

Bradford Christian Academy
Bradford, MA 01835

Course Descriptions
2010 – 2011

Language Arts: Grade 5

Language Arts curriculum is comprised of spelling, grammar, reading, and writing. Weekly spelling lists contain challenging words and commonly misspelled or confused words. Grammar instruction includes all eight parts of speech in depth and includes sentence diagramming. Writing focuses on persuasive and informative writing and the basic rules of punctuation and word usage. Students hone their skills of paragraph writing, learning to write clear topic and conclusive sentences. The class also emphasizes fluency in oral reading and vocabulary building. Twenty-five literary terms and techniques are mastered and students become proficient at identifying them in the six novels that are read throughout the year. Students also learn to assess literal and figurative meaning through a study of idioms, metaphors and similes.

Language Arts: Grade 6

Language Arts 6 provides instruction in literature, writing, vocabulary, spelling, and grammar. The class emphasizes the love of reading through age appropriate novels. Students will read orally for fluency and understanding, study in collaborative literature circle groups, and work on independent reading. Explicit instruction focuses on vocabulary, spelling skills, grammar, and writing. Students will write regularly using the writing process, which includes prewriting, planning, drafting, revising, and editing. Students work on creative and descriptive pieces based on personal experience as well as analytical writing based on the literature they study. Several short writing pieces are completed each week, and students can expect to write about two longer compositions each term. Students learn to identify, include, and explain evidence to support their literary interpretations.

Language Arts: Grade 7

Language Arts 7 weaves together the five strands of language learning: literature, grammar, vocabulary, spelling, and writing. The seventh grade class continues to emphasize the love of reading through age appropriate novels, and where appropriate these novel selections reinforce their US history course. Students read widely working both in collaborative literature circles and independently. The students also write steadily using the writing process, which includes prewriting, planning, drafting, revising, and editing. An emphasis is placed on honing self-editing and rewriting skills, and an ever growing command of the English language. Students work on creative and descriptive pieces based on personal experience as well as analytical writing based on the literature they study. Several short writing pieces are completed each week, and students can expect to write about two longer compositions each term.

Language Arts: Grade 8

Students read a variety of literature, building on an understanding of reading as a process that includes analyzing and interpreting the text. Language study includes vocabulary building and learning about grammar, language use, and spelling. Through varied and frequent writing assignments, students build on their understanding of writing as a process that includes drafting, composing, revising, editing, proofreading, and publishing. Students write in a variety of forms, including an informational/technical essay. All students learn to adopt speaking and writing skills to fit the intended audience, topic, purpose, and situation.

Classic World Literature and Modern World Literature: Grade 9 – 10 (offered alternating years)

1 Credit

The college preparatory sections of these courses focus on the foundation of written communication skills and classic world literature. Literature is taught as a genre study with

emphasis on literary forms and techniques. Students are challenged to apply to their lives the ideas presented in the literature. They will develop their Christian world-and-life-view as they are guided through materials written by both Christian and non-Christian authors. The works have recognized literary merit in the literary canon and address a variety of themes. Communication skills are taught through grammar, vocabulary, public speaking, essay and research writing, and creative projects. Students will work on perfecting the 5 paragraph essay and write two longer formal papers. The emphasis in all areas is on using language honestly and effectively to build up other people and to glorify God.

Honors Classic World Literature and Modern World Literature: Grade 9 – 10 (offered alternating years)

1 Credit

Honors Classic World Literature and Honors Modern World Literature are survey courses for those students willing to take on the challenges of a rigorous, fast-paced language arts program. Students study masterpieces of world literature in translation, analyzing the role of cultural and historical placement, the world and life view of the author, and the relationship between literature and their own lives. Students continue to develop their Christian perspective as they are guided through materials by both Christian and non-Christian authors. The works to be studied have status in the literary canon, address a variety of themes, and present various historical periods, cultures, and geographical locations. Skills are taught primarily through the writing of essays, research papers, and oral presentations. Students will master language mechanics, diversify sentence structure and build vocabulary to prepare the students for the SAT and other related tests. The emphasis in all areas is on using language honestly and effectively in order to edify other people and to glorify God. Admission to the honors course is by invitation only. Transfer students will be required to submit a writing sample for review by the English department. The pace of the honors course is noticeably faster; more texts are covered; writing is more intensive, with a focus on close, argumentative analysis.

Honors or College Preparatory American Literature: Grade 11 – 12 (offered alternating years)

1 Credit

American Literature is a survey of American literature and a communication skills course. Students will explore the major epochs in American literary history and develop a comprehensive understanding of American culture and philosophy by studying the literature that each era produced. Students will learn to think critically about the American worldview by reading the works of both Christian and non-Christian authors from each time period, analyzing their works in light of biblical truth. All the works selected have outstanding literary merit, addressing a variety of themes and representing a wide range of cultural viewpoints. Students will develop their communication skills in a variety of ways. They will study vocabulary and grammar, design and give oral presentations, write and revise analytical essays and research papers, and prepare for the SAT. All writing and language skills assignments are designed to further the student's ability to use the gift of language to the glory of God. Admission to the honors course is by invitation only. Transfer students will be required to submit a writing sample for review by the English department. The pace of the honors course is noticeably faster; more texts are covered; writing is more intensive with a focus on close, argumentative analysis.

Honors or College Preparatory British Literature: Grade 11 – 12 (offered alternating years)

1 Credit

British literature class will explore the development of the rich, multi-layered English language and its literature through a historical survey of British culture and literary works. Students will consider how language and society impact each other and how the values of different time periods are reflected in their stories. By studying the writing and ideas of great British writers and thinkers, students will also stretch and develop their own literary, intellectual, and expressive powers. More importantly, students will explore the vast scope and power of the written and spoken word, and consider how we have used the gift of language for good and ill throughout history. Writing, communication, and research skills will be taught through a variety of short analytical essays and creative writing pieces; individual and group presentations on aspects of major works and British history, the interpretation, production, and performance of a scene from Shakespeare, and a formal literary term paper. Admission to the honors course is by invitation only. Transfer students will be required to submit a writing sample for review by the English department. The pace of the honors course is noticeable faster; more texts are covered; writing is more intensive with a focus on close argumentative analysis.

Yearbook: Grades 9 – 12

.25 Credits

Students in this course publish the Academy's yearbook. They learn design, layout, copy writing, photo scanning and cropping, using the Yearbook Publisher's web-based tool. Students also learn project and time management skills as the work toward the publication dates of the various publications.

Basics in Mathematics: Grade 5

Basics in Mathematics includes sharpened and reinforced skills with multi-digit addition, subtraction, multiplication, and division. Students will increase their math knowledge of fractions, decimals, and positive and negative numbers and master longer multiplication and division problems. Students are drilled daily on their math facts to increase speed and accuracy in computation. The curriculum is supplemented with worksheets, flash cards, charts, and visuals to build math conceptual skills. Mathematical vocabulary and real-world math through word problems are also emphasized to increase students' conceptual skills and math relevancy. Reinforcement is provided throughout the year.

Foundations in Mathematics: Grade 6

Students will spend the year becoming proficient in the basic skills of mathematics. Much attention is focused on operations involving fractions, decimals, and percents. Students will work with ratios and proportions, interpret data and create graphs, learn the basic tools of measurement and geometry, explore probability, and become acquainted with simple equations and inequalities. During each lesson students see many sample problems and have the opportunity to ask questions. There is ample time in class to begin homework. Before new topics are introduced the teacher will check for readiness and review accordingly. Reinforcement will be provided throughout the year.

Pre-Algebra: Grade 7

Prerequisite: Math 6

Pre-Algebra is designed to prepare students with a solid foundation for the study of algebra. The instructor will focus on organization skills and mathematical process, helping students build confidence and gain proficiency. Many examples are presented in each lesson with ample time

given for discussion and questions. The course begins by reviewing basic mathematical concepts and gradually introducing algebraic terminology. Students will work with decimals, fractions, percents, exponents, ratios, and proportions. They will learn to write algebraic expressions and solve simple one-step equations and inequalities. They will graph linear functions and understand basic geometry. Students will learn valuable problem-solving strategies for approaching real-life problems. During each lesson students will see many sample problems and have the opportunity for discussion and questions.

Algebra I: Grade 8 or 9 (1 credit in 9th grade)

Prerequisite: Pre-Algebra

Students will learn the universal language of higher mathematics in Algebra I. This course covers the full array of topics in a typical Algebra I course. These include, modeling relationships with variables, expressions, and equations, graphing and solving systems of equations and inequalities, exponents and exponential functions, polynomials and factoring, quadratic equations and functions, radical expressions and equations, and more. There is an emphasis on building mathematical communication skills and good conceptual skills. Students will learn to effectively read, speak, and think algebraically. Real world activities and examples will engage students in critical thinking, reasoning, and error analysis. Students will learn test taking strategies and become familiar with SAT prep questions. Throughout the year the teacher will provide numerous examples and continuously check for understanding. The TI 83 or TI 84 graphing calculator is required.

Geometry: Grade 9 – 10 (offered alternating years)

1 Credit

Prerequisite: Algebra I

Geometry students will discover the tools of geometry, methods of reasoning, proof and construction, while maintaining previous mathematical and algebraic skills. Students will keep a glossary of definitions, postulates, axioms, and theorems on which they will build a vast knowledge of geometric principles. Students will learn to recognize, apply and interpret these principles using real-world examples. Students will explore properties of lines, triangles, quadrilaterals, similarity, right triangle trigonometry, circles, transformations, and more. Test taking strategies will be incorporated to prepare students for the SAT. Throughout the year the teacher will provide numerous examples and continuously check for understanding. The TI 83 or IT 84 graphing calculator is required.

Honors Geometry: Grade 9 – 10 (offered alternating years)

1 Credit

Prerequisite: A grade of 83% or higher in Algebra I and teacher's recommendation

Geometry students will discover the tools of geometry, methods of reasoning, proof and construction, while maintaining previous mathematical and algebraic skills. Students will keep a glossary of definitions, postulates, axioms, and theorems on which they will build a vast knowledge of geometric principles. Students will learn to recognize, apply and interpret these principles using real-world examples. Students will explore properties of lines, triangles, quadrilaterals, similarity, right triangle trigonometry, circles, transformations and more. Test taking strategies will be incorporated to prepare students for the SAT. Throughout the year the teacher will provide numerous examples and continuously check for understanding. The TI 83 or TI 84 graphing calculator is required. Honors sections will move much faster through the material and delve deeper into the content.

Algebra II: Grades 9 – 10 (offered alternating years)

1 Credit

Prerequisite: Algebra I

This is the sequel to Algebra I and will extend our study of functions, linear systems, matrices, quadratics, polynomials, radicals, exponents, rational functions, probability and statistics and trigonometry. Test taking strategies will be incorporated to prepare students for the SAT.

Throughout the year the teacher will provide numerous examples and continuously check for understanding. The TI 83 or TI 84 graphing calculator is required and will be used extensively.

Honors Algebra II: Grades 9 – 10 (offered alternating years)

1 Credit

Prerequisite: A grade of 83% or higher in Algebra I and teacher's recommendation

This is a second-year course in upper school mathematics designed to prepare students for a comprehensive pre-calculus course. This course integrates the standard topics of Algebra II with data analysis and graphing calculator technology. Functions (linear, exponential, logarithmic, rational, and quadratic) are explored from algebraic and geometric perspectives. A TI-83 or TI 84 graphing calculator is required for this course. Students will work with spreadsheets using Excel. Honors sections will move faster through the material and delve deeper into the content.

Personal Finance and Business Math: Grades 11 – 12

1 Credit

Prerequisite: Algebra I and Geometry

This course reviews topics of personal finance, including creating a personal budget, balancing a check book, investing personal money, and other practical life skills that all students should know and practice as adults. Students will also study business mathematics, including creating and keeping balance sheet, budgeting, cash flow, and business plans.

Pre-Calculus: Grades 11 – 12

1 Credit

Prerequisite: A grade of 83% or higher in Algebra II

This course provides an introduction to topics fundamental to calculus, emphasizing the behavior of functions both analytically and graphically. The TI-83 or TI 84 graphing calculator will be used extensively for this latter purpose. Real-world problem solving will be emphasized in this course. Students will work with spreadsheets using Excel.

AP Calculus AB: Grade 12

1 Credit

Prerequisite: A grade of 83% or higher in Pre-calculus

AP Calculus AB at Bradford Christian Academy aims to instruct and foster an atmosphere of college level mathematics. Students are instructed in all necessary material in differential and integral Calculus, from the smallest of rules to the largest of theorems, to give each student the best chance to succeed on the AP Exam and thereby gain college credit. The course will follow closely to College Boards guidelines, philosophy, and curricular requirements and remain disciplined in class time as to sufficiently cover all concepts prior to the May exam. Additionally, the class will seek to grow in each student the courage, confidence, conceptual thinking skills, and tools to effectively solve problems.

Old Testament Part I: Grade 6

This course is an introduction to the Bible, chronologically telling the story from Genesis to Judges. At the heart of the course is the account of God and His people. The course focuses on the ways in which God acted to save and restore His people to a right relationship with Him. Students will learn how individual narratives are integral to the whole biblical story. The class focuses on God's revelation of Himself to mankind, His redemptive purpose, and His relationship with His people. Students are encouraged to see how these stories find application to their own lives and will explore how to grow in personal faith, and fellowship with other believers, what it means to love all people as Christ first loved us, and what it might look like to live out our faith consistently.

Old Testament Part II: Grade 7

This second part of the Old Testament course chronologically tells the story from 1 Samuel through Malachi. Students will learn the Biblical history and study lives of a number of Old Testament people. Students will learn how the Bible applies to their lives today and explore what it means to be a Christian. Students will reflect on their own lives and be encouraged to pursue a personal and transforming relationship with God, which enables them to live a dynamic life of faith, hope, and love in a broken and sinful world.

New Testament: Grade 8

The eighth grade Bible course is an introductory survey of the New Testament, beginning with a brief review of the Old Testament and the historical highlights from Israel's life between the testaments. Students will examine who Jesus is, and how He is the fulfillment of the Old Testament. Attention is given to understanding the unique distinctiveness between the gospels while emphasizing the continuity of the gospel narrative through each. Beginning with Acts and following through the major letters of Paul, James, Peter, and the book of Hebrews, attention is given to answering the questions of personal faith, such as, "How do we live as citizens in the Kingdom of God?" Throughout the year, students are challenged to think critically and somewhat extensively about the claims of Jesus and the apostles in the New Testament and the implications for students' lives.

Study Skills, Argumentation and Research Writing: Grade 9

.50 Credits

Study Skills, Research Writing, and Argumentation is designed to help students develop better organizational and study skills, learn the art of argumentation, and improve writing skills, so as to be prepared to write well-argued, properly formatted research papers in preparation for college. The course will begin by reviewing good study skills and proper organization and planning for successful academics. Students will then learn the mechanics of an excellent argument, including how to make a good claim, how to support it with thoughtful reasons and sound evidence, and how to anticipate counter-claims. This will then be explored through oral debates, which will help students to hone these skills in a time-sensitive environment. Students then will learn about good research skills, including proper use of differing types of sources, and how to give proper credit to them. Finally, students will learn how to draft and format these patterns in accord with College level standards.

Hermeneutics: Grade 9

1 Credit

Hermeneutics is designed to form the foundations for students' Biblical study at BCA by training them in basic Bible study skills, which they will use to study Scripture during their time at BCA

and throughout the course of their lives. Towards this end, they first will learn a *process* by which they can study, interpret, and apply Scripture to their lives. They will then learn some *ethics* for studying the Bible, so as to insure that they study and apply Scripture rightly, and in such a way that its original authors would approve. Finally they will spend the latter part of the year learning the *contexts* of the Bible, including its geography, history, and literature.

Old Testament Theology and Survey: Grade 10

1 Credit

In Old Testament Theology and Survey, students will begin to learn the theology and content of the thirty-nine books of the Old Testament canon. This will be done by viewing the canon through the lens of the covenant relationships that God develops with both humanity as a whole and his chosen people in particular, where they are granted a relationship with God by grace, but are nonetheless called to be faithful to him if they are to remain in his blessing and avoid coming under his curse. This pattern will first be examined as it is developed in the Pentateuch, as it is demonstrated to be true in history by the historical books, as it is preached by the prophets, and as it is reflected upon in the poetic writings of the Old Testament.

New Testament Theology and Survey: Grade 11

1 Credit

New Testament Theology and Survey completes the story begun in Old Testament Theology and Survey by a study of the twenty-seven books of the New Testament canon. This will be done first through a historical survey of the 2nd Temple era, including the 300 years in between the ministry of the prophet Malachi and the birth of Christ, so as to give better historical backdrop to the situation at the time of the gospels. This then continues with some reflection on how the New Testament continues and fulfills the concepts established in the Old. Finally, the way in which Jesus fulfills God's ancient promise to Abraham and thus guarantees his covenant faithfulness to his people is studied through a thorough study of the gospels, the book of Acts, the epistles of Paul, the general letters, and the book of Revelation.

Christian Thought: Grade 12

1 Credit

Christian Thought is designed to serve as a summative experience for students' study of the Bible at BCA, where students will be called to articulate their worldview and Christian beliefs prior to going off to college. They will begin this process by thinking about what theology is, and how all people have a theology that affects their lives whether they can articulate it or not. They then will do a brief comparative study of the four other major religious worldviews of the globe, Islam, Hinduism, Buddhism, and Judaism, towards the end of understanding how these are distinct from the Christian viewpoint on life. Students then will study Christian theology, including Christian beliefs about the Bible, God himself, humanity, sin, the person and work of Jesus Christ, salvation, the Holy Spirit, the church, and the age to come, while writing their own personal life theology based on their cumulative high school knowledge to integrate their lives and faith.

Comparative Religions: Grades 11 – 12

.50 Credits

World Religion is a comparative study of the major religions of the world, including Hinduism, Buddhism, Taoism, Confucianism, Sikhism, Judaism, Islam, and Christianity. This class will be taught in an on-line seminar format in conjunction with Northern Essex Community College. The course may be taken for dual high school and college credit.

Ethics: Grades 10 – 12

.50 Credits

Ethics is designed to help students develop an approach for making complex ethical choices against the backdrop of the complicated moral universe of the postmodern world from the viewpoint of the biblical Christian worldview. To this end, students will first survey the various approaches to ethical decision making offered by secular moral philosophers. Then, they will consider what it would mean to make ethical decisions from the perspective of a biblical worldview, including the various challenges offered by the interpretation of both the biblical text and the contemporary context in regards to many moral quandaries. Finally, students will complete the course by considering how it is that they can do the good when the moral choice is clear.

Leadership: Grades 10 – 12 (offered alternating years)

.50 Credits

The Leadership course is designed to teach students about the value and praxis of both personal and corporate leadership. This course will involve learning the 21 basic principles of leadership as articulated by famed leadership expert John Maxwell, as well as understanding personal leadership styles and developing leadership strategies. The course will also examine some biblical leadership principles, and seek to help students evaluate their own leadership aspirations from the perspective of a Christian worldview.

World Geography: Grade 5 and 6

Over two years, these courses introduce students to the world's people, places, and environments. Students will also study the world's landforms, climates, and natural resources. A focus is on the connection between physical geography and cultural and economic geography. The class will use maps for research and study, as well as learning locations around the world. Resources include textbook, charts, and handouts.

U.S. History I: Grade 7

This is the first year of the two-year United States History course. This class is the survey of American History from Columbus through the Civil War. The course focuses on political and international developments with some coverage of social and cultural trends. Special focus is on the Revolutionary War period and the development of the Constitution, the westward expansion, and the Civil War. Students also study citizenship and their role as an American. Resources include textbook, maps, and handouts.

U.S. History II: Grade 8

This is the second year of the two-year United States History course. This class is the survey of American History from the late 1800s to the present day. The course focuses on political and international developments with some coverage of social and cultural trends. Special focus is on World War I, World War II, the Cold War, the civil rights movement and the Vietnam conflict. Resources include textbook, maps, and handouts.

Ancient World History: Grade 9

1 Credit

This is the first year of the two-year World History course. This class studies the development of civilizations of the major regions of the world, with a primary focus on the eastern hemisphere. Topics include Ancient Egypt, the classic periods of Greece, Rome, and China, Medieval institutions and concepts and the clashing of civilizations as demonstrated in the Crusades, and

the rise of modern thought from the Renaissance in Europe. Resources include textbook, maps, and handouts.

Modern World History: Grade 10

1 Credit

The class is the second of a two-year World History course that begins with a brief review of the rise of modern thought in the Renaissance and ends with an in-depth study of world history of the 21st century. The course focuses on European commercial and colonial expansion throughout the globe, the modernization of European society from the age of exploration, the rise of merchant capitalism, the urbanization and mass production of the Industrial Revolution, and the contributing factors leading to the French Revolution. The course shows the encounters between modernizing Europe and other parts of the world, through trade, conquest, and cultural interaction. Students will be asked to think comparatively and analytically, addressing essential questions posed by both academic historical inquiry and theological reflection. There will be a special emphasis on development of good reasoning and writing skills.

United States History: Grade 11 and 12

1 Credit

This course provides an overview of United States history from the voyages of exploration to the post-Cold War era. In the first semester instruction focuses on the period of colonization, the revolution and establishment of the new Republic, the rise of sectionalism, and the Civil War. In the second semester the course covers the rise of American industry and cities, America as a global power, World War I, the 1920s, the Great Depression and World War II, the Cold War, civil rights, and the post-Cold War era. United States History is a graduation requirement, generally taken in the junior year.

Advanced Placement United States History: Grade 11 – 12 (offered alternating years)

1 Credit

Prerequisite: Enrollment is by invitation after review of past grades, writing sample and teacher's recommendation.

Intended to prepare students for the Advanced Placement Examination, this course provides an overview of United States history from the voyages of exploration to the post-Cold War era. In the first semester instruction focuses on the period of colonization, the revolution and establishment of the new Republic, the rise of sectionalism, and the Civil War. In the second semester instruction focuses on the rise of American industry and cities, America as a global power, World War I, the 1920s, the Great Depression, World War II, the Cold War, civil rights and the post-Cold War era. United States History is a graduation requirement, generally taken in the junior year. In the AP section, students explore topics in greater depth, cover additional material and practice the Document-Based-Question format needed for success on the Advanced Placement test.

AP European History: Grades 11 – 12 (offered on alternating years)

1 Credit

Prerequisite: Enrollment is by invitation after review of past grades, writing sample and teacher's recommendation.

The study of European history since 1450 introduces students to cultural, economic, political, and social developments that played a fundamental role in shaping the world in which they live. Without this knowledge, we would lack the context for understanding the development of contemporary institutions, the role of continuity and change in present-day society and politics,

and the evolution of current forms of artistic expression and intellectual discourse. In addition to providing a basic narrative of events and movements, the goals of the AP program in European History are to develop (a) an understanding of some of the principal themes in modern European History, (b) an ability to analyze historical evidence and historical interpretation, and (c) an ability to express historical understanding in writing. In the AP section, students cover additional material and practice the Document-Based-Question format needed for success on the Advanced Placement test.

General Science: Grade 6

This science course is designed to give students an understanding of the world around them, to develop a desire to investigate their environment and to engage God through the world He has purposefully designed. This class is the first of three integrated classes that introduces the student to the nature and extent of science in the world and focuses them towards potential high school science curriculums and beyond. For example, physics is first introduced through an in depth look at energy, chemistry with a look at matter, and biology with introducing cells. Students pursue this challenging scientific inquiry through hands on labs, demonstration of scientific principles, experiments, and individual research.

General Science: Grade 7

The second of three general science classes, this class builds on the basic platform of the sixth grade year by delving deeper into and extending the breadth of topics covered. Students encounter the Periodic Table, Newton's Laws, and advanced examination of cells as the program builds towards high school level science. This course is designed to give students insight into scientific inquiry through hands on labs, demonstration of scientific principles, experiments, and individual research. The course topics guide students to hands-on and explorative activities through scientific labs. Students continue to engage God through the world He has purposefully designed.

General Science: Grade 8

The third of three general science classes, this class revisits and continues to build on scientific themes initially taught in sixth and seventh grades and frames each unit as an introduction to what students will encounter at the high school level. This integrated, looping, and sequential curriculum allows students to study some physical, chemical, and biological science each year at an ever deeper and more complex level. With this cyclical curriculum, students are well prepared for continued studies in high school in Biology, Chemistry, Physics, and Environmental Science. Students continue to engage God and the world He has purposefully designed through a Christian world view.

Chemistry: Grades 9 – 10 (offered alternating years)

Prerequisite: Algebra I

1 Credit

This course will give the student an overview of general chemistry. It will give a perspective of atomic and molecular structure as it relates to the structure of ionic and covalent bonds. Formulas and equations will be presented in a context where students will predict reactions. The kinetic theory, the basis of modern chemistry, is used to explain gas volume, pressure and temperatures as well as rates of chemical reactions. Thermodynamics is studied to explain energy transformations and spontaneity of chemical reactions. Acid/base theory, chemical equilibrium and rates of reactions are emphasized.

Honors Chemistry: Grades 9 – 10 (offered alternating years)

Prerequisite: Algebra I and enrollment is by invitation after review of past grades and the science and math teacher's recommendations.

1 Credit

This course is a study of the fundamental principles of chemistry. Topics covered include atomic theory, stoichiometry, gas laws, the properties of liquids and solids, bonding and intermolecular forces, chemical kinetics, theories of acids and bases and oxidation-reduction. Demonstrations and laboratory exercises illustrate the concepts presented in lecture. A graphing calculator is a requirement for this course, and its use is part of the pool of techniques that are used for solving problems.

Biology: Grades 9 – 10 (offered alternating years)

1 Credit

This course explores the science of life, from the global to the microscopic. We will gain an understanding of the fundamental biology common to animals and plants, with an emphasis on the biochemistry needed for cell function, cellular structure and function, genetics, ecology, and the taxonomy, structure, and function of the major kingdoms of organisms on earth.

Honors Biology: Grades 9 – 10 (offered alternating years)

Prerequisite: Enrollment is by invitation after review of past grades and the science and math teacher's recommendations.)

1 Credit

This course covers the major topics in biology such as molecular biology, genetics, diversity, human biology, and ecology, which will be reinforced through a mandatory lab component which includes dissection. The emphasis will be on the molecular level, which will help the student perform well in future biology classes and on standardized tests.

Advanced Placement Biology: Grade 11 – 12 (offered alternating years)

1.25 Credit

Prerequisite: A minimum grade of 85% in Biology - Honors, Principles of Chemistry – Honors, and instructor's permission.

This course is equivalent in scope and difficulty to a first-year college course for science majors. It is designed both for non-majors who want to complete a college-level science course while in upper school, and for biology majors seeking to strengthen their biology fundamentals. Emphasis will be placed on problem solving, understanding the natural world, and experimental design. Students prepare for the Advanced Placement test. Students taking this course should plan to take the Advanced Placement Biology test in May. Dissection is required.

Honors Physics: Grade 11 – 12 (offered alternating years)

Prerequisite: Pre-calculus or concurrent registration

1 Credit

Students explore the basic concepts of the mechanics of motion, wave phenomena, electricity and circuits, and modern physics. The emphasis is on concept development, multiple approaches to problem solving, and using technology to acquire and analyze data. Students must be proficient in the use of a graphing calculator, skilled in spreadsheet analysis, and possess strong math skills.

Anatomy/Physiology: Grade 11 – 12 (offered alternating years)

Prerequisite: Biology and Chemistry

1 Credit

Anatomy and Physiology is a course designed for students who would like to pursue a career in the life science area, medical fields, or want to learn more about their bodies. The course involves the study of the mammalian body structure and the body's basic physiological functions. The students apply their classroom knowledge in laboratory exercises and required dissections.

Environmental Science: Grade 11 – 12 (offered alternating years)

Prerequisite: Biology and Chemistry

1 Credit

This course stresses basic understanding of Environmental Science and application of this knowledge with respect to life on Earth. An understanding of life and how various living organisms carry on life activities in the natural world is also stressed. Biology, evolution, and ecology are among some of the topics covered.

Forensics: Grade 11-12 (offered alternating years)

.50 Credits

This course explores the application of science to crimes and criminology/criminal justice. Students will gain an understanding of the fundamentals of forensic science, including a review of the crime scene, physical evidence, properties of various substances, drugs and toxicology, DNA, trace evidence, fire, firearms, explosions, document review, and the internet and computer forensics.

History and Philosophy of Science: Grades 11 – 12 (offered on alternating years)

.50 Credits

This course explores the development of Science as a unique and vital discipline in today's world and the history of the relationship between scientific inquiry and Christian theology. Through mostly primary sources, the course surveys various approaches to Science in ancient, medieval and modern times. Areas of focus include the nature and scope of the scientific method and issues involving the integration of faith and reason.

Latin 1a and 1b: Grades 5 – 6

This is an introductory course for fifth and sixth graders that will provide them with some basics in foreign language learning. The emphasis is on building vocabulary that builds language skills in English, Spanish and other modern romance languages. In the process students will improve their command of English grammar, and gain a deeper understanding of English word meanings through examining their Latin etymologies. In addition students will become familiar with Roman civilization, culture, literature, and mythology.

Spanish 1a: Grade 7

This is the beginning course of a two year (seventh and eighth grade) study of Spanish I, in preparation for Spanish II in grade nine. The same text is used for both years. Through learning how to start a conversation and how to ask and answer basic questions, students learn conversational skills and acquire a large vocabulary. There is also an emphasis on Hispanic culture and its presence and influence in the United States.

Spanish 1b: Grade 8

Prerequisite: Spanish 1a or equivalent

This is a continuation of Spanish 1a in preparation for Spanish II in grade nine. Conversational skills are emphasized, along with word usage and grammar. Students will increase their vocabulary and daily work on speaking, reading, and writing skills.

Classical Latin: Grades 9 – 12

1 Credit

In Classical Latin, students will learn the basic grammar and morphology of Latin so as to be capable of translating basic Latin texts with the use of a Lexicon by the end of the year. Towards this end, the focus of the course will be on learning the basic morphology, pronunciation, grammar, and vocabulary of the language of the Roman Empire.

Hellenistic Greek: Grades 9 – 12 (offered alternating years)

1 Credit

In Hellenistic Greek, students will learn the basic grammar and morphology of Koine Greek so as to be capable of translating any passage in the New Testament with the use of a Lexicon by the end of the year. Towards this end, the focus of the course will be on learning the basic morphology, pronunciation, grammar, and vocabulary of the Greek language of the Hellenistic era.

Spanish I: Grades 9 – 11

1 Credit

This is an introductory course for students with little or no background in Spanish. It is designed to aid the beginner in acquiring the four basic skills of language: listening comprehension, reading, writing, and speaking. Various aspects of Hispanic culture are also taught.

Honors or College Preparatory Spanish II: Grades 9 – 12

Prerequisite: Spanish I

1 Credit

This course begins with a review of the grammar and vocabulary covered in Spanish I and builds on the language fundamentals, emphasizing written and oral communication skills. The course will increase Spanish vocabulary and expand the use of present tense and preterit tense. Students will also improve reading, writing, and listening skills through composition and conversation. Students will also learn more about culture, history, and geography in the Spanish-speaking world.

Honors or College Preparatory Spanish III: Grades 10 – 12

Prerequisite: Spanish II

1 Credit

This course consists of a variety of oral, written, comprehension, and listening skills, building upon the skills learned in the first two years of Spanish. The course will continue to expand the usage of present, past, and future tenses, increase understanding and usage of the subjunctive mode, improve accuracy and clarity in speaking, and develop composition and conversation skills. There is a concentration on knowing all the tenses for use in all these areas. Various works of Hispanic literature will be read and analyzed.

Spanish IV: Grades 11 – 12

Prerequisite: Spanish III

1 Credit

This is an advanced course that builds on the foundations taught in the first three years of language study. An emphasis is placed on helping the student build comprehension skills in reading progressively difficult literature leading to “liberated” reading in Spanish. The student is exposed to a wide variety of modern authors and the cultures each represent. A research paper dealing with selected cultural topics of the Hispanic world will help improve the student’s ability to express himself/herself in written format.

Introduction to Philosophy: Grades 11 – 12

This course will examine the major aspects of philosophy (metaphysics, epistemology and ethics) and the history and flow of philosophy in order to understand the major figures and movements in Western thought. This class will be taught in an on-line seminar format in conjunction with Northern Essex Community College. The course may be taken for dual high school and college credit.

Communication Arts: Grades 5 – 8

Throughout the year, students will be participating in all forms of Communication Arts, including acting, public speaking, rhetorical criticism, and choral performances at the annual Christmas Concert. Students will develop an increased awareness of cultural literacy and the value of arts in society, develop an understanding of the nature of God as the Divine Creator, and identify their own talents as a reflection of and an opportunity to glorify our Lord. Students will also have the opportunity to participate in a full production of either a musical or a play as an extra-curricular activity.

Introduction to Acting: Grades 9 – 12

.50 Credits

This course provides students with the opportunity to develop dramatic and comedic performance skills. Through lectures, workshops, and individual and group assignments, students will learn theoretical background of important dramatic movements, as well as gain practical experience in performance. Students will learn how to prepare and deliver both a comedic and dramatic monologue, as well as participate in group performances and directing. Further, students will recognize and develop an appreciation for dramatic elements seen in various public presentations.

Aesthetics: Grades 9 – 12 (offered on alternating years)

.50 Credits

This course focuses on the aesthetics of performance and visual arts. Students will examine all aspects of the arts—visual, musical, and theatrical—paying particular attention to not only the aesthetics of performance and the unity of production values, but to the physicalities of all aspects of communication. Throughout the course, students will apply selected readings to live performances during in-class lectures as well as in written form. In both group and one-on-one discussions, students are required to analyze the artistic form seen either in the theatre or at live presentations, and to relate them to specific current events and cultural influences, where appropriate. The course will involve a combination of analysis of selected readings with careful and critical examination of each artistic presentation. In addition, students will create and apply universal criteria necessary for the analysis and appreciation of all artistic forms, enhanced by required visitation of galleries, performances, and concerts throughout the academic year. In taking this course, students should expect to pay an additional \$200 to cover tickets, transportation, entry fees, etc. for required events. Further, students will explore the integration of Christianity and the theatre as they develop their own aesthetic philosophy.

Art: Grades 5 – 6

The middle school art helps students develop basic skills in several mediums. Both two- and three- dimensional assignments focus on multicultural art themes and give opportunity to experiment and grow in artistic discernment and familiarity with the elements of design. Fun and serious artwork go hand-in-hand in this class.

Art: Grade 7 – 8

This class will build on art skills learned in the sixth and seventh grades and will introduce design principles through more challenging projects. Eighth grade art requires a higher level of dedication to longer projects. Students grow in their ability to respond to the world around them and use multiple mediums in applying the elements of design in more formal considerations of composition.

Art: Grades 9 – 12**.50 Credits**

This class is designed to provide experience in many mediums with a deliberate focus on the elements of design. Drawing, various painting methods, and printmaking are included. Assignments can also include a three-dimensional design in clay, wood, wire, plaster, and carving foam. Assignments are created so students will gain an understanding of various kinds of art work and expression with an integration of art history.

Middle School Physical Education: Grades 5 – 8

This course includes a variety of sports (individual and team), activities, and games. The class emphasizes participation in class activities and on individual skill improvement. Students rotate through units in basketball, tennis, swimming, volleyball, racquetball, fitness, nutrition, and weight training.

High School Physical Education: Grades 9 – 12**.50 Credits**

This course provides the student with an opportunity to choose a varied path toward healthful living. The student will participate in classes that teach life sports, team sports and individual activities. The student will be encouraged to improve cardiovascular development and to focus on their strengths to achieve lifelong healthful attitudes. Students elect six or eight week units in basketball, swimming, tennis, volleyball, racquetball, fitness, and weight training.

High School Health: Grades 9 – 12**.50 Credits**

This course provides students with knowledge in the four basic areas of health, physical health, mental/emotional health, social health, and spiritual health and equips them choose healthful living as a life-long initiative. Students will create their own personal health profile, including areas of personality, heredity, and environment and are asked to keep a health journal of their personal habits. Students will also study healthy choices, life skills that are learned and practiced for healthy living, and risky behaviors that threaten good health.

Technology: Grade 5 – 8

Students will spend the first quarter gaining proficiency in typing skills. Subsequent quarters will be based on student experience and motivation and will also include learning the basics of Microsoft Word as well as other advanced programs, such as Microsoft Publisher, Microsoft Excel, and Microsoft PowerPoint.