



2014-2015 Grace Prep Course Descriptions

Mathematics

Algebra (1 credit)

This course is designed to provide students with an introductory understanding of important concepts in algebra. A main goal of the course is to help students develop their thinking skills. Specific Habits of Mind to be developed and used in the course include process, visualization, representation, pattern, and relationship. Major course content will involve the concepts of expression, equation, graph, slope, linearity, function, exponent, and polynomial.

Geometry (1 credit)

This course is designed to provide students with a comprehensive understanding of Euclidean geometry. A main goal of the course is to help students develop their skills in both deductive and inductive reasoning. Using *GeoGebra*, a dynamic geometry software teaching tool, students will create their own geometric constructions and formulate the mathematics to describe relationships they discover. Student attempts to explain the validity of their conjectures will lead to the development of proof. Major course content will involve the concepts of congruence, similarity, and transformation.

Algebra 2 (1 credit)

This course is a continuation of topics in Algebra I and focuses primarily on properties of polynomial functions as well as a variety of concepts which appear on the ACT and SAT. Specific topics covered include roots of polynomials, graph manipulation, matrices, number sets and imaginary numbers, and probability. Students will also be introduced to algebraic proofs and forming deductive arguments.

Pre-calculus (1 credit)

This course is an amalgam of Trigonometry and Algebra 3 with the intent of equipping students for future studies in Calculus. Properties of trigonometric and exponential functions will be explored in detail through graphical, tabular, verbal, and analytic representations. An emphasis will be placed on application to physical and social sciences as well as mathematical modeling. Students will develop deductive reasoning skills through construction of algebraic proofs. A brief introduction to Probability and Statistics will also be given.

Calculus (1 credit)

The primary purpose of this course is to prepare students for taking Calculus and calculus-based sciences at the college level. The curriculum will be determined for each student on an individual basis.

Fundamentals of Java and Game Programming (1 credit)

This course examines the science of computing through the Java programming language. An entry-level class in programming, this course includes the fundamentals and syntax of the Java programming language. Students will learn to create graphical and console applications using object-oriented design concepts and continue to build on these fundamentals as they construct a side-scrolling game. We will also investigate game theory and design. The class helps beginners gain a basic understanding of programming languages, applications, and object-oriented programming. No prior programming experience is required for this course. A Windows laptop is necessary for this course. Depending on availability, a laptop may be provided.

Science

Biology (1 credit)

General biology will start with a study of plants. We will use the warm autumn weather to do some observing and collecting outside. When the weather turns cold, we will turn to subjects best done indoors, such as cells and microbes. We will also learn a bit about everyone's least favorite kingdom- the fungi-- but which God created as an important part of all ecosystems! Lastly, by the time the weather gets warm again, we hope to have time to explore the simple invertebrates such as protozoans, worms, and insects. We'll be using a variety of learning materials and activities, and hope to make all the topics engaging and memorable.

Anatomy & Physiology (1 credit)

In Anatomy and Physiology we will focus mainly on mammals, and at times specifically on humans. We will do some comparative anatomy and see how mammalian systems compare to those of invertebrates or single-celled animals. We will start with a thorough review of cells so

that we can then begin to put cells together to form tissues and organs. (We'll delve into the topic of genetics, also, toward the end of the class.) We'll be doing a lot of guided, step-by-step drawings which will hopefully be a highly effective (and time efficient) method of learning. Critical thinking will also be emphasized. As much as possible, we want this to be a hands-on class that everyone enjoys.

Chemistry (1 credit)

Chemistry is a college preparatory course. Theoretical aspects of chemistry are introduced to the student. An emphasis is placed on problem solving both on paper and in the laboratory. Evaluation is based upon exams, quizzes, laboratory reports, homework, and in-class activities. Chemistry is also a project course. The following topics will be covered in this course: measurement, atomic structure, nuclear chemistry, the periodic table, chemical bonding, chemical formulas, equations, stoichiometry, acids and bases, gas laws, and organic chemistry.

Physics (1 credit)

Physics is a college preparatory course. An emphasis is placed on mathematics and science to provide the opportunity to engage in higher-level thinking and problem solving. Evaluation is based upon exams, quizzes, laboratory reports, homework, and in-class activities. Physics is also a project course. The main topics covered in this course are: mechanics, the properties of matter, heat, sound and light, electricity and magnetism, and robotics.

Engineering Explorations (1 credit)

Through problems that engage and challenge, students explore a broad range of engineering topics, including mechanisms, structures, materials, land design, environmental sustainability, and engineering ethics. Students in the course will apply engineering, science, math, and technology to solve complex, open-ended problems in a real-world context. The focus will be on the process of defining and solving a problem rather than getting the "right" answer. The course can be for students who do not plan to pursue engineering after high school as it provides opportunities to develop highly transferable skills in collaboration, communication, and critical thinking, which can help in preparation for any career. The course is open to students in Grades 9-12 with no prerequisite course requirements. Completion of the course will satisfy a science credit for graduation.

Fine Arts

Drama (spring semester only/.5 credit)

Students will benefit from the skills they learn in this elective which will help them in future classes and real-life situations. In this drama elective, students will be trained in fundamental theater skills, including improvisation techniques, body control, voice, dictation, line memorization, idea projection, character creation, emotion, preparation, and the acting of

scenes. It will develop self-discipline, peer evaluation, creative criticism, and creative expression skills. It will help build confidence in the actor. It will also build students' skills and knowledge of the specific components of theater. This class will help students unleash the true talents that God has given them.

International Studies

Essentials in Spanish (1 credit)

In this course, students will be introduced to the essential parts of the Spanish language such as its sound system, sentence structure, parts of speech, verb forms, and common expressions. They will be challenged to practice these in conversation through role playing, reading, dictation, and casual dialogue. All four domains of the language will be covered including reading, writing, listening, and speaking.

Communicating in Spanish (1 credit)

The goal of this class is to build the student's confidence in order to speak freely in the Spanish language. They will be challenged to use what they already know in practical conversation through a series of interactive projects as well as real life scenarios. They will also acquire new Spanish much like they did their native tongue, by listening to it and then using it. A strong emphasis will be placed on speaking and listening skills.

English as a Second Language Program (1 credit)

This course is designed to support the English language learner (ELL) in both their content coursework and personal life. The student will experience full immersion into Grace Prep academics and community while being provided with a 'safe' class to support their specific needs. The ESL instructor works in close connection with the core curriculum teachers to ensure that individualized learning plans for each student will be carried out. Embedded in the ESL program are a mandatory host family stay and a student ambassador program which will ensure that the ELL student interacts with native speakers on a regular basis.

Latin I (1 credit)

Soon after beginning the study of Latin, the student will be able to see that studying Latin is far from a waste of time. Students will learn how an inflected language works by studying five noun declensions, four verb conjugations, adjectives, pronouns, and common expressions. Emphasis is given to Latin vocabulary and English derivatives. Students will build translation skills while exploring Roman culture, studying people and practices from antiquity by reading passages in both Latin and English, which are further brought to life as viewed through a Biblical worldview.

Latin II (1 credit)

Latin II is a continuation of Latin I, with the addition of more complex grammar forms, vocabulary, and English derivatives. There will be increased emphasis on translation skills and enjoyment of Latin by classical authors, including the Latin Vulgate Bible.

History

US History (1 credit)

Students explore the history of the United States from early colonization to the present, including the development of the United States Constitution, the Civil War, and America in the 19th and 20th centuries. A study of the history of Christianity in America is included because of the important impact it has had on our nation.

Global Politics (1 credit)

Students explore the key concepts that have shaped the American political experience. An intensive study of the government's structure, purpose, and key players prepares students to participate in the current and future elections. The second half of the year will explore historical themes that have shaped the modern era. Guest speakers, class discussions, public debates, and research equip students to understand, evaluate, and participate in the political process as responsible citizens.

English

American Literature (1 credit)

Students will relate the study of great literature to the development of their own value systems and independent analysis abilities. They will hone critical thinking and analysis skills through being exposed to a wide variety of perspectives and then discussing how they correspond with biblical and personal values. Our focus will be what it means to grow up in America and how America's history has influenced its literature. We will begin with Native American writings and continue with a non-fiction narrative, *Having Our Say, the Delany Sisters First Hundred Years*. Students will enjoy American poetry and classics such as Hawthorne's *The Scarlet Letter*, Twain's *Huckleberry Finn*, and Fitzgerald's *The Great Gatsby* while they continue to develop their literary evaluation skills, SAT vocabulary knowledge, and presentation skills.

AP Literature and Composition (1 credit)

AP English Literature and Composition is designed to fulfill the requirements of a university-level course. Students will encounter workload challenges consistent with an undergraduate English composition course. We will endeavor to gain an understanding of and an appreciation for good literature, an understanding of literature as a tool for personal enrichment, and an understanding of the difference between objective standards and personal views. We will conduct in-depth analysis of literary themes and techniques by reading, discussing, and writing about challenging

works such as *Heart of Darkness* (Conrad), *Silas Marner* (Eliot), as well as primary sources and great works of poetry. We will work together to learn the necessary concepts and vocabulary to intelligently discourse with literary works as well as prepare for the AP Literature and Composition Exam. The pace of this course requires a commitment to ongoing reading, writing, and active participation.

Western Literature (1 credit)

Western Literature focuses on novels, stories, plays, and poetry from the United States and Britain. The course begins with reading *To Kill a Mockingbird*, and also explores novels, poetry, and short stories that are paramount within western thought. Students will engage in analytical discussion and writing, particularly in regard to an individual's place within a society. The course highlights Western individualism, and students will experience vibrant classroom discussions about biblical values within the culture at large. Students will refine their writing skills through short essays and a longer research paper. Additionally, students will develop SAT and vocabulary skills through the study of Greek and Latin root words. Finally, students will look closely at the details of the texts, and then zoom out to a broad discussion of human nature.

British Literature (1 credit)

British Literature focuses on novels, stories, plays, and poetry from Great Britain. The course begins with an introductory discussion of homelessness and placelessness as students study ancient British texts such as *Beowulf* and "The Wanderer." Students will then study Shakespeare and Romantic Poetry as they scrutinize thoughts about individuality and culture in light of biblical values and modern society. Students will refine their writing skills through short essays and a longer research paper. Additionally, students will develop SAT vocabulary skills and grammatical competence. Students will have the opportunity to learn the etymology of important words within the English language, and the students will apply their analysis of English language and literature to their own perspective of the world.

20th and 21st Century Literature (1 credit)

Literature of the 20th and 21st Centuries is an English course which focuses on modern classics. Students will read novels, political pieces, dystopias, and poetry in this course. Students will focus on close reading, writing competencies, and vocabulary development specifically in line with the literature. Students will develop organizational writing skills. Students will look at many different types of texts, and will practice discerning the meaning of the writing. Students will address the topic of identity, and will write intentionally about their own identities within society in comparison with biblical values and the modern culture.

Bible

New Testament (spring semester/.5 credit)

Students will engage with the teachings of Jesus and the Apostles through a reading experience called *The Story*. *The Story* is a chronological adaptation of the Bible. Using the NIV version, it organizes the Scriptures into a reading experience that is fluid and easily understandable. Students will read the entire New Testament of *The Story* and discuss it in class.

Old Testament (.5 credit)

Students will engage with the teachings of the Old Testament through a reading experience called *The Story*. *The Story* is a chronological adaptation of the Bible. Using the NIV version, it organizes the Scriptures into a reading experience that is fluid and easily understandable. Students will read the entire Old Testament of *The Story* and discuss it in class.

Prayer (.5 credit)

It is not uncommon to think that there is only one way to pray, but God's people have found many different ways to spend time with their Creator. This class will teach students the many ways we can communicate with God. It will be a very experiential class, meaning that we will not just talk about prayer, we will spend time praying. In addition, the students will help to create prayer experiences for the school's weekly prayer chapel.

Financial Peace (spring semester only/.5 credit)

Following Dave Ramsey's popular and fun youth curriculum, this class will teach students Biblical principles of finances. From explaining the danger of credit cards, to learning how to create a budget, and the amazing mathematics of compound interest, students will be prepared to live life in financial peace.

Healthy Living (.5 credit)

Students discuss God's plan for mental and physical well-being including nutrition, fitness, stress management, decision-making processes, first aid, family relationships, human sexuality, as well as drug, alcohol, and tobacco prevention.

Discipleship (.5 credit)

The goal of this class is to help students develop a method of discipleship for their lives. It will utilize Francis Chan's book *multiply* as well as a discipleship curriculum developed by Larry Poston. It will include Bible memorization, Bible study, prayer, and much discussion. This will be a mentally and spiritually challenging class limited to 12 students who desire to live as disciples of Jesus Christ.

Apologetics (.5 credit)

In this course students will study scripture concerning the defense of their faith, grounding each student in his/her Biblical beliefs. Students will become knowledgeable in current philosophies and demonstrate an ability to give reasoned Biblical answers to the philosophies and issues in our world today. Utilizing a video curriculum by Ravi Zacharias, they will come to an understanding of various counterfeit religions and false world philosophies as they relate to Biblical Christianity. Each student will be encouraged to pray for one another developing a love and unity among the class and a compassion for their entire world.

Living the Gospel (.5 credit)

This class will help students clearly understand what it means to be a Christian. It utilizes *The Case for Christ* curriculum by Lee Strobel as well as Francis Chan's *Crazy Love* curriculum. We will learn the basics of discipleship, answer questions about why we believe what we believe, and stretch ourselves by living out the Gospel. The goal is to establish in the students' minds the center of Jesus' teaching: living a life of love, faith, and service.