to extensive discussion of genomics, microarrays, and proteomics, as well as exciting information on biotechnological advances in drug discovery, gene therapy, plant-based pharmaceuticals, forensics, and horticulture. Students will be presented with the business side of biotechnology, including opportunities and careers in academic, industrial, and regulatory biotechnology. Lab activities will also address current scientific methods and developments in the biotechnology industry.

Marine Biology**Grade 11****1 unit**

Marine Biology is a Christ-centered, high school science course that provides a comprehensive study of marine life and ecosystems from a Biblical worldview. It covers topics from the physical characteristics of the oceans and marine oceanography to the various kingdoms of marine life, including microscopic organisms, invertebrates, and vertebrates. The course features engaging content with illustrations, interactive learning tools, and hands-on labs such as microscopy and dissections, and is designed to foster an understanding of marine ecology, human impact on the oceans, and the stewardship of marine resources

Astronomy**Grade 12****1 unit**

Astronomy a Christian-based elective that explores God's creation through the study of the universe, focusing on scientific principles and connecting them to the existence of a Creator. The curriculum covers a range of topics, including space, the solar system, stars, galaxies, telescopes, and celestial navigation. Students delve into the wonders of space and interstellar space, normal matter and antimatter, dark matter, the electromagnetic spectrum, our solar system, orbital mechanics, constellations, galaxies, and celestial navigation.