Learning Unlimited
Preparatory School

Curriculum Guide

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Upper School

Learning Unlimited Preparatory School

MISSION, PHILOSOPHY AND OBJECTIVES

Mission Statement

Learning Unlimited Preparatory School is founded on the principle of developing each student's potential to the fullest within a safe, positive, and academically challenging environment. The LUPS community is committed to cultivating the value of scholarship, creativity, moral and ethical development and the fellowship of a diverse student body. Recognizing the variety of ways in which students learn, the LUPS faculty and staff strive to empower them to be life-long learners and responsible, compassionate citizens of the world.

Philosophy and Objectives

In order to accomplish the school's mission, Learning Unlimited Preparatory School is committed to creating and maintaining a challenging and rigorous program including (but not limited to) the following:

- Fostering a strong sense of individual and community responsibility and self-confidence.
- Cultivating a lifelong appreciation of learning, resourcefulness and individual potential.
- Providing broad-based, integrated, experiential learning in basic academic disciplines in preparation for higher learning.
- Promoting global awareness and connectivity.
- Providing leadership opportunities.
- Developing critical and creative thinking and problem solving skills
- Promoting ethical and moral conduct respecting cultural diversity and individual differences preparing students for global citizenship.
- Developing communication, research and organizational skills.
- Offering opportunities to every member of the school community to be a partner in learning

Learning Unlimited Preparatory Schools admit students of any race, color, creed, religion, sex, or national origin to all privileges, rights, programs, and activities. The school does not discriminate on basis of race, color, creed, religion, sex, or national origin in administration of educational policies, scholarships, or student activity programs. This statement also applies to the schools' personnel and employment policies.

Upper School Curriculum Guide and Course Description

PLANNING CONSIDERATIONS FOR HIGH SCHOOL

1. For required courses, including English, Math, Social Studies, Science, and Foreign Language, a student earning a final grade of D+ or D is recommended to repeat the course for grade forgiveness before advancing. These courses may be repeated during the summer, online, or during the following school year.

2. Any required course in which a student receives a failing grade of "F" must be repeated before credit is earned and the student progresses to the next course. A passing grade must be earned in all required courses before a student can graduate. If the student chooses to wait until the following school year to repeat a course, it may delay his or her graduation.

3. Foreign Language is required for three years. At least two of the credits must be in the same language. Many colleges require more than two years of a language; therefore, we encourage three years or more in the same language.

4. One credit is required in Health/Physical Education.

5. One credit is required in Technology.

6. One credit is required in Fine Arts. Students may choose from a list of possible courses.

7. A half unit of College/Career Preparation is required.

8. All courses graded on a scale of A-F are included in the calculation of the student's cumulative grade point average, which is reported on the high school transcript.

9. Electives offered each year will be determined by student enrollment in these courses.Therefore, the electives that are available will vary each year.

11. Certain courses are labeled HONORS or ADVANCED PLACEMENT (AP). These courses are accelerated or college level courses open by invitation to the highly qualified and ambitious student. An AP course may be taken as a substitute for any required course in that particular field. Teacher approval is required for these courses.

12. GPA - All Honors courses are taken on a 4.5 grading scale, and all AP courses are on a 5.0 grading scale (new grading scale effective in St. Maarten beginning in fall, 2013). These higher grading scales for these courses allow the students to possibly increase their overall grade point average by doing well in these accelerated courses.

13. Summer courses or courses taken at other educational institutions may be used toward meeting graduation requirements. Official transcripts must be submitted for these courses.

14. Some courses may also be arranged through dual enrollment, independent study, or online classes. Since there is a limit to the number of outside courses that may be taken, please see the Dean of Academics to pursue this avenue.

GRADUATION INFORMATION

To qualify for graduation and a Learning Unlimited Preparatory School diploma, a student must be in attendance for his or her entire senior year. It is the student's responsibility to meet with the Dean of Academics and College Counselor to make sure he/she is properly enrolled in the correct courses. Additionally, a senior must earn a college-qualifying passing grade in all course work. A senior who is deficient in one subject may make up the deficiency during the summer, thereby qualifying him/her for receiving a late diploma.

In order for a student to qualify as the valedictorian of the graduating senior class, he/she must have completed the final two years of high school at LUPS, with no interruption of enrollment. He or she must be in good standing academically and behaviorally in order to be asked to speak at graduation and represent LUPS in this position.

ADVANCED PLACEMENT COURSES

The Advanced Placement Program of the College Board gives students the opportunity to pursue college-level studies while still in secondary school and possibly to receive advanced placement and/or credit upon entering college.

In recent years LUPS has offered AP courses in AP Literature and Composition, AP Psychology, AP Human Geography, and AP French Language and Culture. Additionally, all other AP courses are available through our accredited online partners (Michigan Virtual School, Keystone Online, and AP4All).

An AP course is a special college-level learning experience. It is challenging and thought provoking and - compared to other high school courses - it takes more time, requires more work, gives greater depth, and is more stimulating. Recommendation by the current year's teacher, motivation, and test scores are used in the screening process to ensure that students are capable of completing college-level course work and are enrolling for sound educational reasons. The program is administered through the College Board, an independent, nonprofit agency in Princeton, New Jersey.

The AP examinations are administered in May. The current fee for each examination is $130. In early July the grades are sent to the students, their designated colleges, and their schools. See the College Board web site for additional information on AP courses.

ACADEMIC ELIGIBILITY: INTERSCHOLASTIC COMPETITION, STUDENT COUNCIL. ATHLETICS, STUDENT ACTIVITIES

Being a preparatory school, there are many demands on a student's time. At LUPS, a student must first satisfy the academic demands. Any student whose cumulative or term grade point

average (GPA) falls below a 2.0 will be notified and then placed on Academic Probation for the next semester. Additionally, any student failing a core course will also be placed on Academic Probation. At the end of the following semester, grades are reviewed again, and student eligibility can be restored.

UPPER SCHOOL COURSE REQUIREMENTS and GUIDELINES:

General Information:

- All students in grades 9-12 must carry a full-day academic course load.
- Seniors must schedule at least six courses out of the seven period academic days.
- Students may only drop a course based upon pressing academic or scheduling needs and with permission of the Dean of Academics, not simply because a course is too difficult.
- Seniors who attempt to drop a course during the second semester will be required to write to the colleges to which they have been accepted to inform them of the course change.
- Study halls are generally not part of a students' academic day; however, a study hall may be assigned to an individual student based on scheduling needs at the discretion of the Dean of Academics.
- Some courses may be multi-level and integrate more than one level of challenge.
- Students taking the honors level course are expected to produce a higher quality of work, to complete some additional assignments or projects, and to be evaluated differently in testing situations.
- Students for courses in the same field may substitute AP courses when available. For example, a student may choose to and qualify to take AP Literature rather than English IV, British Literature.
- Students may be asked by the instructor to drop from an Honors level class or from an AP level class if they do not maintain adequate work habits and an acceptable grade in the course. These changes may only be done at the beginning of each semester.
- Students may be asked by the instructor to change to an Honors level class at the beginning of the school year.

- To qualify for an Honors or AP course, the student must have teacher recommendation and approval and should have earned an "A" in the previous course.

- There will be a minimal workbook fee or lab fee for some classes.

- See the Dean of Academics or the teacher of any elective course for details and prerequisites. Students may also take additional English, social studies, science, or math courses as their elective choices.

Curriculum Scope and Sequence - Grades 9 – 12

Grades 9, 10

Grammar and Composition I & II (formerly English 9 & 10)
Algebra I, Geometry, Algebra II/Trig.
World History, American History, Modem World History
Biology, Environmental Science, Chemistry
Spanish I, II, III, IV
French I, II, III, IV
Studio Art, Dance, Information Technology, Graphic Design, PE/Health, College Skills, College Writing, College Counseling, Literature and Film, Speech and Debate, Journalism, Introduction to Business

Grades 11, 12

American Literature, World Literature, AP English Literature and Composition
Algebra II/ Trig, Geometry, Pre-Calculus, Calculus, Consumer Mathematics
American History, World History, Government, Economics, Psychology, AP Psychology, AP Human Geography
Chemistry, Physics, Environmental Science, AP Environmental Science
Spanish I, II, III, IV
French I, II, III, IV, AP
Studio Art, Dance, Information Technology, Graphic Design, PE/Health, College Skills, College Writing, College Counseling, Literature and Film, Speech and Debate, Journalism, Introduction to Business

UPPER SCHOOL COURSE DESCRIPTIONS BY DEPARTMENT:

ENGLISH:

Grammar and Composition I (formerly English 9) Grades 9,10 Credit: 1

This survey course includes the formal study of the elements of composition, the results of which are several short papers and a long research paper. The requirements also include writers' workshops, which allow students or engage in more personal, creative writing. This class is also comprised of a genre-based study of literature that includes classics as well as contemporary pieces. Reading selections for the course may include longer works such as *The Odyssey, Romeo and Juliet, The Miracle Worker,* and various other appropriate literary selections chosen by the instructor each year. Students will be expected to master the conventions of grammar, usage, mechanics, and style and apply them in their own writing or analyze them in the writing of others. Students will learn to write using a variety of sentence openers and integrated grammatical components, utilizing these strategies to write expository, descriptive, narrative, and persuasive essays. Students will read several novels or plays in and out of class and respond in appropriate ways based upon the assignment given by the instructor.

Grammar and Composition II (formerly English 10) Grades 9, 10 Credit: 1

This course expands upon the knowledge gained in Grammar and Composition I. This class is also comprised of a genre-based study of literature that includes classics as well as contemporary pieces. Reading Selections of the course include The Great Gatsby, The Curious Incident of the Dog in the Night-time, as well as selections from the textbooks. As with Grammar and Composition I, students will be expected to master the conventions of grammar, usage, mechanics, and style and apply them in their own writing or analyze them in the writing of others. Students will learn to write using a variety of sentence openers and integrated grammatical components, utilizing these strategies to write expository, descriptive, narrative, and persuasive essays. Students will read several novels or plays in and out of class and respond in appropriate ways based upon the assignment given by the instructor.

American Literature (formerly English 11) Grades 11, 12
Credit: 1

This course takes an interdisciplinary approach, concentrating on literary selections by American authors, beginning with the Native American myth and working forward to more contemporary writers. Students are introduced to a range of texts in different genres and styles and develop the ability to engage in close critical textual analysis. The literary selections taught focus on promoting an understanding of the oral tradition; religious, political, historical, and social impacts on literature; early writings among Puritans and women; political rhetoric; changing literary genres from essays to poetry and short fiction; the concepts of regionalism, realism, Transcendentalism, naturalism; the Harlem Renaissance; and a host of other ideas. A number of novels and plays are read in and out of the classroom setting, generally including but

not limited to *The Crucible, The Scarlet Letter, The Red Badge of Courage, Heart of Darkness, The Awakening, Slaughterhouse Five, The Great Gatsby,* and various other selections· chosen by the instructor. Students are asked to interpret, analyze, and demonstrate their understanding of these literary classics through test taking and through writing assignments. The course introduces students to the power and purpose of an author's language. Knowledge of the literature is enriched by supplementary studies of related films. Writers' workshops present the student with a variety of challenges in both traditional types of essays, in creative writing, and in producing an MLA formatted research paper. The focus of the course will be on developing higher order thinking skills and an understanding of the finer points of written or oral communication. Students will also review vocabulary and test-taking strategies in preparation for the verbal portion of the SAT. Grammar mini-lessons and exercises in the grammar workbook will be used to teach students to incorporate these grammatical, usage, and mechanical skills into their own writing.

World Literature (formerly English 12) Grades 11, 12
Credit: 1

This comprehensive course involves an in-depth study of a collection of literary works ranging from the classics of ancient Greece and Rome to the post-modem and broadens the students' knowledge of literature from other cultures. Students generally read selections including but not limited to *The Iliad, Heart of Darkness, Ethan Frome, Of Mice and Men,* and various other works chosen by the instructor. Writing in tenth grade focuses on critical thinking, literary analysis, reading response, writing prompts and modeling. Students are asked to use available technology appropriately as part of their strategy for writing a research paper. Students also write both personal and analytical papers of varying lengths, correlating historical and social principles and specific themes with the literature they read. Students are taught to recognize persuasive techniques, bias, propaganda, or prejudice in what they read. In this course, they expand their vocabularies, refine their writing skills, and find relevancy in what they read.

AP English Language and Composition Grades 11,12 Credit: 1
This college-level course is designed for juniors and seniors with exceptional verbal ability who can handle an accelerated pace of reading plus writing assignments on a variety of topics including but not limited to the literary and nonfiction reading selections studied in class. Students will read a variety of genres including novels, poetry, drama, short stories, biographies, and essays. Many of the selections will be non-fiction so that rhetorical devices will be used. Four or five novels will be read in this course, followed by challenging class and group discussions and appropriate writing responses. An AP grading rubric will be used to assess all students' writing attempts. Grammar, mechanics, rhetoric, and style are emphasized in the writing assignments. Students will learn to outline, review, and revise their work. Practice AP essay tests and practice AP Multiple Choice tests will be given periodically throughout the course to better prepare students for the types of questions they will be asked on the AP Exam. Admission to this course is by teacher recommendation only. AP Language and Composition is

not a prerequisite for the AP Senior English course. Students may take the College Board AP Language and Composition Exam in May. There is a fee for this exam, payable to College Board. Results of the exam will be mailed to students in July. College credit may be earned for students scoring at the 3, 4, or 5 level on the exam.

AP English Literature and Composition Grades 11, 12 Credit: 1

This college-level course focuses on an in-depth study of various works of literature, including the social, political, and historical themes of these works and textual devices used by the writers. Extensive reading and literary analysis of English, American, and/or World literature selections at least from the 16th century (and possibly beginning with the 8th century) to the present are the basis of the course. The literary selections used are chosen at the teachers' discretion each year. Generally, longer reading selections include but are not limited to such works as *Beowulf, Hamlet, Macbeth, A Man for All Seasons, Great Expectations, The Importance of Being Earnest, Pygmalion, Pride and Prejudice,* and *The Awakening.* In response to the literature, students are taught to answer essay .questions concerning various literary devices and the structure of language, including theme, style, diction, rhetorical devices, syntax, figurative language, poetic devices, and many others.

An AP grading rubric will be used to assess all students' writing attempts. Grammar, mechanics, rhetoric, and style are emphasized in all the students' writing responses. Students will learn to outline, review, and revise their work. Practice AP essay tests and practice AP Multiple Choice tests will be given periodically throughout the course to better prepare students for the types of questions they will be asked on the AP Exam.

Admission to this course is by teacher recommendation only. AP Language and Composition is not a prerequisite for the AP Senior English course. Students may take the College Board AP Language and Composition Exam in May. There is a fee for this exam, payable to College Board. Results of the exam will be mailed to students in July. College credit may be earned for students scoring at the 3, 4, or 5 level on the exam.

Yearbook Elective Grades 9-12 Credit: ¼

This yearlong course is designed to produce a cumulative description of yearly student and faculty populations, as well as academic and extracurricular events. Students gain journalistic skills in writing copy, designing layouts, photography, business advertising, and graphics. The entire yearbook production is computer based. Teamwork, dedication, creativity, and reliability are essential traits for students wishing to be a part of the yearbook staff. Students must arrange to work after school hours whenever necessary in order to meet deadlines. Students are also responsible for selling advertisements as part of the grade for the course.

Speech and Debate Elective Grades 9-12 Credit: ½

This course is for students who wish to learn how to speak before an audience. Individual persuasive and informative speeches help students organize thoughts and overcome performance anxiety. Oral dramatic reading of selected literature develops poise, increases expressiveness, and improves the ability to analyze and interpret the author's meaning. Additional components of this course are for students interested in current events, public policy, politics, and excitement of a direct oral clash of ideas. The focus is on the rules of debate

and parliamentary procedure, techniques of persuasion, methods of reasoning, and the use of evidence to build compelling cases.

Journalism Elective Grades 9-12 Credit: ½
Students in this course offering learn the techniques and obligations of journalistic writing. Members of the class will work together to plan features and editorials, do copywriting, plan assignments, conduct interviews, meet deadlines, and do editing. Topics covered will also include principles of journalism, ethics, standard, and styles. Newspaper teacher approval required. The goal of the course would be to produce a high school newspaper that is issued on a regular basis.

College Writing Grades 9-12 Credit: ½
This course, co-taught by the College Counselor and English Department, readies students for the college admission process as well as what will be expected of them in college. While the English Department focuses on admissions essays and college writing, the College Counselor focuses on the application and acceptance processes.

Introduction to Business Grades 9-12 Credit: ½

Through the information and activities covered in class, students will increase their preparation to be a knowledgeable consumer, a well-prepared employee, and an effective citizen in today's economy. Topics will focus on four basic areas of business including: Finance, Marketing, Operations, and Management. This course will serve as a background for other business courses in high school and college, will present material to prepare the student for future employment and/or business ownership, and make the student a better-informed citizen for an expanding international economy in our world. The student will learn about many topics they will encounter throughout life as a consumer, worker, and citizen, along with perspectives on business and related life skills.

MATHEMATICS:

Algebra I Grade 9 Credit: 1
The Algebra I course provides the necessary foundation for all of the more advanced mathematics courses. This course is taught to students in grade nine who are at a standard or average level in math, and it is the first math course recorded on the students' high school transcripts. This course involves a study of algebraic fundamentals that are necessary to the success of the students in all future math courses. Therefore, it is essential that students demonstrate mastery of these mathematical concepts and procedures. Topics covered in this course include exploring expressions, equations, and functions; exploring rational numbers; solving linear equations; using proportional reasoning; graphing relations and functions; analyzing linear equations; solving systems of linear equations and inequalities. If students are capable of the challenge and reach the [mal chapters of the textbook, the course may also include exploring polynomials, using factoring, exploring quadratic and exponential functions,

and exploring rational expressions and equations

Geometry Grades 10 or 11 Credit: 1

Geometry emphasizes critical thinking involving the discovery of relationships and proofs. Students learn about sets of points in the plane and space and also develop skill in applying the deductive method to mathematical situations. Topics include but are not limited to the study of Euclidean geometry of lines, planes, angles, triangles, similarity, congruence, polygons, circles, area, volume, constructions, and logic. Students will study discovering points, lines, planes, and angles; connecting
reasoning and proof; using perpendicular and parallel lines; identifying congruent triangles; applying congruent triangles; exploring quadrilaterals; connecting proportion and similarity; applying right triangles and trigonometry; analyzing circles; exploring polygons and area; and investigating surface area and volume.

Algebra II / Trigonometry Grades 10 or 11 Credit: 1

Algebra II continues the study of the structure of Algebra. Topics include the review of the structure and properties of the real number system, along with the study of relations, functions, graphs, polynomial and rational expressions, exponents, logarithms, complex numbers, and word problems. A TI-82 or TI-83 graphing calculator is required for this course. The course will cover the topics of analyzing equations and inequalities; graphing linear relations and functions; solving systems of linear equations; using matrices; exploring polynomials and radical expressions; exploring quadratic functions; analyzing conic sections; exploring rational expressions; exploring trigonometric functions; using trigonometric graphs and identities; and exploring exponentials and logarithms.

Pre-Calculus Grade 11 or 12 Credit: 1

Prerequisite: Algebra II/Trig.
The Honors Pre-Calculus course is designed to prepare students to take a Calculus course. It challenges students to incorporate critical thinking and problem solving skills. Pre-calculus provides a thorough study of relations and functions with a TI-83+ graphing calculator. Algebraic, numerical, and graphical techniques are used for understanding and solving problems. The topics covered in this course include but are not limited to polynomial functions, rational functions, exponential functions, logarithmic functions, trigonometric functions, conic sections, vectors, linear transformations, limits, parametric equations, an introduction to calculus and a variety of applications.

Calculus Grade 11 or 12 Credit: 1

The Calculus course is a comprehensive look at the study of differential and integral calculus concepts including limits, derivative and integral computation, linearization, Riemann sums, the

Fundamental Theorem of Calculus, and differential equations. Applications include graph analysis, linear motion, average value, area, volume, and growth and decay models.

AP Calculus AB Grade 11 or 12 Credit: 1

Prerequisite: Algebra II/Trigonometry and Pre-Calculus and requires teacher approval
This is a college level differential calculus course for very advanced students of mathematics. The topics include: functions, limits, continuity, differentiation and applications (including curve sketching), optimization, velocity and acceleration, related rate problems, exponential and logarithmic functions, methods of integration, the calculus and application of the inverse functions (including growth and decay problems), areas, volumes of solids of revolution, numerical methods, and first and second order differential equations.
Admission to this course is by teacher recommendation only. Students may take the College Board AP Calculus AB Exam in May. There is a fee for this exam, payable to College Board. Results of the exam will be mailed to students in July. College credit may be earned for students scoring at the 3, 4, or 5 level on the exam.

AP Statisics Grades 11,12 Credit: 1

Curriculum for this course follows the AP Statistics curriculum set by the College Board and is designed to prepare students for the AP Statistics exam in May. The purpose of the AP course in statistics is to introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. This course draws connections between all aspects of the statistical process, including design, analysis, and conclusions. Additionally, using the vocabulary of statistics this course will teach students how to communicate statistical methods, results and interpretations. Students will learn how to use graphing calculators and read computer output in an effort to enhance the development of statistical understanding.
Admission to this course is by teacher recommendation only. Students may take the College Board AP Statistics exam in May. There is a fee for this exam, payable to College Board. Results of the exam will be mailed to students in July. College credit may be earned for students scoring at the 3, 4, or 5 level on the exam.

Consumer Mathematics Grades 11, 12
Credit: 1
This course is designed for students who are performing at the standard level in mathematics and who do not wish to take the pre-calculus or calculus courses but need to finish their math requirements. This course will continue their study of algebra and prepare them for introductory college level math classes.

SOCIAL SCIENCES AND HISTORY:

World History Grades 9-12
Credit: 1
This course is a study of world history and geography that provides an extensive survey of history from ancient civilizations to modem times. The course emphasizes major civilizations beginning with a review of hunting and gathering societies, the transition to agriculture, gender roles, technological innovation, evolution of social classes, role of major religions, and the structure and types of government. The purpose of the course is to engage students in a study of the significant people, events, and trends of world history. Students will be expected to understand and articulate major and minor historical themes.

Modern World History Grades 9-12
Credit: 1
The theme of his course is a study of history from 1850 to the present, including a review of the industrial and technological revolutions of the world in the later years of the 19th century. Major subjects of study include the Russian and Chinese Revolutions, the Fascist and Nazi Regimes of Europe, World War II and the Holocaust, the Cold War, Vietnam and Post-Cold War international relations. Other changes such as intensified communications, new weaponry, global environmental change, transformations in work and gender roles, and the demographics transformation are also covered. The course not only discusses the "facts" of modem history, but it includes discussion of the social, religious, intellectual, and economic trends of the modem age.

AP World History Grades 11, 12 Credit: 1

AP World History is a rigorous, college-level course designed to explore human history from 8000 B.C.E. to the present. The development of analytical and writing skills necessary for college is emphasized. The course devotes considerable time to the critical evaluation of primary and secondary sources, analysis of historiography, and inquiry into the global connections that have shaped our present world. This course is designed to prepare students for the AP World History Exam.
Admission to this course is by teacher recommendation only. Students may take the College Board AP World History Exam in May. There is a fee for this exam, payable to College Board. Results of the exam will be mailed to students in July. College credit may be earned for students scoring at the 3, 4, or 5 level on the exam.

AP European History Grades 11, 12 Credit: 1
This course is a rigorous, college-level course only to be undertaken by the serious, motivated student. The course is both reading and writing intensive. This means that students are subject

to the following requirements: reading the entire textbook; reading four to six other books as assigned by the instructor; reading numerous other handouts; writing frequently and competently on various historical and technical topics; completing a wide variety of other enrichment activities or projects; and participating in scheduled salons to discuss history and philosophy.
Admission to this course is by teacher recommendation only. Students may take the College Board AP European History Exam in May. There is a fee for this exam, payable to College Board. Results of the exam will be mailed to students in July. College credit may be earned for students scoring at the 3, 4, or 5 level on the exam.

United States (American) History Grades 9-12 Credit: 1
After a review of U.S. history through the Civil War and Reconstruction, students in this course will learn about the history of the United States from the Reconstruction era through the Cold War. Emphasis will be placed on the political development of institutions and traditions, the development of a unique American character, and the influences of isolationism and internationalism on foreign policy. Special attention will be given to the Constitution, national government, and trend towards centralization of political powers. This course encompasses certain critical events and developments in American history that students will be expected to analysis and evaluate.

AP United States History Grades 11, 12 Credit: 1
This course is an accelerated, college-level survey course designed to provide students with the analytic skills and factual knowledge necessary to deal critically with the events of United States history. This class explicitly prepares students for the AP Exam by training them in the analysis and interpretation of critical historical documents and the writing of analytical essays. The class encourages more independent preparation and uses research assignments, class discussions, and practice exams. The first semester will cover major topics of the American historical experience for the period of discovery and exploration through the Civil War and the Reconstruction Era. The second semester will continue the chronological development to the present. The major objective of the course is to have the student examine the American experience from an analytical viewpoint and write an AP level essay in response. Students will learn to assess historical materials and to weigh the evidence and interpretations presented in historical scholarship. An AP history course should develop the skills necessary to arrive at conclusions on the basis of an informed judgment and to present reasons and evidence clearly and persuasively in essay format. Students are required to write one book review and one film review as part of the course.
Admission to the AP United States History course is by teacher recommendation only. Students may take the College Board AP U.S. History Exam in May. There is a fee for this exam, payable to College Board. Results of the exam will be mailed to students in July. College credit may be earned for students scoring at the 3, 4, or 5 level on the exam.

American Government Grades 11,12 Credit: 1/2
Students in American Government course will begin by reviewing some basic theories of

government, and then examine the principles of the American government in particular. American Government asks students to be able to identify and understand the significance of major documents from American history, which formed the United States and charted the course for the government of the U.S. Emphasis, will be placed on the Constitution, Bill of Rights, organization of the central government and the political development of institutions and traditions within government. Political parties throughout American history will be studied~ as well as key elections. Special attention will be given in this course to the centralization of political powers and the continuous growth of the federal government over time.

Economics Grades 11, 12 Credit: ½

Economics is a one semester, required course that is taken during one half of the senior year. Economics examines how markets for goods and services have evolved over time. A study of supply, demand, and price at the level of the firm and industry are studied. Business institutions and their operations are explored.

Psychology Grades 11, 12 Credit: 1

This is an introductory level course that examines topics, problems and approaches in contemporary psychology. Topics include the biological basis of behavior, sensation, perception, attention, learning and memory, cognition, language, abnormal behavior and therapies, personality and individual differences, child development and social psychology.

AP Psychology Grades 10-12 Credit: 1

The AP Psychology course is designed to introduce students to the systematic and scientific study of the behavior and mental processes of human beings and other animals. Students are exposed to the psychological facts, principles, and phenomena associated with each of the major subfields within psychology. They also learn about the ethics and methods psychologists use in their science and practice. Areas covered include: history of psychology; research methods; biological bases of behavior; sensation and perception; cognitive psychology; physical, social and emotional development; abnormal behavior and therapies; social psychology; and gender differences. This is a rigorous and demanding course requiring students to have a strong work ethic, to read at a rigorous pace, and to complete a variety of writing assignments. Students are expected to demonstrate strong writing and analytical skills and independent work habits. This course follows the APA guidelines for Advanced Placement Psychology, and all students are expected to take the AP exam.

Admission to the AP Psychology course is by teacher recommendation only. Students may take the College Board AP U.S. History Exam in May. There is a fee for this exam, payable to College Board. Results of the exam will be mailed to students in July. College credit may be earned for students scoring at the 3, 4, or 5 level on the exam.

Global Studies Grades 9-12 Credit: 1

This course introduces the phenomenon of globalization and broad range of cultural, economic,

political, and social issues confronting globalized world today. Structured around three thematic categories -- culture and society, governance and conflict, and markets -- designed to capture principal dimensions of multifaceted connections among nation-states, nongovernmental organizations, ethnic, cultural, and religious groups, and populations around world.

College Skills Grades 9-12 Credit: 1/2

College Skills is a course designed to help students get ready for SATs and College Prep courses and ultimately college itself. Students will be able to

- Learn time management and organizational skills
- Understand Library Resources
- Evaluate historical data and Document Based items from Caribbean History
- Develop better reading & vocabulary skills
- Apply successful test taking strategies
- Develop effective strategies to better utilize class time
- Analyze and apply individual learning styles
- Work in a learning community for greater college success
- Analyze and apply critical thinking techniques
- Learn effective communication within the college setting
- Critical writing and reading strategies
- Notes from lectures and videos
- Common core standards in Math & Social Studies
- Application of Music and Math

Aim. The emphasis on this course is on learning skills that are essential for success in college work. This includes strategies for a successful transfer first year community colleges and universities.

SCIENCE:

Biology Grades 9, 10 Credit: 1

This course is designed to provide a general overview of the study of living organisms. The course is divided into six themes that allow students to focus learning on connections among major ideas and concepts. These six themes are unity in diversity, evolution, energy, homeostasis~ systems and interactions, and the nature of science. Topics of study include all cell structure, principles and mechanisms of hereditary, human, animal and plant physiology, study of bacteria, classification of organisms, and habitat interactions. Students acquire fundamental concepts and principles in biological sciences using scientific inquiry and problem solving skills. Laboratory sections provide for hands on experiences and are an integral learning accompaniment to this and any science course. Labs should occur at approximately the rate of one per week. Other learning activities include videos~ computer internet studies using the "Smart Board" interactive computer~ studies in the computer lab~ use of anatomical models,

charts and specimens for dissection.

AP Biology Grades 11 or 12 Credit: 1

Prerequisites: Biology and Chemistry with no less than a "B" in both

This highly accelerated, college-level course that is taught at the high school level; therefore, the expectation is that students perform at this higher level of achievement. The content is rigorous and in depth and proceeds at a rapid pace. The course includes an all-inclusive study of such topics as

cellular metabolism, photosynthesis, molecular genetics, cell reproduction, microorganisms, ecology, and genetics. There are twelve lab activities produced by the College Board to accompany the course content. There are eleven basic themes in the study of life covered in eight units. These units include:

The Chemistry of Life, The Cell, Genetics, Mechanisms of Evolution, The Evolutionary History of Biological Diversity, Plant Form and Function, Animal Form and Function, and Ecology. In addition to the major lab component, intense writing assignments are included to prepare for the essay portion of the AP exam. There are three major components of the AP exam, which are Molecules and Cells; Heredity and Evolution; Organisms and Populations. The text, *Biology,* by Neil Campbell, is used at colleges across the country.

Admission to the AP Biology course is by teacher recommendation only. Students may take the College Board AP Biology Exam in May. There is a fee for this exam, payable to College Board. Results of the exam will be mailed to students in July. College credit may be earned for students scoring at the 3, 4, or 5 level on the exam.

Chemistry Grades 10-12 Credit: 1

This introductory course to chemistry includes an introduction to atomic theory and organic chemistry. Concepts of energy relationships, chemical bonding, acids and bases, formula writing, states of matter, physical and chemical equilibrium, and the periodic table are introduced. The laboratory section for this course thoroughly familiarizes the students with equipment, laboratory safety, and experimental procedure.

AP Chemistry Grades 10-12 Credit: 1

AP Chemistry is equivalent to a college level general chemistry course that provides rigorous study in four major areas: structure of matter, states of matter, reaction and descriptive chemistry. Students must be highly motivated to tackle this rigorous course. At the end of the year, students are encouraged to take the Advanced Placement Examination for college credit. Students taking this course may be required to complete laboratory work outside of the regular class time. The student will demonstrate a basic understanding of, and the ability to apply, mathematical solutions to problems involving atomic theory and structures, chemical bonding, nuclear chemistry, kinetic theory, solutions, reaction types, stoichiometry, equilibrium, kinetic,

thermodynamics, and descriptive chemistry. Evaluation is based on homework, lab reports and tests.
Admission to the AP Chemistry course is by teacher recommendation only. Students may take the College Board AP Chemistry Exam in May. There is a fee for this exam, payable to College Board. Results of the exam will be mailed to students in July. College credit may be earned for students scoring at the 3, 4, or 5 level on the exam.

Physics Grades 11, 12 Credit: 1

This course provides high school students with an introductory study of the theories and laws governing the interaction of matter, energy, and the forces of nature. It challenges students to incorporate critical thinking and problem solving skills. The topics include but are not limited to kinetics, dynamics, energy, work, power, heat and thermodynamics, wave properties, light, sound, electricity, magnetism, and nuclear physics. Mathematical treatments of essential concepts are used in this course. The needed mathematical knowledge includes some trigonometric functions, basic algebra, and some vector analysis. This course involves a three-stage learning cycle. Stage one, Exploration, is done before students are introduced to textbook material. Students are asked to do an activity or observe a demonstration. In stage two, Concept Development, the focus is on the physics concepts from the textbook and may be done through lecture, reading assignments, demonstrations, practice-sheet assignments, and class discussions. In the final stage, Application, the focus is on experiments in the laboratory portion of the course and on the algebraic problems that are done in class and for homework. The students are now asked to use the concepts. Laboratory sections emphasize practical work and are an integral part of the course.

Environmental Science Grades 9-12 Credit: 1

The environmental science course is designed to immerse students in the physical, biological, and earth systems sciences that shape our environment. Scientific concepts, principles and modern science practices allow students to analyze environmental issues, both natural and human induced, and engage in evidence-based decision making in real world contexts.

AP Environmental Science Grades 9-12 Credit: 1

AP Environmental Science is designed to be the equivalent of an introductory college course in environmental science The goal of the AP Environmental Science course is to provide students with scientific principles, concepts and methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems both natural and human-made, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving or preventing them. The AP Environmental Science course is an excellent option for any interested student who has completed two years of laboratory science in Biology and Chemistry. The course includes laboratory and field investigations. The goal of this component is to complement the classroom portion of the

course by allowing students to learn about the environment through firsthand observation. Experiences both in the laboratory and in the field provide students with important opportunities to test concepts and principles that are introduced in the classroom exploring specific problems with a depth not easily achieved otherwise and gain an awareness of the importance confounding variables that exist in the "real world".
Admission to the AP Environmental Science course is by teacher recommendation only.
Students may take the College Board AP Environmental Science Exam in May. There is a fee for this exam, payable to College Board. Results of the exam will be mailed to students in July. College credit may be earned for students scoring at the 3, 4, or 5 level on the exam.

FOREIGN LANGUAGES:
SPANISH:

Spanish I Grades 9-12 Credit: 1
This beginning high school level course may be started in grade· eight and presents language structure and vocabulary in an audio-lingual manner. The goal of the course is to develop student' comprehension skills in Spanish through listening and reading activities. At the end of the course, students will be able to understand some ideas and familiar details presented in clear, uncomplicated speech when listening. Additionally, students will be able to understand short texts enhanced by visual clues when reading. Conversational sequences, routine dialogues, written lessons and drills comprise many of the main activities. The course will develop students' ability to use Spanish to express themselves orally and in writing. The teaching of Hispanic culture, comparisons with English language, and connections with other disciplines is integrated into the curriculum.

Spanish II Grades 9-12 Credit: 1
Students will use, refine, and expand knowledge and skills mastered in the previous course. Reading, which is introduced in the previous course, progresses from identical patterns to re-combinations of already mastered familiar patterns. Directive studies in grammar and dictation as well as presentation of cultural topics are an integral part of this course. Students continue to develop the communicative skills of listening, speaking, reading, and writing using more complicated grammar structures along with the basic structures already familiar to the student. At this level, students' ability to produce and understand the target language will encompass the simple present, past indicative, and the simple future. Reading selections will reflect the grammar mastery limitations but will seek to expand vocabulary knowledge and usage. It is expected that the student will demonstrate a higher level of performance in receptive skills than in productive skills. It should be noted that it is very rare in foreign language study for a student to perform at the same level in all four skills (reading, listening, writing, and speaking)

Spanish III Grades 9-12
Credit: 1
This course extends language skills learned in previous courses. The focus is on communication and culture. Students will be presented with new material while reviewing, reinforcing, and

gradually expanding previously studied concepts and vocabulary. Exercises and activities are communication-oriented, allowing for progression that guides students from comprehensible input of authentic language through structured practice to creative, personalized expression. This progression is accompanied by consistent re-entry of grammar functions, vocabulary, and structures. Grammar is not the focus of the course, but students will be expected to perform at a higher level of proficiency. Conversational skills are developed on specific topics. Reading of abridged literary works is implemented and the writing program is expanded. Students will further their knowledge of and appreciation for the culture of Spanish-speaking countries.

Spanish IV Grades 9-12

Credit: 1

This course introduces students to Spanish and Latin American literature and history through readings and discussions. Authentic reading materials are introduced in which students focus on appreciation and comprehension. Guided simple composition is strengthened by means of frequent written assignments. ill addition to dictation and composition, vocabulary, conversations, oral presentation, reading, and cultural studies comprise the scope of this advanced class. Students taking this course generally do so in preparation for a possible AP Spanish course. Travel and study abroad is a possibility for this course.

AP Spanish Grades 11 or 12

Credit: 1

The advanced placement (AP) program is designed to provide promising students the opportunity to engage in an intensive, accelerated course of study. This course is a culmination of the Spanish I-IV sequence. It focuses on reading Spanish literature. The basic objectives are progress in reading, speaking, translating, understanding analyzing and interpreting Spanish. Admission to the AP Spanish course is by teacher recommendation only. Students may take the College Board AP Latin Exam in May. There is a fee for this exam, payable to College Board. Results of the exam will be mailed to students in July. College credit maybe earned for students scoring at the 3, 4, or 5 level on the exam.

FRENCH

French I Grades 9-12

Credit: 1

Students acquire working use of a fundamental vocabulary of contemporary French. Students develop the ability to converse in French about such topics as school, family, friends, the house, time, numbers, food, shopping, and personal activities. A wide variety of instructional materials are employed. Students also begin to learn about French history through readings and projects.

French II Grades 9-12

Credit: 1

French II builds on the student's elementary knowledge of French and is designed to develop the fundamental skills necessary for genuine oral and written communication. Topics studied include travel, summer and winter sports, clothes, physical fitness and health, and means of transportation. Students also continue learning about French history and the traditions of other Francophone cultures.

French III Grades 9-12

Credit: 1

French III continues to develop the student's ability to effectively communicate on everyday topics such as daily routine, environment, medical care, city life, university studies, and careers. All communication is in French. An intensive review of grammar accompanies an introduction to French literature and literary analysis. Guided essays and conversations on topics discussed are geared towards sharpening a student's descriptive and narrative prose. In addition to continues instruction in the history of France, students are also exposed to Francophone culture and history via activities, discussions, films, and projects.

French IV Grades 9-12

Credit: 1 French IV is designed to teach students to verbally communicate and write wholly in French by focusing on readings about milestone events and important figures from the Renaissance to the Modern period. Students will discuss topics that require intensive use of advanced grammar patters. Emphasis will be placed on correct pronunciation, inflection, intonation, as well as reading for content, theme, vocabulary development, cultural and historical content, and nuance. Students will pursue this intensive study of literature and literary analysis through short stories, poems, novels, and passages from important works by French and Francophone (Canadian, African, Caribbean) writers.

AP French Language and Culture Grades 9-12

Credit: 1

This is an advanced level course wherein students will experience a full immersion into Frech conversation, literature, and culture. AP French Language and Culture is a college-level course designed to emphasize the use of language for active communication and in preparation for the Advanced Placement exam.

The objectives are the development of:

A) The ability to understand spoken French in a various contexts.

B) A French vocabulary sufficiently ample for reading literary texts, magazine and newspaper articles, non-technical writings, etc.

C) The skills necessary to express oneself coherently, creatively, and with reasonable fluency and accuracy in both spoken and written French.

D) An increased knowledge of Francophone world/cultures.

The course is conducted exclusively in French at all times in the classroom and students are expected to communicate in French at all times in the classroom and during online activities and collaboration. Students have the opportunity to demonstrate proficiency by engaging in daily activities that require the three modes of communication (Interpersonal, Interpretive, and Presentational) as defined in the standards for foreign language learning in the 21st century. The course is designed around six themes (Global Challenges, Science and Technology, Contemporary Life, Personal and Public Identities, Families and Communities, and Beauty and Aesthetics) that provide a basis for an in-depth study of French language and its many cultures. Students use two primary textbooks to hone their speaking, listening, reading, and writing skills. Authentic materials and resources will also be unsed on a daily basis to serve as a springboard for discussion of the sic major themes and sub-themes. Students are expected to take the AP French Language and Culture exam at the end of the course.

POSSIBLE ELECTIVE CHOICES FOR UPPER SCHOOL:

Physical Education Electives:

Phyisical Education and Health
Dance

Technology Electives:

Information Technology
Yearbook
Graphic Design

Fine Arts Electives:

Dance
Chorus
Drama
Studio Art
Film
Graphic Design

English Electives:

Yearbook
Journalism
College Writing
Literature and Film

Social Studies Electives:

Speech and Debate
Psychology

Economics
College Skills

PHYSICAL EDUCATION AND HEALTH

Health Credit: ½

This required one-semester course will help individuals develop the concept of physical, mental, emotional, and social wellness throughout the stages of life. The course topics consist of mental and emotional health, family and social health, human body systems and nutrition, substance awareness, community and environmental health, and safety and first aid. Specific issues covered include wellness, drug and alcohol abuse, sex education, and other related topics. The course also explores how health affects society and how society affects health.

TECHNOLOGY

Information Technology Grades 9 -10 Credit: ½

This course is designed to help students meet their basic technology requirement and to introduce them to basic skills they will find useful in other classes. In this course students learn the Microsoft Office Standard software, including Microsoft Word, Microsoft Excel, and Microsoft Power Point. The impact of technology use in the home, business, industry, and society at large is studied in this course. The course concludes with a final project that will merge all three applications together.

Graphic Design Grades 9-12

Credit: ½

In this course students are introduced into a professional environment and are expected to treat the classroom more like an office, and to behave more like an employee than a student. Over the course of the school year we will complete graphic design projects similar to real world assignments at varying skill level. Each assignment gets more and more complex, from creating a simple "Google Doodle" to a poster to promote a local event to building a complete corporate suite with full brand identity. This class will provide real life lessons in the business world and give students a glimpse into the competitive field of design. We even had the opportunity to participate in our very own design competition for a real client. Students will become familiar with the practice of social media, marketing, advertising and public relations with how it relates to graphic designs. This will also enhance computer literacy with the mastering of the Photoshop, improving research skills and basic troubleshooting when a deadline is fast approaching.

ARTS

Dance Credit: ½

This course is a new elective course that would provide basic training in various types of dance,

especially dance for theater or for performance. The instructor will determine the types, styles, or elements of dance that will be studied and performed for each year. Students may also train for participation in the school Dance Troupe.

Chorus Credit:½

This course is opened to all interested students who enjoy singing individually or in small groups. They explore a wide variety of musical styles, vocal techniques, and music selection. Small ensemble performs a cappella and accompanied classical, jazz, and popular music. The structure or schedule of the course may be altered based upon the number of students enrolled in the class.

Drama Credit:½

Drama is an elective course that serves as an introduction to various aspects of theater, theater history, stage production, directing and acting. This course exposes students to theater arts through writing about personal experience and heritage, imagination, literature, and history. Students are expected to interact in improvisations and to assume various roles and voices. They will also plan and present informal and formal productions. Students will compare and integrate art forms by analyzing and performing traditional theater, dance, music, visual arts, and new art forms. Studies may also include critiques of informal and formal theater, film, television, and electronic media productions.

Studio Art Credit: 1

This course provides the student with a survey of art from ancient civilizations to the present. Students taking the course will become familiar with basic principles of drawing, visual theory and design, presentation, history, and rules of critique. This will occur through lectures, assignments and projects, museum visits, research projects, and critiques. Primary projects generally include: drawing, ceramics, wire and "found object" sculpture, painting with acrylics, painted furniture, papier-mâché and other projects of student choice. Students will also be expected in the course to prepare and present a report on an artist or time period of their choice.

Study Skills Credit: ½

The Study Skills sessions will help students develop the skills they need to improve all grades, build confidence and plan for the future. This course will help students to use their learning style and existing skills effectively to develop core study skills in time management, academic writing, critical thinking and more. Some topics are: * Effective study strategies * How to get good grades * Learning from lectures * Independent study * Reading strategies * Research strategies * Memory * Motivation * Organizational skills * Time management * Getting support at home and school * Common core standards in Math & Social Studies

NOTE: Several of the required academic courses above may be offered with an "Honors" designation, requiring a higher level of work and expectations. Please ask the appropriate teacher or Upper School Administrator for more details if you are interested.

Grades 9
Algebra I

Basic assumptions for mathematics education:
All students will have access to calculators and computers; classroom activities will be student-centered; all courses will have increased emphasis on problem-solving, estimation, and real-world applications; evaluation will include alternative methods of assessment.

Major Concepts/Content.
The purpose of this course is to develop the algebraic concepts and processes that can be used to solve a variety of real-world and mathematical problems.

The content includes, but not is limited to, the following:

- Structure and properties of the real number system, including rational and irrational.
- Numbers - exponents, square roots, radicals, absolute value, and scientific notation.
- Varied means for analyzing and expressing patterns, relations, and functions, including words, tables, sequences, graphs, and algebraic equations.
- Variables, algebraic expressions, polynomials, and operations with polynomials.
- Coordinate geometry and graphing of equations and inequalities.
- Data analysis concepts and techniques including introductory statistics and probability.
- Varied solution strategies, algebraic and graphic, for inequalities, linear and quadratic equations, and for systems of equations.

After successfully completing this course, the student will:

- Demonstrate understanding of the different ways numbers are represented and used in the real world.
- Associate verbal names, written word names, and standard numerals with integers, rational numbers, irrational numbers, real numbers, and complex numbers.
- Understand the relative size of integers, rational numbers, irrational numbers, and real numbers.
- Understand concrete and symbolic representations of real and complex numbers in real-world situations.
- Understand that numbers can be represented in a variety of equivalent forms, including integers, fractions, decimals, percents, scientific notation, exponents, radicals, absolute value, and logarithms.
- Demonstrate understanding of number systems.
- Understand and use the basic concept of infinity.

- Understand and use the real number system.
- Demonstrate understanding of the effects of operations on numbers and the relationships among these operations, select appropriate operations, and compute for problem solving.
- Understand and explain the effects of addition, subtraction, multiplication, and division on real numbers, including square roots, exponents, and appropriate inverse relationships.
- Select and justify alternative strategies, such as using properties of numbers, including inverse, identity, distributive, associative, and transitive, that allow operational shortcuts for computational procedures in real-world or mathematical problems.
- Add, subtract, multiply, and divide real numbers, including square roots and exponents, using appropriate methods of computing, such as mental mathematics, paper and pencil, and calculator.
- Demonstrate understanding and apply theories related to numbers.
- Apply special number relationships such as sequences and series to real-world problems.
- Compare, contrast, and convert within systems of measurement (both standard/nonstandard and metric/customary).
- Select and use direct (measured) and indirect (not measured) methods of measurement as appropriate.
- Solve real-world problems involving rated measures (miles per hour, feet per second).
- Estimate measurements in real-world problem situations.
- Solve real-world and mathematical problems involving estimates of measurements, including length, time, weight/mass, temperature, money and perimeter.
- Describe, analyze, and generalize a wide variety of patterns, relations, and functions.
- Describe, analyze, and generalize relationships, patterns, and functions using words, symbols, variables, tables, and graphs.
- Determine the impact when changing parameters of given functions.
- Use expressions, equations, inequalities, graphs, and formulas to represent and interpret situations.
- Represent real-world problem situations using finite graphs, matrices, sequences, series, and recursive relations**.**
- Use systems of equations and inequalities to solve real-world problems graphically, and algebraically**.**
- Demonstrate understanding and use the tools of data analysis for managing information.
- Calculate measures of central tendency (mean, median, and mode) and dispersion (range, standard deviation and variance) for complex sets of data and determine the most meaningful measure to describe the data**.**
- Analyze real-world data and make predictions of larger populations by applying formulas to calculate measures of central tendency and dispersion using the sample population data and using appropriate technology, including calculators and computers.
- Identify patterns and make predictions from an orderly display of data using concepts of

probability and statistics.

- Determine probabilities using counting procedures, tables, tree diagrams and formulas for permutations and combinations**.**
- Determine the probability for simple and compound events as well as independent and dependent events.

Grade 9
English I College Preparatory

Basic Assumptions for Language Arts Education:
Reading, writing, speaking, listening and viewing competencies are integrated throughout students' learning experiences. Benchmarks are repeated as needed in course sequences. As students progress from one course to the next, increases should occur in the complexity of materials and tasks and in the students' independence in the application of skills and strategies. Learning tasks and materials accommodate the individual needs of students. Technology is available for students to develop competencies in the language arts.

Major Concepts/Content
The purpose of this course is to provide integrated educational experiences in the language arts strands of reading, writing, listening, viewing, speaking, language, and literature.

The content includes, but is not limited to, the following:

- Using reading strategies to construct meaning from informative, technical, and literary texts.
- Acquiring an extensive vocabulary through reading, discussion, listening, and systematic word study.
- Using process writing strategies, student inquiry, and self-monitoring techniques.
- Using speaking, listening, and viewing strategies in formal presentations and informal discussions.
- Understanding and responding to a variety of literary forms.
- Understanding and using language successfully to impact readers, writers, listeners, speakers, and viewers.

After successfully completing this course, the student will:

- Use reading strategies effectively to construct meaning from a range of technical, informative, and literary texts.
- Select and use pre-reading strategies that are appropriate to the text, such as discussion, making predictions, brainstorming, generating questions, and previewing to anticipate content, purpose, and organization of a reading selection.
- Select and use strategies to understand words and text, and to make and confirm inferences from what is read. Refine vocabulary for interpersonal, academic, and workplace situations, including figurative, idiomatic, and technical meanings.
- Apply a variety of response strategies, including rereading, note taking, summarizing, outlining, writing a formal report, and relating what is read to his or her own

experiences and feelings.
- Determine the main idea and identify relevant details, methods of development, and their effectiveness in a variety of types of written material.
- Determine the author's purpose and point of view and their effects on text.

- Locate, gather, analyze, and evaluate written information for a variety of purposes, including research projects, real-world tasks, and self-improvement.
- Identify devices of persuasion and methods of appeal and their effectiveness.
- Select and use appropriate study and research skills and tools according to the type of information being gathered or organized, including news sources, and information services.
- Analyze the validity and reliability of primary source information and use the information appropriately.
- Synthesize information from multiple sources to draw conclusions.
- Use process-writing strategies effectively to meet the needs of a variety of audiences, writers, and types of information being communicated.
- Select and use appropriate prewriting strategies, such as brainstorming, graphic organizers, and outlining.

Students will draft and revise writing that:
- Is focused, purposeful, and reflects insight into the writing situation.
- Has an organizational pattern that provides for a logical progression of ideas.
- Has effective use of transitional devices that contribute to a sense of completeness.
- Has support that is substantial, specific, relevant, and concrete.
- Demonstrates a commitment to and involvement with the subject.
- Uses creative writing strategies as appropriate to the purpose of the paper.
- Demonstrates a mature command of language with precision of expression.
- Has varied sentence structure, and has few, if any, conventional errors in mechanics and usage.

Students will produce final documents that have been edited for:
- Correct spelling, correct punctuation, including commas, colons, and common use of semicolons, correct capitalization.
- Correct sentence formation.
- Correct instances of possessives, subject/verb agreement, noun/pronoun agreement, and the intentional use of fragments for effect.

Students will write fluently for a variety of occasions, audiences, and purposes, making appropriate choices regarding style, tone, level of detail, and organization.

Students will:
- Select and use appropriate speaking, listening, and viewing skills to clarify and interpret meaning in both formal and informal contexts.

- Understand the common features of a variety of literary forms.
- Select and use appropriate listening strategies according to the intended purpose, such as solving problems, interpreting and evaluating the techniques and intent of a presentation, and take action in career-related situations.

- Describe, evaluate, and expand personal preferences in listening to fiction, drama, literary nonfiction, and informational presentations.
- Use effective strategies for informal and formal discussions, including listening actively and reflectively, connecting to and building on the ideas of a previous speaker, and respecting the viewpoints of others.
- Identify bias, prejudice, or propaganda in oral messages.
- Determine main concept and supporting details in order to analyze and evaluate non-print media messages.
- Understand factors that influence the effectiveness of nonverbal cues used in non-print media, such as the viewer's past experiences and preferences, and the context in which the cues are presented.
- Use volume, stress, pacing, enunciation, eye contact, and gestures that meet the needs of the audience and topic.
- Select and use a variety of speaking strategies to clarify meaning and to reflect understanding, interpretation, application, and evaluation of content, processes, or experiences (including asking relevant questions when necessary, making appropriate and meaningful comments, and making insightful observations).
- Use details, illustrations, analogies, and visual aids to make oral presentations that inform, persuade, or entertain.
- Apply oral communication skills to interviews, group presentations, formal presentations, and impromptu situations.
- Develop and sustain a line of argument and provide appropriate support.
- Identify the characteristics that distinguish literary forms.
- Identify universal themes prevalent in the literature of all cultures.
- Understand the characteristics of major types of drama. Understand the different stylistic, thematic, and technical qualities present in the literature of different cultures and historical periods.
- Understand genres in fiction and read and engage in analysis of a variety of fiction genres including, but not limited to: fantasy, science fiction, and picaresque.
- Respond critically and aesthetically to literature.
- Demonstrate understanding and use of appropriate language for effective visual, oral, and written communication.
- Describe and evaluate personal preferences regarding fiction and nonfiction.
- Analyze the effectiveness of complex elements of plot, such as setting, major events, problems, conflicts, and resolutions.
- Understand the relationships between and among elements of literature, including characters, plot, setting, tone, point of view, and theme.
- Analyze poetry for the ways in which poets inspire the reader to share emotions, such as

the use of imagery, personification, and figures of speech, including simile and metaphor; and the use of sound, such as rhyme, rhythm, repetition, and alliteration.

- Recognize and explain those elements in texts that prompt a personal response, such as connections between one's own life and the characters, events, motives, and causes of conflict in texts.
- Apply an understanding that language and literature are primary means by which culture is transmitted.
- Make appropriate adjustments in language use for social, academic, and life situations, demonstrating sensitivity to gender and cultural bias.
- Understand specific ways in which language has shaped the reactions, perceptions, and beliefs of the local, national, and global communities.
- Understand the subtleties of literary devices and techniques in the comprehension and creation of communication.
- Select and use a variety of electronic media to create, revise, retrieve, and verify information.
- Write text, notes, outlines, comments, and observations that demonstrate comprehension and synthesis of content, processes, and experiences from a variety of media.
- Organize information using appropriate systems.
- Select and use a variety of electronic media, such as the Internet, information services, and desktop-publishing software programs, to create, revise, retrieve, and verify information.
- Demonstrate understanding of the impact of mass media.
- Critically analyze specific elements of mass media with regard to the extent to which they enhance or manipulate information.

HONORS PROGRAM

In addition to the above curriculum, the Honors program requires students to undertake a succession of topics for independent study that go beyond the knowledge base covered in the College Preparatory course. Students are required to complete:

- A comparative study of selected poets from the 16th century to modern era, analyzing form, rhyme, rhythm, imagery.

- A comparative study of selected short stories, analyzing characterization, point of view, tone, theme and plot.

- A comparative study of selected dramatic works.

Grades 9

American History and Honors

Major Concepts/Content.

The purpose of this course is to enable students to understand the development of the United States within the context of history with a major focus on the post-Reconstruction period. Students will use knowledge pertaining to history, geography, economics, political processes, religion, ethics, diverse cultures, and fundamentalism to solve problems in an academic, civic, social, and employment settings.

Requirements for Honor Students of this course include: a GPA of 95% or higher to first be considered, a consistent and continuous display of effort both in and outside the classroom and finally the ability to advocate a significant workload.

The content should include, but not be limited to, the following:

- A comprehensive review of American history from 1600 – present
- An analysis of ancient cultures of North America
- time-space relationships
- significant events and trends in the development of United States culture and
- the impact of institutions on the expansion on the United States
- origin of United States documents, ideals, and characteristics
- the changing role of the U.S. Constitution
- political, social, and economic conflicts and resolutions
- technological and urban transformation of the United States
- changes in lifestyles of United States citizens
- changes in United States foreign policy from regional to global
- cyclical characteristics of United States economic development
- contemporary domestic and foreign issues that affect the United States
- an evaluation of fundamental change in American citizens over time

After successfully completing this course, the student will:

- Demonstrate understanding of the historical development of the United States.
    - understand the economic, social, and political interactions between Native American tribes and European settlers during the Age of Discovery.
    - understand how religious, social, political, and economic developments shaped the settlement patterns of the North American colonies.
    - understand the significant military and political events that took place during the American Revolution.

- understand the political events that defined the Constitutional period.
- understand the significant political events that took place during the early national period.
- understand the military and economic events of the Civil War and Reconstruction.

- Demonstrate understanding of the impact of significant people, ideas, and events on the development of values, traditions, and social, economic, and political institutions in the United States.
    - Recall the causes of the Industrial Revolution and its economic, political, and cultural effects on American society.
    - Understand significant events leading up to the United States involvement in World War I and the political, social, and economic results of that conflict in Europe and the United States.
    - Understand social transformations that took place in the 1920s and 1930s, the principal political and economic factors that led to the Great Depression, and the legacy of the Depression in American society.
    - Perceive the origins and effects of the involvement of the United States in World War II.
    - Understand the political events that shaped the development of United States foreign policy since World War II and know the characteristics of that policy.
    - Understand the development of federal civil rights and voting rights since the 1950s and the social and political implications of these events.
    - Comprehend significant political events and issues that have shaped domestic policy decisions in contemporary America.
    - Understand how government taxes, policies, and programs affect individuals, groups, businesses, and regions.

- Demonstrate understanding of the significance of physical and cultural geography on the development of the United States society.
    - Use mental maps of physical and human features of the world
    - To answer complex geographic questions:
    - Understand how cultural and technological characteristics can link or divide regions.
    - Understand how various factors affect people's mental maps.
    - Understand how social, cultural, economic, and environmental factors contribute to the dynamic nature of regions.
    - Understand past and present trends in human migration and Understand cultural interaction and their impact on physical and human systems.
    - Understand how the allocation of control of the Earth's

surface affects interactions between people in different regions.
    - Know how humans overcome “limits to growth” imposed by physical obstacles.
    - Understand the relationships between resources and the exploration, colonization, and settlement of different regions of the world.
    - Understand the concept of sustainable development.

- Demonstrate understanding of current and historic events in relation to the experiences, contributions, and perspectives of diverse cultural and ethnic groups, including slavery, the passage of slaves to America, abolition, and the contributions of African-Americans to society.
    - identify and understand themes in history that cross- scientific, economic, and cultural boundaries.
    - understand the social and cultural impact of immigrant groups and individuals on American society after 1880.
    - understand the role of special interest groups, political parties, the media, public opinion, and majority/minority conflicts on the development of public policy and the political process.
    - understand issues of personal concern: the rights and responsibilities of the individual under the U.S. Constitution; the importance of civil liberties; the role of conflict resolution and compromise; and issues involving ethical behavior in politics.

- Demonstrate understanding of the processes used to create and interpret history.
    - understand how ideas and beliefs, decisions, and chance events have been used in the process of writing and interpreting history.
    - evaluate conflicting sources and materials in the interpretation of a historical event or episode.
    - use chronology, sequencing, patterns, and periodization to examine interpretations of an event.

- Demonstrate understanding of the interactions among science, technology, and society within the context of the historical development of the United States.
    - identify and understand themes in history that cross- scientific, economic, and cultural boundaries.
    - understand the global impacts of human changes in the physical environment.

- Apply research, study, critical-thinking, and decision-making skills and demonstrate the use of new and emerging technology in problem solving.
    - use a variety of maps, geographic technologies including geographic information systems (GIS) and satellite-produced imagery, and other advanced graphic representations to depict geographic problems.
    - understand the advantages and disadvantages of using maps

      from different sources and different points of view. (**Note:** In this course, students will have opportunities to apply skills described in language arts and mathematics benchmarks that pertain to this requirement.)

This class will also use outside reading sources to further focus on the Civil War and Reconstruction period of the south, and the subsequent boom of big business and the industrial revolution in America.

Grades 9

Spanish 1

Basic Assumptions for Spanish 1

This Spanish language program not only develops the students' oral communication and listening skills but also enhances their general skills. The interdisciplinary nature of language allows students to use technology to explore related areas such as geography, history, art, music, business and world issues. This in turn enables them to analyse and use available global information to communicate effectively in the target language for both business and personal purposes.

Major Concepts/ Content:

In keeping with Standards for Foreign language learning in the 21st Century, the Spanish Program seeks to develop skills in understanding, speaking, reading and writing the target language. One of its main goals is to develop correct pronunciation and intonation by listening and imitating. It also aims to develop a substantial vocabulary of basic words, functional expressions and terms for oral and written communication.

The content should include, but not be limited to, the following:

- Using simple vocabulary and expressions such as, greetings, school, clothing, food, time, family, sports and leisure activities, illnesses, weather, travel, places.
- Appropriate use of gender, number, and agreement of nouns and adjectives**.**
- Using definite and indefinite articles and recognition of the difference in usage in English vs. Spanish.
- Using regular and common irregular verbs in the present tense.
- Asking and answering questions using interrogative adjectives.
- Using negation.
- Using prepositions appropriately.
- Using direct and indirect object pronouns.
- Using contractions *al* and *del*.

- Expressing possession using *de*.
- Using the personal *a*.
- Recognizing the differences between the verbs *Ser* and *Estar* and correct usage of both.
- Using (*ir* + *a* + infinitive) to express future actions.
- Using the preterite tense with regular verbs.
- Using the verb *ir* in the preterite tense.
- Expressing likes and dislikes.

After successfully completing this course, the student will:

- Demonstrate the ability to communicate simple ideas using the vocabulary and grammar presented.
- Use the present tense effectively.
- Demonstrate the ability to use the preterite tense to talk about familiar events in the past.

Grade 10
Algebra II - Trigonometry

Basic Assumptions
All students will have access to calculators and computers; classroom activities will be student-centered; all courses will have increased emphasis on problem-solving, estimation, and real-world applications; evaluation will include alternative methods of assessment.

Major Concepts/Content
The purpose of this course is to continue the study of algebra and to provide the foundation for applying algebraic skills to other mathematical and scientific fields.

The content should include, but not be limited to, the following:

- Structure and properties of the complex number system.
- Arithmetic and geometric sequences and series.
- Relations, functions and graphs extended to polynomial, exponential, and logarithmic functions.
- Varied solution strategies for linear equations, inequalities, and systems of equations and inequalities.
- Varied solutions strategies, including the quadratic formula, for quadratic equations, conic sections and their applications.
- Analysis, including measures of central tendency and dispersion -probability, permutations, and combinations.

After successfully completing this course, the student will:

- Demonstrate understanding of the different ways numbers are represented and used in the real world.
- Associate verbal names, written word names, and standard numerals with integers, rational numbers, irrational numbers, real numbers, and complex numbers.

- Understand the relative size of integers, rational numbers, irrational numbers, and real numbers.
- Understand concrete and symbolic representations of real and complex numbers in real-world situations.
- Understand that numbers can be represented in a variety of equivalent forms, including integers, fractions, decimals, percentages, scientific notation, exponents, radicals, absolute value, and logarithms.
- Demonstrate understanding of number systems.
- Understand and use the basic concepts of limits and infinity.
- Understand and use the real number system.
- Understand the structure of the complex number system.
- Demonstrate understanding of the effects of operations on numbers and the relationships among these operations, select appropriate operations, and compute for problem solving.
- Understand and explain the effects of addition, subtraction, multiplication, and division on real numbers, including square roots, exponents, and appropriate inverse relationships.
- Select and justify alternative strategies, such as using properties of numbers, including inverse, identity, distributive, associative, and transitive, that allow operational shortcuts for computational procedures in real-world or mathematical problems.
- Add, subtract, multiply, and divide real numbers, including square roots and exponents, using appropriate methods of computing, such as mental mathematics, paper and pencil, and calculator.
- Use estimation in problem solving and computation.
- Use estimation strategies in complex situations to predict results and to check the reasonableness of results**.**
- Demonstrate understanding and apply theories related to numbers.
- Apply special number relationships such as sequences and series to real-world problems.
- Measure quantities in the real world and use the measures to solve problems.
- Use concrete and graphic models to derive formulas for finding rate, distance, time, angle measures, and arc length.
- Relate the concepts of measurement to similarity and proportionality in real-world situations.
- Compare, contrast, and convert within systems of measurement (both standard/nonstandard and metric/customary).
- Select and use direct (measured) and indirect (not measured) methods of measurement as appropriate.
- Solve real-world problems involving rated measures (miles per hour, feet per second).
- Visualize and illustrate ways in which shapes can be combined, subdivided, and changed.

- Understand geometric concepts such as perpendicularity, parallelism, tangency, congruency, similarity, reflections, symmetry, and transformations including flips, slides, turns, enlargements, rotations, and fractals.
- Analyze and apply geometric relationships involving planar cross-sections (the intersection of a plane and a three-dimensional figure).
- Use coordinate geometry to locate objects in two and three dimensions and to describe objects algebraically.
- Represent and apply geometric properties and relationships to solve real-world and mathematical problems including ratio, proportion, and properties of right triangle trigonometry.
- Using a rectangular coordinate system (graph), apply and algebraically verify properties of two and three-dimensional figures, including distance, midpoint, slope, parallelism, and perpendicularity.
- Describe, analyze, and generalize a wide variety of patterns, relations, and functions.
- Describe, analyze, and generalize relationships, patterns, and functions using words, symbols, variables, tables, and graphs.
- Determine the impact when changing parameters of given functions.
- Use expressions, equations, inequalities, graphs, and formulas to represent and interpret situations.
- Represent real-world problem situations using finite graphs, matrices, sequences, series, and recursive relations.
- Use systems of equations and inequalities to solve real-world problems graphically, algebraically, and with matrices.
- Demonstrate understanding and use the tools of data analysis for managing information.
- Interpret data that has been collected, organized, and displayed in charts, tables, and plots.
- Calculate measures of central tendency (mean, median, and mode) and dispersion (*range*, *standard deviation, and variance*) for complex sets of data and determine the most meaningful measure to describe the data.
- Analyze real-world data and make predictions of larger populations by applying formulas to calculate measures of central tendency and dispersion using the sample population data and using appropriate technology, including calculators and computers.
- Identify patterns and make predictions from an orderly display of data using concepts of probability and statistics.
- Determine probabilities using counting procedures, tables, tree diagrams and formulas for permutations and combinations.

Grades 9-12
Algebra II Honors

Basic Assumptions
All students will have access to calculators and computers; classroom activities will be student-centered; all courses will have increased emphasis on problem-solving, estimation, and real-world applications; evaluation will include alternative methods of assessment.

Major Concepts/Content
The purpose of this course is to continue the study of algebra and to provide the foundation for applying algebraic skills to other mathematical and scientific fields.

The content should include, but not be limited to, the following:

- Structure and properties of the complex number system.
- Arithmetic and geometric sequences and series.
- Relations, functions and graphs extended to polynomial, exponential, and logarithmic functions.
- Varied solution strategies for linear equations, inequalities, and systems of equations and inequalities.
- Varied solutions strategies, including the quadratic formula, for quadratic equations, conic sections and their applications.
- Analysis, including measures of central tendency and dispersion -probability, permutations, and combinations.

After successfully completing this course, the student will:

- Demonstrate understanding of the different ways numbers are represented and used in the real world.
- Associate verbal names, written word names, and standard numerals with integers, rational numbers, irrational numbers, real numbers, and complex numbers.
- Understand the relative size of integers, rational numbers, irrational numbers, and real numbers.
- Understand concrete and symbolic representations of real and complex numbers in real-world situations.
- Understand that numbers can be represented in a variety of equivalent forms, including integers, fractions, decimals, percentages, scientific notation, exponents, radicals, absolute value, and logarithms.
- Demonstrate understanding of number systems.
- Understand and use the basic concepts of limits and infinity.
- Understand and use the real number system.
- Understand the structure of the complex number system.

- Demonstrate understanding of the effects of operations on numbers and the relationships among these operations, select appropriate operations, and compute for problem solving.
- Understand and explain the effects of addition, subtraction, multiplication, and division on real numbers, including square roots, exponents, and appropriate inverse relationships.
- Select and justify alternative strategies, such as using properties of numbers, including inverse, identity, distributive, associative, and transitive, that allow operational shortcuts for computational procedures in real-world or mathematical problems.
- Add, subtract, multiply, and divide real numbers, including square roots and exponents, using appropriate methods of computing, such as mental mathematics, paper and pencil, and calculator.
- Use estimation in problem solving and computation.
- Use estimation strategies in complex situations to predict results and to check the reasonableness of results**.**
- Demonstrate understanding and apply theories related to numbers.
- Apply special number relationships such as sequences and series to real-world problems.
- Measure quantities in the real world and use the measures to solve problems.
- Use concrete and graphic models to derive formulas for finding rate, distance, time, angle measures, and arc length.
- Relate the concepts of measurement to similarity and proportionality in real-world situations.
- Compare, contrast, and convert within systems of measurement (both standard/nonstandard and metric/customary).
- Select and use direct (measured) and indirect (not measured) methods of measurement as appropriate.
- Solve real-world problems involving rated measures (miles per hour, feet per second).
- Visualize and illustrate ways in which shapes can be combined, subdivided, and changed.
- Understand geometric concepts such as perpendicularity, parallelism, tangency, congruency, similarity, reflections, symmetry, and transformations including flips, slides, turns, enlargements, rotations, and fractals.
- Analyze and apply geometric relationships involving planar cross-sections (the intersection of a plane and a three-dimensional figure).
- Use coordinate geometry to locate objects in two and three dimensions and to describe objects algebraically.
- Represent and apply geometric properties and relationships to solve real-world and mathematical problems including ratio, proportion, and properties of right triangle trigonometry.

- Using a rectangular coordinate system (graph), apply and algebraically verify properties of two and three-dimensional figures, including distance, midpoint, slope, parallelism, and perpendicularity.
- Describe, analyze, and generalize a wide variety of patterns, relations, and functions.
- Describe, analyze, and generalize relationships, patterns, and functions using words, symbols, variables, tables, and graphs.
- Determine the impact when changing parameters of given functions.
- Use expressions, equations, inequalities, graphs, and formulas to represent and interpret situations.
- Represent real-world problem situations using finite graphs, matrices, sequences, series, and recursive relations.
- Use systems of equations and inequalities to solve real-world problems graphically, algebraically, and with matrices.
- Demonstrate understanding and use the tools of data analysis for managing information.
- Interpret data that has been collected, organized, and displayed in charts, tables, and plots.
- Calculate measures of central tendency (mean, median, and mode) and dispersion (*range*, *standard deviation, and variance*) for complex sets of data and determine the most meaningful measure to describe the data.
- Analyze real-world data and make predictions of larger populations by applying formulas to calculate measures of central tendency and dispersion using the sample population data and using appropriate technology, including calculators and computers.
- Identify patterns and make predictions from an orderly display of data using concepts of probability and statistics.
- Determine probabilities using counting procedures, tables, tree diagrams and formulas for permutations and combinations.

Grade 10

English II College Preparatory

Basic Assumptions for Language Arts Education:
Reading, writing, speaking, listening and viewing competencies are integrated throughout students' learning experiences. Benchmarks are repeated as needed in course sequences. As students progress from one course to the next, increases occur in the complexity of materials and tasks and in the students' independence in the application of skills and strategies. Learning tasks and materials accommodate the individual needs of students.

Major Concepts/Content:
The purpose of this course is to provide integrated educational experiences in the language arts strands of reading, writing, listening, viewing, speaking, language, and literature.

The content includes, but is not limited to, the following:

- Using reading strategies to construct meaning from informative, technical, and literary texts.
- Acquiring an extensive vocabulary through reading, discussion, listening, and systematic word study.
- Using process writing strategies, peer and self-editing.
- Using speaking, listening, and viewing strategies in formal presentations and informal discussions.
- Understanding and responding to a variety of literary forms.
- Understanding and using language successfully to impact readers, writers, listeners, speakers, and viewers.

After successfully completing this course, the student will:

- Use reading strategies effectively to construct meaning from a range of technical, informative, and literary texts.
- Select and use pre-reading strategies that are appropriate to the text, such as discussion, making predictions, brainstorming, generating questions, and previewing to anticipate content, purpose, and organization of a reading selection.
- Select and use strategies to understand words and text, and to make and confirm inferences from what is read, including interpreting diagrams, graphs, and statistical illustrations.
- Refine vocabulary for interpersonal, academic, and workplace situations, including figurative, idiomatic, and technical meanings.
- Apply a variety of response strategies, including rereading, note taking, summarizing, outlining, writing a formal report, and relating what is read to his or her own experiences and feelings.
- Determine the main idea and identify relevant details, methods of development, and their effectiveness in a variety of types of written material.

- Determine the author's purpose and point of view and their effects on the text.

- Locate, gather, analyze, and evaluate written information for a variety of purposes, including research projects, real-world tasks, and self-improvement.
- Identify devices of persuasion and methods of appeal and their effectiveness.
- Select and use appropriate study and research skills and tools according to the type of information being gathered or organized, including news sources, and information services.
- Analyze the validity and reliability of primary source information and use the information appropriately.
- Synthesize information from multiple sources to draw conclusions.
- Use process-writing strategies effectively to meet the needs of a variety of audiences, writers, and types of information being communicated.
- Select and use appropriate prewriting strategies, such as: brainstorming, graphic organizers, and outlining.

The student will draft and revise writing that:

- Is focused, purposeful, and reflects insight into the writing situation; has an organizational pattern that provides for a logical progression of ideas.
- Has effective use of transitional devices that contribute to a sense of completeness.
- Has support that is substantial, specific, relevant, and concrete.
- Demonstrates analysis and insight.
- Demonstrates an understanding of author's purpose, and the ways in which diction, voice, style, and figurative language are employed to construct meaning.
- Uses creative writing strategies as appropriate to the purpose of the paper.
- Demonstrates a mature command of language with precision of expression.
- Has varied sentence structure and has few, if any, conventional errors in mechanics, usage, punctuation, and spelling.

Students will produce final documents that have been edited for:

- Correct spelling, correct punctuation, including commas, colons, and common use of semicolons; correct capitalization.
- Correct sentence formation.
- Correct instances of possessives, subject/verb agreement, instances of noun/pronoun agreement, and the intentional use of fragments for effect.

Students will organize information using appropriate systems and will:

- Write fluently for a variety of occasions, audiences, and purposes, making appropriate choices regarding style, tone, level of detail and organization.
- Select and use appropriate speaking, listening, and viewing skills to clarify and interpret meaning in both formal and informal situations.
- Select and use appropriate listening strategies according to the intended purpose, such as solving problems, interpreting and evaluating the techniques and intent of a presentation, and take action in career-related situations.
- Describe, evaluate, and expand personal preferences in listening to fiction, drama,

literary nonfiction, and informational presentations.

- Use effective strategies for informal and formal discussions, including listening actively and reflectively, connecting to and building on the ideas of a previous speaker, and respecting the viewpoints of others.
- Identify bias, prejudice, or propaganda in oral messages.
- Determine main concept and supporting details in order to analyze and evaluate non-print media messages.
- Understand factors that influence the effectiveness of volume, stress, pacing, enunciation, eye contact, and gestures that meet the needs of the audience and topic.
- Select and use a variety of speaking strategies to clarify meaning and to reflect understanding, interpretation, application, and evaluation of content, processes, or experiences (including asking relevant questions when necessary, making appropriate and meaningful comments, and making insightful observations).
- Use details, illustrations, analogies, and visual aids to make oral presentations that inform, persuade, or entertain.
- Apply oral communication skills to interviews, group presentations, formal presentations, and impromptu situations.
- Develop and sustain a line of argument and provide appropriate support.
- Understand the common features of a variety of literary forms.
- Respond critically and aesthetically to literature.
- Demonstrate understanding and use of appropriate language for effective visual, oral, and written communication.
- Identify the characteristics that distinguish literary forms.
- Identify universal themes prevalent in the literature of all cultures.
- Understand the characteristics of major types of drama.
- Understand the different stylistic, thematic, and technical qualities present in the literature of different cultures and historical periods.
- Describe and evaluate personal preferences regarding fiction and nonfiction.
- Analyze the effectiveness of complex elements of plot, such as setting, major events, problems, conflicts, and resolutions.
- Understand the relationships between and among elements of literature, including characters, plot, setting, tone, point of view, and theme.
- Analyze poetic form and content, including sound devices, rhyme, meter, and repetition schemes, and figurative tropes.
- Recognize and explain those elements in texts that prompt a personal response, such as connections between one's own life and the characters, events, motives, and causes of conflict in texts.
- Apply an understanding that language and literature are primary means by which culture is transmitted.

- Make appropriate adjustments in language use for social, academic, and life situations, demonstrating sensitivity to gender and cultural bias.
- Understand specific ways in which language has shaped the reactions, perceptions, and

beliefs of the local, national, and global communities.
- Understand the subtleties of literary devices and techniques in the comprehension and creation of communication.
- Comprehend, identify and analyze universal symbolic patterns.

Students will select and use a variety of electronic media to create, revise, retrieve, and verify information and:

- Write text, notes, outlines, comments, and observations that demonstrate comprehension and synthesis of content, processes, and experiences from a variety of media.
- Organize information using appropriate systems.
- Select and use a variety of electronic media, such as the Internet, information services, and desktop-publishing software programs, to create, revise, retrieve, and verify information.
- Recognize production elements that contribute to the effectiveness of a specific medium.
- Effectively integrate multimedia and technology into presentations.

HONORS PROGRAM

In addition to the above curriculum, the Honors program requires students to undertake a succession of topics for independent study that go beyond the knowledge base covered in the College Preparatory course. Students are required to complete:

- A comparative study of selected poets from the 16th century to modern era, analyzing form, rhyme, rhythm, imagery.

- A comparative study of selected short stories, analyzing characterization, point of view, tone, theme and plot.

- A comparative study of selected dramatic works, including at least one Shakespearean play.

Grade 10
American Government /US History 2

Basic Assumptions

- Students would have completed American History (Part 1)
- Students would have honed necessary skills in order to analyze, synthesize and evaluate course content.
- Students may be motivated to sit SAT II History

Major Concepts/Content.

The purpose of this course is to enable students to gain an understanding of American government and political behavior that is essential for effective citizenship and active involvement in a democratic American society.

The content should include, but not be limited to, the following:

- Interrelationship between American government and the American economic system
- Documents that shape our political traditions, including the Declaration of Independence, the Constitution, the Bill of Rights and the Federalist Papers
- Functions of the three branches of government at the local, state and national levels
- Municipal and county government
- The evolving role of political parties and interest groups in determining government policy
- How rights and responsibilities of citizens in a democratic state have evolved and been interpreted
- Contemporary political issues
- Career opportunities available in government services
- Importance of civic participation in the democratic political process
- Role of women and diverse cultural groups in the development of our political system

After successfully completing this course, the student will:

- Compare the structure and functions of government at all levels: national, state (Florida), municipal and county.
    - Understand the nature of political authority and the nature of the relationship between government and civil society in limited governments (e.g., constitutional democracies) and unlimited governments (e.g., totalitarian regimes).
    - Understand the ideas that led to the creation of limited government in the United States (e.g., ideas of natural rights philosophy, and the concept of popular sovereignty).
    - Understand how the overall design and specific features of the Constitution prevent the abuse of power by aggregating power at the national, state, and

local levels; dispersing power among different levels of government; and using a system of checks and balances (e.g., federalism).

- Analyze the basic principles of political organization embodied in the Constitution of the United States.
    - Understand how the overall design and specific features of the Constitution prevent the abuse of power by aggregating power at the national, state, and local levels; dispersing power among different levels of government; and using a system of checks and balances (e.g., federalism).

- Compare the decision-making process at all levels of the three branches of government.
    - Understand how the overall design and specific features of the Constitution prevent the abuse of power by aggregating power at the national, state, and local levels; dispersing power among different levels of government; and using a system of checks and balances (e.g., federalism).

- Examine the influence of individuals and interest groups in the governmental decision-making process.
    - Understand the development of federal civil rights and voting rights since the 1950s and the social and political implications of these events.

    - Understand the role of special interest groups, political parties, the media, public opinion, and majority/minority conflicts on the development of public policy and the political process.

- Trace the evolution of the relationship between majority rule and individual rights.
    - Understand significant aspects of the economic, political, and social systems of ancient Greece and the cultural contributions of that civilization.
    - Understand the significant features of the political, economic, and social systems of ancient Rome and the cultural legacy of that civilization.
    - Understand transformations in the political and social realms from the Age of Absolutism through the Glorious Revolution to the French Revolution.
    - Understand how personal, political, and economic rights are secured by constitutional government and by such means as the rule of law, checks and balances, an independent judiciary, and a vigilant citizenry.

- Analyze the effectiveness of our federal system of government in addressing domestic and foreign problems. (Note: In this course, major historical events will be used to illustrate important political decisions and policies.)
    - Understand the political, military, and economic events since the 1950s that have had a significant impact on international relations.
    - Understand the significant political events that took place during the early national period.

- Understand significant events leading up to the United States involvement in World War I and the political, social, and economic results of that conflict in Europe and the United States.
- Know the origins and effects of the involvement of the United States in World War II.
- Understand the political events that shaped the development of United States foreign policy since World War II and know the characteristics of that policy.
- Understand the development of federal civil rights and voting rights since the 1950s and the social and political implications of these events.
- Know significant political events and issues that have shaped domestic policy decisions in contemporary America.

- Examine the relationship between American political traditions and the American way of life (i.e., social, economic and religious ideals).
    - Understand social transformations that took place in the 1920s and 1930s, principal political and economic factors that led to the Great Depression, and the legacy of the Depression in American society.
    - Understand how cultural and technological characteristics can link or divide regions.
    - Understand the argument that personal, political, and economic rights reinforce each other.
    - Understand how government taxes, policies, and programs affect individuals, groups, businesses, and regions.

- Demonstrate an understanding of the importance of participation in community service and political activities.
    - Develop and define his or her own political beliefs and tendencies.
    - Assess the role that his or her own political behavior plays in determining the flow of power through our political system and for resolving conflicts in a pluralistic society.
    - Understand issues of personal concern: the rights and responsibilities of the individual under the U.S. Constitution; the importance of civil liberties; the role of conflict resolution and compromise; and issues involving ethical behavior in politics.
    - Understand the distinction between citizens and non-citizens (aliens) and the process by which aliens may become citizens.
    - Know the points at which citizens can monitor or influence the process of public policy formation.

- Examine career opportunities and requirements in government service.

- Apply research, study, critical thinking, and decision-making skills and demonstrate the use of new and emerging technology in problem solving.

- Evaluate conflicting sources and materials in the interpretation of a historical event or episode.
- Use chronology, sequencing, patterns, and periodization to examine interpretations of an event.
- Use mental maps of physical and human features of the world to answer complex geographic questions.
- Select and use strategies to understand words and text, and to make and confirm inferences from what is read, including interpreting diagrams, graphs, and statistical illustrations.
- Refine vocabulary for interpersonal, academic, and workplace situations, including figurative, idiomatic, and technical meanings.
- Select and use appropriate study and research skills and tools according to the type of information being gathered or organized, including almanacs, government publications, microfiche, news sources, and information services.
- Analyze the validity and reliability of primary source information and use the information appropriately.
- Synthesize information from multiple sources to draw conclusions.
- Write text, notes, outlines, comments, and observations that demonstrate comprehension and synthesis of content, processes, and experiences from a variety of media.
- Organize information using appropriate systems.
- Select and use a variety of electronic media, such as the Internet, information services, and desktop-publishing software programs, to create, revise, retrieve, and verify information.

Grades 10
World History

Major Concepts/Content.

The purpose of this course is to enable students to understand their connections to the development of civilizations by examining the past to prepare for their future as participating members of a global community. Students will use knowledge pertaining to history, geography, economics, political processes, religion, ethics, diverse cultures, and humanities to solve problems in academic, civic, social, and employment settings.

The content should include, but not be limited to, the following:

- time-space relationships
- prehistory
- rise of civilization
- cultural universals
- development of religion and the impact of religious thought
- evolution of political systems and philosophies
- interactions between science and society
- development of nationalism as a global phenomenon
- origin and course of economic systems and philosophies
- influence of significant historical figures and events
- contemporary world affairs

After successfully completing this course, the student will:

- Demonstrate understanding of the influence of physical and cultural geography on the development of civilizations and nation-states.
    - Understand the early physical and cultural development of humans.
    - Understand the rise of early civilizations and the spread of agriculture in Mesopotamia, Egypt, and the Indus Valley. SS.A.2.4.3
    - Understand the emergence of civilization in China, Southwest Asia, and the Mediterranean basin. SS.B.2.4.1
    - Understand how social, cultural, economic, and environmental factors contribute to the dynamic nature of regions.
    - Understand past and present trends in human migration and cultural interaction and their impact on physical and human systems.
    - Understand how the allocation of control of the Earth's surface affects interactions between people in different regions.
    - Understand the global impacts of human changes in the physical environment.
    - Know how humans overcome "limits to growth" imposed by physical systems.

- Understand the relationships between resources and the exploration, colonization, and settlement of different regions of the world.
- Understand the concept of sustainable development.

- Demonstrate understanding of the impact of significant people, ideas, and events on the development of values, traditions, and social, economic, and political institutions of civilizations and nation-states.
  - Understand significant aspects of the economic, political, and social systems of ancient Greece and the cultural contributions of that civilization.
  - Understand features of the theological and cultural conflict between the Muslim world and Christendom and the Resulting religious, political, and economic competition in the Mediterranean region.
  - Understand the development of the political, social, economic, and religious systems of European civilization during the Middle Ages.
  - Understand the significant scientific and social changes from the Age of Reason through the Age of Enlightenment.
  - Understand transformations in the political and social realms from the Age of Absolutism through the Glorious Revolution to the French Revolution.
  - Understand significant political developments in Europe in the 19th century.
  - Understand the effects of the Industrial Revolution.
  - Analyze major historical events of the first half of the 20th Century.
  - Understand the political, military, and economic events since the 1950s that have had a significant impact on international relations.
  - Demonstrate understanding of current and historic events in relation to the experiences, contributions, and perspectives of diverse cultural and ethnic groups, including African-Americans and the Holocaust.
  - Understand the significant features of the political, economic, and social systems of ancient Rome and the cultural legacy of that civilization.
  - Understand cultural, religious, political, and technological developments of civilizations in Asia and Africa.
  - Understand significant social, cultural, and religious features of India, and India's conflict with the Moslem Turks.
  - Understand significant cultural, religious, and economic features of civilizations in Mesoamerica and Andean South America.
  - Understand political and cultural features of the Mongol Empire and the Empire's impact on Eurasian peoples.
  - Understand the significant political and economic transformations and significant cultural and scientific events in Europe during the Renaissance.
  - Understand significant religious and societal issues from the Renaissance through the Reformation.
  - Understand the significant economic, political, and cultural interactions among the peoples of Africa, Europe, Asia, and the Americas during the Age of Discovery and the European Expansion.

- Know the significant ideas and texts of Buddhism, Christianity, Hinduism, Islam, and Judaism, their spheres of influence in the age of expansion, and their reforms in the 19th century.

- Demonstrate understanding of the processes used to create and interpret history.
  - Understand how ideas and beliefs, decisions, and chance events have been used in the process of writing and interpreting history.
  - Use chronology, sequencing, patterns, and periodization to examine interpretations of an event.

- Demonstrate understanding of the interactions among science, technology, and society within global historical contexts.
  - Identify and understand themes in history that cross- scientific, economic, and cultural boundaries.
  - Understand how cultural and technological characteristics can link or divide regions.
- Apply research, study, critical-thinking, and decision-making skills and demonstrate the use of new and emerging technology in problem solving.
  - Evaluate conflicting sources and materials in the interpretation of a historical event or episode.
  - Use a variety of maps, geographic technologies including geographic information systems (GIS) and satellite-produced imagery, and other advanced graphic representations to depict geographic problems.
  - Understand the advantages and disadvantages of using maps from different sources and different points of view.
    (Note: In this course, students will have opportunities to apply skills described in language arts and mathematics benchmarks that pertain to this requirement.)

In addition, students will:

- identifying major themes through the use of primary and secondary sources—more definitively, analyzing key documents such as: Homer's "Illiad" and "Odyssey", the teachings of Socrates, Plato, and Aristotle; India's Mahabharata; The Magna Carta; and other works by revolutionary writers—Payne, Locke, and Russeau, to name a few.
- Use primary and secondary sources to produce a historiographic essay about a topic covered in our text, "World History: People and Nations".
- Focus on writing a competent essay by using grammatically correct sentence structure, thesis, supporting paragraphs, and a conclusion supporting the thesis statement.
- Required to read history-based works outside of the text to help strengthen comprehension of various periods of World History discussed throughout the year.

Grade 10
Spanish II

Basic assumptions for Spanish II
This course provides students with the language learning experiences that will enable them to communicate in the target language. Although students will continue to expand their vocabulary and repertoire of language structures, the language they will use at this level will still be simple.

Major concepts /Content:
Students will continue to develop and apply their speaking skills in a variety of contexts, and will participate in activities that will improve their reading comprehension and writing skills. They will continue to use both print and technological resources to explore aspects of the culture of countries where the target language is spoken.

The content should include, but not be limited to, the following:

- Using a variety of selected irregular verbs in the past tense.
- Using stem changing verbs in the present and past tense.
- Using the imperfect tense.
- Differentiate between proper usage of imperfect and preterite tenses on the receptive level.
- Demonstrating usage of the passive voice.
- Using regular and irregular verbs in the future tense.
- Comparing and contrasting things.
- Using direct and indirect objects.
- Using regular and irregular verbs in the conditional tense.
- Using regular and irregular verbs in the present perfect tense.
- Using regular and irregular verbs in the imperfect progressive tense.
- Using demonstrative pronouns and adjectives.
- Using possessive adjectives and pronouns.
- Using formal and informal imperatives.
- Using negative imperatives.
- Using the subjunctive in general cases.

After successfully completing this course, the student will:

- Demonstrate an understanding of simple spoken language, used in various situations and for different purposes, applying language knowledge appropriate to the level.
- Communicate orally in various situations and for different purposes, using simple language appropriate to the level.
- Read a range of texts for comprehension, consolidation of oral skills, and expansion of vocabulary.
- Write in different forms to express ideas and opinions, using basic guidelines.

Grade 11

Geometry

Basic assumptions for mathematics education:
All students will have access to calculators and computers; classroom activities will be student-centered; all courses will have increased emphasis on problem-solving, estimation, and real-world applications; evaluation will include alternative methods of assessment.

Major Concepts/Content.
The purpose of this course is to develop the geometric relationships and deductive strategies that can be used to solve a variety of real world and mathematical problems.

The content will include, but not be limited to, the following:

- Geometric constructions -terminology and fundamental properties of geometry - deductive and inductive reasoning and their application to formal and informal.
- Proof -formulas pertaining to the measurement of plane and solid figures -coordinate geometry and transformations on the coordinate plane -exploration of geometric relationships such as parallelism, perpendicularity, congruence, and similarity, properties of circles and right triangle trigonometry.

After successfully completing this course, the student will:

- Work with angles in relation to the following: Angle Addition Postulate, bisectors, adjacent angles, vertical angles, complementary and supplementary angles, and linear angles.
- Identify and use basic postulates regarding points, lines, and planes.
- Measure segments and midpoints of segments.
- Use Inductive Reasoning and Deductive Reasoning to solve problems.
- Use the Law of Detachment and Law of Syllogism in deductive reasoning.
- Use properties of equality in algebraic and geometric proofs.
- Complete proofs involving angle and segment theorems.
- Identify and use the medians, altitudes, angle bisectors, and perpendicular bisectors in a triangle.
- Understand and prove relationships of parallel lines, transversals, and angles.
- Find the slopes of lines and distance between a point and a line.
- Identify points, lines and planes in spherical geometry.
- Compare and contrast basic properties of plane and spherical geometry.
- Classify and analyze triangles.
- Use angle postulates and theorems to solve problems.
- Explore quadrilaterals and their properties.
- Identify and explore similar polygons.
- Apply right angles and trigonometry involving geometric mean, Law of Sines, and Law of Cosines.
- Analyze circles and their properties involving diameter, arcs, chords, central angles, inscribed angles, tangents, and secants.

- Find and explore the area of polygons.
- Identify regular and uniform tessellations.
- Investigate surface area and volume in relation to cones, cylinders, spheres, prisms, and pyramids.
- Relate statistics and equations of lines to geometric concepts.
- Perform operations with vectors.
- Investigate loci and coordinate transformations.

Grade 11
English III

Basic Assumptions for Language Arts Education:
Reading, writing, speaking, listening and viewing competencies are integrated throughout students' learning experiences. Benchmarks are repeated as needed in course sequences. As students progress from one course to the next, increases occur in the complexity of materials and tasks and in the students' independence in the application of skills and strategies. Learning tasks and materials accommodate the individual needs of students.
Technology is available for students to develop competencies in the language arts.

Major Concepts/Content
The purpose of this course is to provide integrated educational experiences in the language arts strands of reading, writing, listening, viewing, speaking, language, and literature.

The content includes, but is not limited to, the following:

- Using reading strategies to construct meaning from informative, technical, and literary texts.
- Using writing processes for various purposes with attention to style and format.
- Using the research process and individual inquiry to locate, analyze, and evaluate information.
- Using effective speaking, listening, and viewing strategies in formal presentations and informal discussions.
- Understanding the power of language as it impacts readers, writers, listeners, viewers, and speakers.
- Understanding and analyzing literary texts responding critically and aesthetically to literature.

After successfully completing this course, the student will:

- Use and monitor own reading processes effectively to construct meaning from a range of technical, informative, and literary texts.
- Apply a variety of response strategies, including rereading, note taking, summarizing, outlining, writing a formal report, and relating what is read to his or her own experiences and feelings.
- Describe and evaluate personal preferences regarding fiction and nonfiction.
- Locate, gather, analyze, and evaluate written information for a variety of purposes, including research projects, real-world tasks, and self-improvement.
- Synthesize information from multiple sources to draw conclusions.
- Use writing processes effectively to communicate ideas and process information for various purposes, reflecting appropriate styles, format, and conventions of standard English.
- Select and use appropriate prewriting strategies, such as brainstorming, graphic organizers, and outlining.

Draft and revise writing that:

- Is focused, purposeful, and reflects insight into the writing situation; has an

organizational pattern that provides for a logical progression of ideas.
- Has effective use of transitional devices that contribute to a sense of completeness.
- Has support that is substantial, specific, relevant, and concrete.
- Demonstrates a commitment to and involvement with the subject.
- Uses creative writing strategies as appropriate to the purpose of the paper.
- Demonstrates a mature command of language with precision of expression.
- Has varied sentence structure and few, if any, conventional errors in mechanics, usage, punctuation, and spelling.

Students will produce final documents that have been edited for:
- Correct spelling, correct punctuation, including commas, colons, and common use of semicolons, correct capitalization.
- Correct sentence formation.
- Correct instances of possessives, subject/verb agreement, instances of noun/pronoun agreement, and the intentional use of fragments for effect;
- Correct formatting that appeal to readers, including appropriate use of a variety of graphics, tables, charts, and illustrations in both standard and innovative forms.

Students will:
- Organize information using appropriate systems and write fluently for a variety of occasions, audiences, and purposes, making appropriate choices regarding style, tone, level of detail, and organization.

Students will:
- Select and use appropriate speaking, listening, and viewing skills to clarify and interpret meaning in both formal and informal situations.
- Use effective strategies for informal and formal discussions, including listening actively and reflectively, connecting to and building on the ideas of a previous speaker, and respecting the viewpoints of others.
- Use volume, stress, pacing, enunciation, eye contact, and gestures that meet the needs of the audience and topic.
- Select and use a variety of speaking strategies to clarify meaning and to reflect understanding, interpretation, application, and evaluation of content, processes, or experiences.
- Use details, illustrations, analogies, and visual aids to make oral presentations that inform, persuade, or entertain.
- Apply oral communication skills to interviews, group presentations, formal presentations, and impromptu situations.
- Develop and sustain a line of argument and provide appropriate support.
- Select and use appropriate language for effective visual, oral, and written communication.
- Make appropriate adjustments in language use for social, academic, and life situations, demonstrating sensitivity to gender and cultural bias.

- Understand the subtleties of literary devices and techniques in the comprehension and creation of communication.
- Recognize production elements that contribute to the effectiveness of a specific medium.
- Demonstrate understanding of the ways that history, culture, and setting influence language.
- Apply an understanding that language and literature are primary means by which culture is transmitted.
- Understand that there are differences among various dialects of English.
- Understand specific ways in which language has shaped the reactions, perceptions, and beliefs of the local, national, and global communities.
- Demonstrate understanding and respond aesthetically and critically to predominantly US literature, including fiction, nonfiction, poetry, and drama.
- Understand why certain literary works are considered classics.
- Understand the different stylistic, thematic, and technical qualities present in the literature of different cultures and historical periods identify the characteristics that distinguish literary forms.
- Analyze the effectiveness of complex elements of plot, such as setting, major events, problems, conflicts, and resolutions.
- Understand the relationships between and among elements of literature, including characters, plot, setting, tone, point of view, and theme.
- Analyze poetry for the ways in which poets inspire the reader to share emotions, such as the use of imagery, personification, and figures of speech, including simile and metaphor; and the use of sound, such as rhyme, rhythm, repetition, and alliteration.
- Understand the use of images and sounds to elicit the reader's emotions in both fiction and nonfiction.
- Analyze the relationships among author's style, literary form, and intended impact on the reader.
- Recognize and explain those elements in texts that prompt a personal response, such as connections between one's own life and the characters, events, motives, and causes of conflict in texts.
- Examine a literary selection from several critical perspectives.
- Know that people respond differently to texts based on their background knowledge, purpose, and point of view.

Use the research and critical inquiry processes to prepare documents and oral presentations.

Students will:

- Select and use appropriate study and research skills and tools according to the type of

information being gathered or organized, including news sources, and information services.
- Analyze the validity and reliability of primary source information and use the information appropriately.
- Synthesize information from multiple sources to draw conclusions.
- Select and use a variety of electronic media, such as the Internet, information services, and desktop-publishing software programs, to create, revise, retrieve, and verify information.

HONORS PROGRAM

In addition to the above curriculum, the Honors program requires students to undertake a succession of topics for independent study that go beyond the knowledge base covered in the College Preparatory course.

Students are required to complete:

- A research paper on the origins of the English language and variations of modern English.
- Comparative essay on selected American authors, poets and dramatists.

Grade 11
Global Politics

Basic Assumptions

- Students would have completed American History
- Students would have honed necessary skills in order to analyze, synthesize and evaluate course content.
- Students may be motivated to sit SAT II History

Major Concepts/Content.

Political science is the systematic study of politics. It is the academic discipline that analyzes how power is defined, who does or should have power in society, how those with power use or ought to use it, how those with less power challenge it, and the effect of power on people's lives. Political Science courses explore a wide range of questions regarding the concepts and norms central to the study of power and politics (e.g., authority, domination, gender, freedom); the structure and operations of law and institutions (e.g., the World Court, United Nations, non-governmental organizations); the historical, sociological and cultural factors involved in political and economic development; social movements and processes (e.g. women's movements, immigration); comparative political systems (e.g., Democracy, Communism); political trends and transformations in various regions (e.g., East Asia, South Asia, Latin America); and analyses of current affairs in the many realms and contexts in which politics take place.

The content should include, but not be limited to, the following:

- The Importance of International Relations.
- The State and its role in the various groupings and International organizations.
- Power factors in International Relations.
- Foreign Policy Formation and Execution.
- Corporate and Non-Governmental Actors.
- Political Geography and how it affects Nationalism, Regionalism, Tribalism.
- Global Violence: Wars and Weapons versus Global Justice: Women, Poverty, Human Rights.
- The benefits of countries of the North American Free Trade Association (NAFTA)
- Compare countries with highest percentage of population living below poverty line

After successfully completing this course, the student will:

- Examine career opportunities and requirements in government service.

- Discuss issues relating to authoritarianism, revolutions, nationalism, social movements, and political culture.
- Complete country studies to illuminate themes such as the role of the state in governing the economy, the challenges of democracy, and the politics of collective identities (attachments such as religion, ethnicity, race, gender, and nationality).
- Analysis of the bases of power and influence, the sources of tension and conflict, and the modes of accommodation and conflict resolution.
- An examination of American foreign policy, understood as the current and recent behavior of the United States Government abroad.
- Research topics including gender biases in international relations theories, women in combat; male and female roles in the conduct of war, gender and attitudes toward war; women's relationship to the state; gays in the military; rape and the military; feminist analysis of war and peace.
- Debate the classic form of international law, including the concepts of statehood and sovereignty, the relationship of nations to each other, and the growth of international organizations.
- Outline the role and responsibility of individuals in international law, especially in the area of human rights.
- Explain the function and role of the League of Nations, the International Labor Organization, the United Nations, the Bretton Woods institutions, the GATT and the World Trade Organization.
- Critique the role of diplomacy and negotiations in international politics.
- Answer all of the following questions about the nature and functioning of power in politics: What is the nature of power and how has it been exercised in political life both past and present? Who has power and who should have it? Is power primarily wielded by political leaders and bureaucrats, or has the development of new technologies decentralized power, making each of us its instrument?
- Apply research, study, critical thinking, and decision-making skills and demonstrate the use of new and emerging technology in problem solving.

    - Evaluate conflicting sources and materials in the interpretation of a historical event or episode.
    - Use chronology, sequencing, patterns, and periodization to examine interpretations of an event.
    - Use mental maps of physical and human features of the world to answer complex geographic questions.
    - Select and use strategies to understand words and text, and to make and confirm inferences from what is read, including interpreting diagrams, graphs, and statistical illustrations.
    - Refine vocabulary for interpersonal, academic, and workplace situations, including figurative, idiomatic, and technical meanings.

- Select and use appropriate study and research skills and tools according to the type of information being gathered or organized, including almanacs, government publications, microfiche, news sources, and information services.
- Analyze the validity and reliability of primary source information and use the information appropriately.
- Synthesize information from multiple sources to draw conclusions.
- Write text, notes, outlines, comments, and observations that demonstrate comprehension and synthesis of content, processes, and experiences from a variety of media.
- Organize information using appropriate systems.
- Select and use a variety of electronic media, such as the Internet, information services, and desktop-publishing software programs, to create, revise, retrieve, and verify information

Grade 11
Spanish III

Basic assumptions for Spanish III
This course offers students various opportunities to further develop their knowledge of the target language and to enhance their communication skills. Students will use increasingly

sophisticated language in a variety of activities that will enable them to speak and write with clarity and accuracy.

Major concepts /Content:
Students will also enhance their thinking skills through the critical study of literature, and continue to explore aspects of the culture of countries where the language is spoken through a variety of print and technological resources.

The content should include, but not be limited to,

- Responding appropriately to comments and identifying key information in a presentation.

- Demonstrating an understanding of information conveyed orally in presentations and dialogues, as well as in recorded materials (e.g., material on videotape, audiotape, and CD-ROMs).

- Using standard pronunciation and intonation with accuracy in the target language (e.g., in conversations and discussions).

- Expressing opinions and ideas in prepared and open-ended conversations and discussions (e.g., comment on a newspaper article or literary work).

- Reading for comprehension of main ideas and expansion of vocabulary, selections from a variety of texts.

- Reading aloud with expression and accurate pronunciation.

- Analyzing plot, character development, and setting in novels, short stories and poems.

- Writing sentences and paragraphs, including dialogues, using level appropriate vocabulary and language.

- Composing and answering a variety of questions.

- Revising and editing their work for accuracy of language, using print and electronic dictionaries, input from peer and teachers and a variety of other resources.

After successfully completing this course, the student will:

- Demonstrate an understanding of short oral messages in practical situations.

- Communicate orally in practical real-life situations for a variety of purposes using language appropriate to the level.

- Read age-and language-appropriate passages from different sources for a variety of practical purposes.

- Write for practical purposes and different audiences using appropriate language structures and vocabulary.

Grade 12
College Algebra

Basic assumptions for mathematics education:
All students will have access to calculators and computers; classroom activities will be student-centered; all courses will have increased emphasis on problem-solving, estimation, and real-world applications; evaluation will include alternative methods of assessment.

Major Concepts/Content:
The purpose of this course is to enable students to develop concepts and skills in advanced algebra and trigonometry.

The content should include, but not be limited to, the following:

- Operations with polynomial and rational expressions.
- Factoring algebraic expressions.
- Functions and functional notation.
- Domains and ranges of functions.
- Graphs of functions and relations.
- Linear, quadratic and rational functions.
- Operations with functions.
- Inverse functions.
- Absolute value and radical functions.
- Exponential and logarithmic properties, functions and equations.
- Systems of equations and inequalities.
- Applications such as modeling, exponential/logarithmic growth).

Af**ter successfully completing this course, the student will:**

- Demonstrate understanding of trigonometric functions and their inverses, trigonometric identities and equations, and their applications to problem-solving situations.
- Understand and explain the effects of addition, subtraction, multiplication, and division on real numbers, including square roots, exponents, and appropriate inverse relationships.
- Use concrete and graphic models to derive formulas for finding rate, distance, time, angle measures, and arc lengths.
- Represent and apply geometric properties and relationships to solve real-world and mathematical problems including ratio, proportion, and properties of right triangle

trigonometry.

- Describe, analyze, and generalize relationships, patterns, and functions using words, symbols, variables, tables, and graphs.

- Determine the impact when changing parameters of given functions.

- Demonstrate understanding of the application of graphing techniques to trigonometric functions and their inverses.

- Use estimation strategies in complex situations to predict results and to check the reasonableness of results.

- Understand geometric concepts such as perpendicularity, parallelism, tangency, congruency, similarity, reflections, symmetry, and transformations including flips, slides, turns, enlargements, rotations, and fractals.

- Demonstrate use of vectors and parametric equations to solve problems**.**

- Solve real-world problems involving rated measures (miles per hour, feet per second) using a rectangular coordinate system (graph), apply and algebraically verify properties of two- and three-dimensional figures, including distance, midpoint, slope, parallelism, and perpendicularity.

- Students will be able to interpret mathematical models such as formulas, graphs.

- Students will be able to represent mathematical information symbolically, visually, numerically, and verbally.

- Students will be able to use a variety of mathematical methods (algebraic, geometric and/or statistical methods, utilizing technology when appropriate) when solving math and/or real life problems.

- Demonstrate understanding of the concept of limits; arithmetic and geometric **s**equences and series; and their applications, including definition of the derivative.

- Understand and use the basic concepts of limits and infinity.

- Apply special number relationships such as sequences and series to real-world problems.

- Demonstrate understanding of conic sections.

- Analyze and apply geometric relationships involving planar cross-sections (the intersection of a plane and a three-dimensional figure).

- Demonstrate understanding of polynomial and rational functions, their graphs, and their applications to problem-solving situations.

- Represent real-world problem situations using finite graphs, matrices, sequences, series, and recursive relations.

- Demonstrate understanding of the relationship between exponential and logarithmic functions and their application to problem-solving situations.

- Understand that numbers can be represented in a variety of equivalent forms, including integers, fractions, decimals, percents, scientific notation, exponents, radicals, absolute value, and logarithms.

- Solve complex systems of equations and inequalities, including use of matrix algebra.

- Use systems of equations and inequalities to solve real-world problems algebraically and with matrices.

Grade 12
Pre-Calculus

Basic assumptions for mathematics education:
All students will have access to calculators and computers; classroom activities will be student-centered; all courses will have increased emphasis on problem-solving, estimation, and real-world applications; evaluation will include alternative methods of assessment.

Major Concepts/Content.
The purpose of this course is to enable students to develop concepts and skills in advanced algebra, analytic geometry, and trigonometry.

The content should include, but not be limited to, the following:

- Trigonometric functions and their inverses.
- Trigonometric identities and equations.
- Vectors and parametric equations.
- Structure and properties of the complex number system.
- Polar coordinate system.
- Sequences and series.
- Concept of limits.
- Conic sections.
- Polynomial, rational, exponential, and logarithmic functions.
- Matrix algebra.

Af**ter successfully completing this course, the student will:**

- Demonstrate understanding of trigonometric functions and their inverses, trigonometric identities and equations, and their applications to problem-solving situations.
- Understand and explain the effects of addition, subtraction, multiplication, and division on real numbers, including square roots, exponents, and appropriate inverse relationships.
- Use concrete and graphic models to derive formulas for finding rate, distance, time, angle measures, and arc lengths.

- Represent and apply geometric properties and relationships to solve real-world and mathematical problems including ratio, proportion, and properties of right triangle trigonometry.

- Describe, analyze, and generalize relationships, patterns, and functions using words, symbols, variables, tables, and graphs.

- Determine the impact when changing parameters of given functions.

- Demonstrate understanding of the application of graphing techniques to trigonometric functions and their inverses.

- Use estimation strategies in complex situations to predict results and to check the reasonableness of results.

- Understand geometric concepts such as perpendicularity, parallelism, tangency, congruency, similarity, reflections, symmetry, and transformations including flips, slides, turns, enlargements, rotations, and fractals.

- Demonstrate use of vectors and parametric equations to solve problems**.**

- Solve real-world problems involving rated measures (miles per hour, feet per second) using a rectangular coordinate system (graph), apply and algebraically verify properties of two- and three-dimensional figures, including distance, midpoint, slope, parallelism, and perpendicularity.

- Demonstrate understanding of the connections between trigonometric functions, polar coordinates, and complex numbers.

- Understand concrete and symbolic representations of real and complex numbers in real-world situations. Understand the structure of the complex number system.

- Demonstrate understanding of the concept of limits; arithmetic and geometric **s**equences and series; and their applications, including definition of the derivative.

- Understand and use the basic concepts of limits and infinity.

- Apply special number relationships such as sequences and series to real-world problems.

    - Demonstrate understanding of conic sections.

- Analyze and apply geometric relationships involving planar cross-sections (the intersection of a plane and a three-dimensional figure).

- Demonstrate understanding of polynomial and rational functions, their graphs, and their applications to problem-solving situations.

- Represent real-world problem situations using finite graphs, matrices, sequences, series, and recursive relations.

- Demonstrate understanding of the relationship between exponential and logarithmic functions and their application to problem-solving situations.

- Understand that numbers can be represented in a variety of equivalent forms, including integers, fractions, decimals, percents, scientific notation, exponents, radicals, absolute value, and logarithms.

- Solve complex systems of equations and inequalities, including use of matrix algebra.

- Use systems of equations and inequalities to solve real-world problems graphically, algebraically, and with matrices.

Grade 12
English IV

Basic Assumptions for Language Arts Education:
Reading, writing, speaking, listening and viewing competencies are integrated throughout students' learning experiences. Benchmarks are repeated as needed in course sequences. As students progress from one course to the next, increases should occur in the complexity of materials and tasks and in the students' independence in the application of skills and strategies. Learning tasks and materials accommodate the individual needs of students. Technology is available for students to develop competencies in the language arts.

Major Concepts/Content.
The purpose of this course is to provide integrated educational experiences in the language arts strands of reading, writing, listening, viewing, speaking, language, and literature.

The content should include, but not be limited to, the following:

- Using the reading process to construct meaning using technical, informative, and imaginative texts.
- Using writing processes for various purposes with attention to style and format.
- Using the research process and individual inquiry to locate, analyze, and evaluate information.
- Using effective listening, speaking, and viewing strategies in informal and formal situations.
- Understanding the power of language as it impacts readers, writers, listeners, viewers, and speakers.
- Understanding and analyzing literary texts.
- Responding critically and aesthetically to literature.

The course emphasizes British authors; however literature representative of other cultures may be used to support integrated studies and multicultural emphases.

After successfully completing this course, the student will:

- Use and monitor own reading processes effectively to construct meaning from a range of technical, informative, and literary texts.

- Apply a variety of response strategies, including rereading, note taking, summarizing, outlining, writing a formal report, and relating what is read to his or her own experiences and feelings.

- Describe and evaluate personal preferences regarding fiction and nonfiction.

- Locate, gather, analyze, and evaluate written information for a variety of purposes, including research projects, real-world tasks, and self-improvement.

- Use writing processes effectively to communicate ideas and process information for various purposes, reflecting appropriate styles, format, and conventions of standard English.

- Select and use appropriate prewriting strategies, such as brainstorming, graphic organizers, and outlining.

Students will draft and revise writing that:

- Is focused, purposeful, and reflects insight into the writing situation.

- Has an organizational pattern that provides for a logical progression of ideas.

- Has effective use of transitional devices that contribute to a sense of completeness.

- Has support that is substantial, specific, relevant, and concrete.

- Demonstrates a commitment to and involvement with the subject.

- Uses creative writing strategies as appropriate to the purpose of the paper;

- Demonstrates a mature command of language with precision of expression.

- Has varied sentence structure and has few, if any, conventional errors in mechanics, usage, punctuation, and spelling.

Students will produce final documents that have been edited for:

- Correct spelling; correct punctuation, including commas, colons, and common use of semicolons; correct capitalization.

- Correct sentence formation.

- Correct instances of possessives, subject/verb agreement, instances of noun/pronoun agreement, and the intentional use of fragments for effect.

- Correct formatting that appeals to readers.
- Organize information using appropriate systems.
- Write fluently for a variety of occasions, audiences, and purposes, making appropriate choices regarding style, tone, level of detail, and organization.
- Select and use appropriate speaking, listening, and viewing skills to clarify and interpret meaning in both formal and informal situations.
- Use effective strategies for informal and formal discussions, including listening actively and reflectively, connecting to and building on the ideas of a previous speaker, and respecting the viewpoints of others.
- Use volume, stress, pacing, enunciation, eye contact, and gestures that meet the needs of the audience and topic.
- Select and use a variety of speaking strategies to clarify meaning and to reflect understanding, interpretation, application, and evaluation of content, processes, or experiences (including asking relevant questions when necessary, making appropriate and meaningful comments, and making insightful observations).
- Use details, illustrations, analogies, and visual aids to make oral presentations that inform, persuade, or entertain.
- Apply oral communication skills to interviews, group presentations, formal presentations, and impromptu situations.
- Develop and sustain a line of argument and provide appropriate support.
- Select and use appropriate language for effective visual, oral, and written communication.
- Make appropriate adjustments in language use for social, academic, and life situations, demonstrating sensitivity to gender and cultural bias.
- Understand the subtleties of literary devices and techniques in the comprehension and creation of communication.
- Recognize production elements that contribute to the effectiveness of a specific medium.

- Demonstrate understanding of the ways that history, culture, and setting influence language.

- Apply an understanding that language and literature are primary means by which culture is transmitted.

- Understand that there are differences among various dialects of English.

- Understand specific ways in which language has shaped the reactions, perceptions, and beliefs of the local, national, and global communities.

- Demonstrate understanding and respond aesthetically and critically to predominantly British literature, including fiction, nonfiction, poetry, and drama.

- Understand why certain literary works are considered classics.

- Understand the different stylistic, thematic, and technical qualities present in the literature of different cultures and historical periods.

- Analyze the effectiveness of complex elements of plot, such as setting, major events, problems, conflicts, and resolutions.

- Understand the relationships between and among elements of literature, including characters, plot, setting, tone, point of view and theme.

- Analyze poetry for the ways in which poets inspire the reader to share emotions, such as the use of imagery, personification, and figures of speech, including simile and metaphor; and the use of sound, such as rhyme, rhythm, repetition and alliteration.

- Understand the use of images and sounds to elicit the reader's emotions in both fiction and nonfiction.

- Analyze the relationships among author's style, literary form, and intended impact on the reader.

- Recognize and explain those elements in texts that prompt a personal response, such as connections between one's own life and the characters, events, motives, and causes of conflict in texts.

- Examine a literary selection from several critical perspectives.

- Use the research and critical inquiry processes to prepare documents and oral

presentations.

- Select and use appropriate study and research skills and tools according to the type of information being gathered or organized, including news sources, and information services.

- Analyze the validity and reliability of primary source information and use the information appropriately.

- Synthesize information from multiple sources to draw conclusions.

- Select and use a variety of electronic media, such as the Internet, information services, and desktop-publishing software programs, to create, revise, retrieve, and verify information.

- Effectively integrate multimedia and technology into presentations.

HONORS PROGRAM

In addition to the above curriculum, the Honors program requires students to undertake a succession of topics for independent study that go beyond the knowledge base covered in the College Preparatory course. Students are required to complete:

- A research paper on the origins of the English language and variations of modern English.

- Comparative essay on selected British authors, poets, essayists and dramatists.

Grade 12
Spanish IV

Basic Assumptions for Spanish IV
This course allows students to enhance their ability to use the language with clarity and precision, and will develop the language skills needed to engage in sustained conversations and discussions, understand and evaluate information, read diverse materials for both study and pleasure and write clearly and effectively.

Major Concepts/ Content:
Students in this course will develop and apply knowledge of language elements through activities in listening, speaking, reading and writing. They will also enhance their thinking skills through the critical study of literature and will also analyze and use available global information to communicate effectively in the target language for both business and personal purposes.

The content should include, but not be limited to, the following:

- Demonstrating an understanding of a variety of oral messages, communicated in various situations and for a variety of purposes.
- Responding appropriately to a variety of oral messages**.**
- Demonstrating an understanding of vocabulary and language structures appropriate to the level.
- Demonstrating an understanding of vocabulary and language structures appropriate to the level.
- Demonstrating the ability to extract information from complex oral messages.
- Using standard pronunciation and intonation in the target language with fluency and accuracy.
- Participating in conversation and group discussions using vocabulary and language structures appropriate to the level (e.g., take part in a debate on desirable careers).
- Expressing personal opinions and explaining ideas in a variety of prepared and open ended conversations.
- Expressing ideas and feelings in writing, using increasingly complex forms (e.g., write short essays and narrative, descriptive, and expository passages).

- Demonstrating knowledge of the culture of countries where the language is spoken in well-researched reports and essays (e.g., write an essay on the literature, music, or art of a country where the language is spoken.

After successfully completing this course, the student will:

- Communicate orally in various situations and for a variety of purposes, using language appropriate to the level.

- Read age-and language appropriate passages from various sources for a variety of purposes.

- Write for a variety of purposes and audiences, using increasingly broad vocabulary and sophisticated language structures.

- Demonstrate the ability to use the preterite tense to talk about familiar events in the past.

Grade 12
Psychology (General)

Major concepts/content
Through the study of psychology, students acquire an understanding of and an appreciation for human behavior, behavior interaction and the progressive development of individuals. This will better prepare them for the AP Exam and to understand their own behavior and the behavior of others.

The content should include, but not be limited to, the following:

- major theories and orientations of psychology
- psychological methodology
- memory and cognition
- human growth and development
- personality
- abnormal behavior
- psychological therapies
- stress/coping strategies
- mental health

After successfully completing this course, the student will:

- Recognize that the study of psychology provides an organized scientific way of understanding human behavior, growth and development.
- Understand and appreciate the various theories or orientations which psychologists have developed to explain human behavior.
- Understand the basic methods and techniques used by psychologists to investigate human behavior.
- Explain the various methods by which human beings acquire specific behaviors and build those specific behaviors into appropriate patterns of behaviors.
- Understand how information is collected, organized, processed and recalled by the brain and used to build a database of knowledge in human beings.
- Describe the stages of psychological development and recognize the relationship between physical and chronological development and psychological development.
- Recognize various forms of abnormal behavior, possible causes of those abnormal behaviors and modern therapies to correct abnormal behaviors.
- Recognize the relationship between stress and psychological well-being.
- Apply research, study, critical-thinking and decision-making skills and demonstrate the use of new and emerging technology in problem solving.

Grade 9-12
Environmental Science

Basic Assumptions for Science Education:

- A variety of scientific concepts will be integrated throughout the students learning experience in order to create an understanding of the nature of science.
- As students progress from one course to the next, they will move through various areas of science, building on prior knowledge and expanding their understanding of the basic concepts.

Major Concepts/Content

The purpose of this course is to provide knowledge, understanding and appreciation of the environment around them and make them familiar with laboratory and field techniques used in environmental studies. The student will learn to evaluate current events related to environmental issues.

The content should include, but not be limited to, the following:

- Earth Systems and Resources
  - Earth Science Concepts
  - The Atmosphere
  - Global Water Resources and Use
  - Soil and Soil Dynamics
  - Rock cycle; formation; composition; physical and chemical properties; main soil types; erosion and other soil problems; soil conservation.
- The Living World
- Ecosystem Structure
  - (Biological populations and communities; ecological niches; interactions among species; keystone species; species diversity and edge effects; major terrestrial and aquatic biomes)
- Energy Flow
  - (Photosynthesis and cellular respiration; food webs and trophic levels; ecological pyramids)
- Ecosystem Diversity
  - (Biodiversity; natural selection; evolution; ecosystem services)
- Natural Ecosystem Change
  - (Climate shifts; species movement; ecological succession)
- Natural Biogeochemical Cycles
  - (Carbon, nitrogen, phosphorus, sulfur, water, conservation of matter)
- Population Biology Concepts
  - (Population ecology; carrying capacity; reproductive strategies; survivorship)
- Human Population

    - Human population dynamics
    - (Historical population sizes; distribution; fertility rates; growth rates and doubling times; demographic transition; age-structure diagrams)
    - Population size
    - Impacts of population growth
    - (Hunger; disease; economic effects; resource use; habitat destruction)

- Land and Water Use
- Agriculture
    - Feeding a growing population
    - (Human nutritional requirements; types of agriculture; Green Revolution; genetic engineering and crop production; defor-estation; irrigation; sustainable agriculture)
    - Controlling pests
    - (Types of pesticides; costs and benefits of pesticide use; integrated pest management; relevant laws)
- Forestry
- (Tree plantations; old growth forests; forest fires; forest management; national forests)
- Rangelands
- (Overgrazing; deforestation; desertification; rangeland management; federal rangelands)
- Other Land Use
    - Urban land development
    - (Planned development; suburban sprawl; urbanization)
- (Management; wilderness areas; national parks; wildlife refuges; forests; wetlands)
    - Land conservation options
    - (Preservation; remediation; mitigation; restoration)
- Sustainable land-use strategies
- Mining
- (Mineral formation; extraction; global reserves; relevant laws and treaties)
- Fishing
- (Fishing techniques; overfishing; aquaculture; relevant laws and treaties)
- Global Economics
- (Globalization; World Bank; Tragedy of the Commons; relevant laws and treaties)
- Energy Resources and Consumption
    - Energy Concepts
- (Energy forms; power; units; conversions; Laws of Thermodynamics)
- Energy Consumption
- Fossil Fuel Resources and Use
- (Formation of coal, oil, and natural gas; extraction/purification methods; world reserves and global demand; synfuels; environmental advantages/disadvantages of sources)
- Nuclear Energy
- (Nuclear fission process; nuclear fuel; electricity production; nuclear

reactor types; environmental advantages/disadvantages; safety issues; radiation and human health; radioactive wastes; nuclear fusion)
    - Hydroelectric Power
- (Dams; flood control; salmon; silting; other impacts)
    - Energy Conservation
    - Renewable Energy
- (Solar energy; solar electricity; hydrogen fuel cells; biomass; wind energy; small-scale hydroelectric; ocean waves and tidal energy; geothermal; environmental advantages/disadvantages)
- Pollution
- Pollution Types
    - Air pollution
    - (Sources-primary and secondary; major air pollutants; measurement units; smog; acid deposition-causes and effects; heat islands and temperature inversions; indoor air pollution; remediation and reduction strategies; Clean Air Act and other relevant laws)
    - Noise pollution
    - (Sources; effects; control measures)
    - Water pollution
    - (Types; sources, causes, and effects; cultural eutrophication; groundwater pollution; maintaining water quality; water purification; sewage treatment/septic systems; Clean Water Act and other relevant laws)
    - Impacts on the Environment and Human Health
    - Hazards to human health
    - (Environmental risk analysis; acute and chronic effects; dose--response relationships; air pollutants; smoking and other risks)
- Hazardous chemicals in the environment
    - (Types of hazardous waste; treatment/disposal of hazardous waste; cleanup of contaminated sites; biomagnification; relevant laws)
- Economic Impacts
    - (Cost-benefit analysis; externalities; marginal costs; sustainability)

HONORS : The honors classes are more challenging than regular classes, requiring more extensive and challenging research assignments; more frequent, complex assignments; and additional questions on the regular quiz, test, and final examination. Environment students are guided to take AP Environment Course online through College Board.

Grades 9-12
Biology

Major Concepts/Content.
The purpose of this course is to provide exploratory experiences and laboratory and real-life applications in the biological sciences.

The content should include, but not be limited to, the following:

- the nature of science
- matter, energy, and chemical processes of life
- cells: biology, reproduction, and communication
- genetics: principles, molecular basis, diversity, and biotechnologies
- levels of organization, classification, and taxonomy
- structure, function, and reproduction of plants, animals, and microorganisms
- behavior of organisms
- interdependence of organisms, humans, and the environment
- biological selection, adaptations, and changes through time
- agricultural, food, and medical technologies and careers

Special Note.
Laboratory investigations, which include the use of scientific research, measurement, laboratory technologies, and safety procedures, are an integral part of this course. Students are prepared for readiness to take Ap Biology course.

After successfully completing this course, the student will:

- Apply knowledge of the nature of science and scientific habits of mind to solve problems, and employ safe and effective use of laboratory technologies.
    - know that investigations are conducted to explore new phenomena, to check on previous results, to test how well a theory predicts, and to compare different theories.
    - know that from time to time, major shifts occur in the scientific view of how the world works, but that more often, the changes that take place in the body of scientific knowledge are small modifications of prior knowledge.
    - understand that no matter how well one theory fits observations, a new theory might fit them as well or better, or might fit a wider range of observations, because in science, the testing, revising, and occasional discarding of theories, new and old, never ends and leads to an increasingly better understanding of how things work in the world, but not to absolute truth.
    - know that scientists in any one research group tend to see things alike and that therefore scientific teams are expected to seek out the possible

sources of bias in the design of their investigations and in their data analysis.
    - understand that new ideas in science are limited by the context in which they are conceived, are often rejected by the scientific establishment, sometimes spring from unexpected findings, and usually grow slowly from many contributors.
    - understand that in the short run, new ideas that do not mesh well with mainstream ideas in science often encounter vigorous criticism and that in the long run, theories are judged by how they fit with other theories, the range of observations they explain, how well they explain observations, and how effective they are in predicting new findings.
    - understand the importance of a sense of responsibility, a commitment to peer review, truthful reporting of the methods and outcomes of investigations, and making the public aware of the findings.
    - know that scientists assume that the universe is a vast system in which basic rules exist that may range from very simple to extremely complex but that scientists operate on the belief that the rules can be discovered by careful, systemic study.
    - know that scientists control conditions in order to obtain evidence, but when that is not possible for practical or ethical reasons, they try to observe a wide range of natural occurrences to discern patterns.
    - know that performance testing is often conducted using small-scale models, computer simulations, or analogous systems to reduce the chance of system failure.
    - know that scientists can bring information, insights, and analytical skills to matters of public concern and help people understand the possible causes and effects of events.
    - know that funds for science research come from federal government agencies, industry, and private foundations and that this funding often influences the areas of discovery.
- Demonstrate understanding of the roles of matter, energy, and the chemical processes of life.
- Demonstrate understanding of the structure and processes of cells with emphasis on reproduction and communication.
    - understand how knowledge of energy is fundamental to all the scientific disciplines (e.g., the energy required for biological processes in living organisms and the energy required for the building, erosion, and rebuilding of the Earth).
    - understand that there is conservation of mass and energy when matter is transformed.
    - know that the total amount of usable energy always decreases, even though the total amount of energy is conserved in any transfer.
    - know that the body processes involve specific biochemical reactions governed by biochemical principles.

- know that membranes are sites for chemical synthesis and essential energy conversions.
- understand that biological systems obey the same laws of conservation as physical systems.
- know that the chemical elements that make up the molecules of living things are combined and recombined in different ways.
- know that complex interactions among the different kinds of molecules in the cell cause distinct cycles of activity governed by proteins.
- know that molecules from other parts of the organism or even from other organisms can affect cell behavior.
- understand the mechanisms of asexual and sexual reproduction and know the different genetic advantages and disadvantages of asexual and sexual reproduction.

- Demonstrate understanding of the principles of genetics with emphasis on the molecular basis of heredity, genetic diversity, and related biotechnologies.
  - know that every cell contains a "blueprint" coded in DNA molecules that specify how proteins are assembled to regulate cells.
  - understand how genetic variation of offspring contributes to population control in an environment and that natural selection ensures that those who are best adapted to their surroundings survive to reproduce.
- Demonstrate understanding of the importance of levels of organization, classification, and taxonomy to the study of biology (e.g., ontogeny recapitulates phylogeny).
  - know of the great diversity and interdependence of living things.
- Demonstrate understanding of the relationships of structure, function, and reproduction of selected plants, animals, and microorganisms.
  - know that body structures are uniquely designed and adapted for their function.
- Demonstrate understanding of factors, which affect the behavior of organisms.
  - know that separate parts of the body communicate with each other using electrical and/or chemical signals.
    know that organisms respond to internal and external stimuli.

- Demonstrate understanding of the interdependence of all living things and the environment.
  - know of the great diversity and interdependence of living things.
  - understand how the flow of energy through an ecosystem made up of producers, consumers, and decomposers carries out the processes of life and that some energy dissipates as heat and is not recycled.
  - know that the chemical elements that make up the molecules of living things are combined and recombined in different ways.
  - know that layers of energy-rich organic materials have been gradually turned into great coal beds and oil pools (fossil fuels) by the pressure of

the overlying earth and that humans burn fossil fuels to release the stored energy as heat and carbon dioxide.
    - know that changes in a component of an ecosystem will have unpredictable effects on the entire system but that the components of the system tend to react in a way that will restore the ecosystem to its original condition.
    - know that the world ecosystems are shaped by physical factors that limit their productivity.
    - understand that the amount of life any environment can support is limited and that human activities can change the flow of energy and reduce the fertility of the Earth.
    - know the ways in which humans today are placing their environmental support systems at risk (e.g., rapid human population growth, environmental degradation, and resource depletion).
- Demonstrate understanding of types of selection, variations, and adaptations, and how they lead to biological changes through time.
    - know that changes in Earth's climate, geological activity, and life forms may be traced and compared.
    - know that Earth's systems and organisms are the result of a long, continuous change over time.
    - understand the mechanisms of change (e.g., mutation and natural selection) that lead to adaptations in a species and their ability to survive naturally in changing conditions and to increase species diversity.
    - know of the great diversity and interdependence of living things.

understand how genetic variation of offspring contributes to population control in an environment and that natural selection ensures that those who are best adapted to their surroundings survive to reproduce.

- Demonstrate understanding of the impact of agricultural, food, and medical technologies on the quality of our lives and career opportunities.
    - understand the interconnectedness of the systems on Earth and the quality of life.
    - know that technological problems often create a demand for new scientific knowledge and that new technologies make it possible for scientists to extend their research in a way that advances science.
    - know that the value of a technology may differ for different people and at different times.
    - know that those who engage in design and technology to solve practical problems, taking human values and limitations into account, use scientific knowledge.

In Addition Students will:

- Understand the scope of biology, life's diversity, and identify the characteristics of life
- Identify themes that unify the study of life, i.e., the cellular basis of life, how form fits function, reproduction and inheritance, interaction with the environment, energy and life, regulation, adaptation and evolution, biology and society, and scientific inquiry
- Utilize the scientific method in practice by participation in our annual science fair competition
- Recognize the biochemical molecules of life and know their functions, i.e., carbohydrates, lipids, proteins, and nucleic acids
- Describe basic cellular organelle structure and function
- Understand why osmosis is important to the living cell
- Differentiate between heterotrophs and autotrophs
- List the reactants and products of photosynthesis as the means of energy conversion of sunlight to chemical
- List the reactants and products for cellular respiration including a discussion of ATP as the energy molecule of the cell
- Describe the structure and function of DNA, replication, and protein synthesis
- Differentiate sexual and asexual reproduction, mitosis, and meiosis
- Understand the process of heredity through studies of genetics and advancements in DNA technology. Learn how DNA can be extracted from plants.
- Describe the conditions of early earth and the first forms of life
- Describe how natural selection is the mechanism for evolution
- Categorize the diversity of life through taxonomy and classification of the six kingdoms of life
- Understand the ecological relationships between man and the environment

Grades 11-12
AP Biology

Major concepts/content.
The purpose of this course is to provide a study of the facts, principles, and processes of biology and the collection, interpretation, and formulation of hypotheses from available data.

Special note
Laboratory investigations of selected topics in the content, which also include the use of scientific method, measurement, laboratory apparatus, and safety procedures, are an integral part of this course. Credit in this course precludes subsequent credit in Fundamentals of Biology, Biology I or Biology I Honors.

After successfully completing this course, the student will:

- Use the scientific method to solve problems, employ metric measurements, and demonstrate safe and effective use of laboratory instruments.
- Analyze the chemical composition of organisms.
- Describe in detail cell infrastructure and function of cellular organelles.
- Assess the role of enzymes in life processes.
- Trace the biochemical pathways involved in respiration and photosynthesis.
- Describe the processes of cell division.
- Describe the principles of genetics.
- Apply knowledge of structure and the function in plants and animals to their reproduction and development.
- Identify the experimental evidence for the modern theories of the origin of life.
  Describe the changes in organisms through time.
- Demonstrate knowledge of the principles of ecology and the role of energy flow, biogeochemical cycles, population growth and regulation, communities, habitats, and niches.
- Distinguish between stereotyped and learned behavior and list the factors of social behavior.
- Describe the implications of man's social biology on his environment and quality of life.
- Analyze how biology interacts with technology and society.

In Addition students will:

- Relate the various disciplines of biology, its scope, depth, and how natural events were explained historically

- State the main goal of science and describe an experiment listing the steps of the scientific method
- Describe and implement safety procedures and demonstrate proficiency in measurements, massing quantities, and proper techniques of microscopy (lab activity and scientific method: Can Paramecia be observed feeding on yeast cells?)
- Describe basic chemistry concepts including interactions of matter from the subatomic level through macromolecules (lab activity: building simple organic molecules with ball and spring kits and demonstrate hydrolysis and condensation reactions and AP Lab #2: Enzyme Catalysis)
- Relate the importance of the chemistry of water to life processes on earth (lab activity: penny lab demonstrating cohesion of water molecules)
- Demonstrate an understanding of cellular structures and their functions, cell reproduction (1st part of AP Lab #3: Mitosis), and how molecular traffic is regulated through the cellular membrane (AP Lab # 1 Osmosis and Diffusion")
- Describe the structure and function of nucleic acids and explain how protein synthesis occurs
- Describe how energy is transformed in living organisms through photosynthesis and cellular respiration and how matter is recycled on earth (AP Lab #4: Plant Pigments and Photosynthesis and AP Lab #5: Cell Respiration)
- Discussion with subsequent essay assignment on the practical applications of alternative energy sources such as, bio-fuels, wind and solar energy, fuel cells, etc.)
- Describe genetic concepts and inheritance in organisms and predict genetic traits passed on to offspring that include the following concepts:
- Meiosis and sexual life cycles (2nd part of AP Lab #3 Meiosis)
- Genes, chromosomes and the molecular basis of inheritance (AP Lab#7: Genetics of Organisms)
- Producing proteins from genes
- The genetics of viruses and bacteria
- The organization and control of gene expression
- DNA technology (AP Lab # 6 Molecular Biology)
- The genetic basis of development
- List and explain evidences for evolution and describe the mechanism of natural selection that leads to the origin of species (AP Lab#8: Population Genetics and Evolution)
- Describe methods used to classify organisms in taxonomy which include:
- The origin of prokaryotic and eukaryotic cells
- The colonization of land by plants
- Animal evolution: invertebrates and vertebrates (A phylogenic tree of the animal kingdom will be drawn by the students as we cover each taxonomic branch and the evolutionary innovations that lead to the basis of the branching)

- Plant structure, growth, transport, nutrition and reproduction (AP Lab#9: Transpiration)
- Utilize comparative anatomy to describe structure and function of organ systems in vertebrates and invertebrates (AP Lab #10: Physiology of the Circulatory System)
- Describe the relationship between the cycling of chemical matter on earth and living organisms in the ecology of the biosphere (AP Lab #11: Habitat Selection)
- Differentiate land and aquatic biomes
- Describe factors that control population growth and regulate communities (AP Lab#12: Dissolved Oxygen and Aquatic Productivity)
- Demonstrate an understanding of how viruses, Monerans, Protista, and Fungi are related and their effects in the cycles of the earth and in organisms

The L2 standard AP laboratory exercises are covered when appropriate to the related content (indicated above throughout the syllabus) as well as other labs and learning activities, such as model building, videos, computer interactive lessons, etc.)

Required Text: Campbell & Reese. Biology, 6th Edition
Recommended Text: Cliffs Notes AP Biology

Grades 9-12
AP Biology Online

Major Concepts/Content.
The course provides an overview of cell biology, evolution, genetics, ecology, as well as the structure and function of plant and animal systems. In AP Biology, students build the conceptual framework necessary to understand science as a process.

The content should include, but not be limited to, the following:

- The process of evolution drives the diversity and unity of life
- Biological systems utilize free energy and molecular building blocks to grow, to reproduce, and to maintain dynamic homeostasis
- Living systems store, retrieve, transmit, and respond to information essential to life processes
- Biological systems interact, and these systems and their interactions possess complex properties
- Chemistry of life
- Cell structure
- Metabolism
- Cell reproduction
- Genetics
- Evolution
- Microbiology and plants
- Animal systems
- Hormones
- Ecology
- Conservation

After successfully completing this course, the student will:

- Use the scientific method to solve problems
- Employ metric measurements
- Analyze the chemical composition of organisms
- Describe in detail cell infrastructure and function of cellular organelles
- Assess the role of enzymes in life processes
- Trace the biochemical pathways involved in respiration and photosynthesis
- Describe cell division
- Describe principles of genetics
- Demonstrate knowledge of the principles of ecology and the role of energy flow

Grades 9-12
Chemistry

Basic Assumptions for Science Education:

- A variety of scientific concepts will be integrated throughout the students learning experience in order to create an understanding of the nature of science.
- As students progress from one course to the next, they will move through various areas of science, building on prior knowledge and expanding their understanding of the basic concepts.

Major Concepts/Content

The purpose of this course is to study the composition, properties, and changes associated with matter, and their applications.

The content should include, but not be limited to, the following:

- the nature of science
- matter: its classification, structure, and changes
- scientific measurement
- atomic theory
- the periodic table
- bonding
- chemical formulas, chemical reactions, and balanced equations
- chemical quantities
- water and aqueous systems
- solutions
- thermo chemistry
- electrochemistry
- organic chemistry
- stoichiometry
- reaction rates and equilibrium
- acids and bases
- oxidation and reduction
- behavior of gases
- dynamics of energy
- chemistry of life
- nuclear chemistry

After successfully completing this course, the student will:

- Apply knowledge of the nature of science and scientific habits of mind to solve problems, and employ safe and effective use of laboratory technologies.

- Demonstrate understanding of matter, its classification, structure, and changes.
    - know that the electron configuration in atoms determines how a substance reacts and how much energy is involved in its reactions.
    - know that a change from one phase of matter to another involves a gain or loss of energy.

- Demonstrate understanding of atomic theory.
    - know that the number and configuration of electrons will equal the number of protons in an electrically neutral atom and when an atom gains or loses electrons, the charge is unbalanced
    - know that a number of elements have heavier, unstable nuclei that decay, spontaneously giving off smaller particles and waves that result in a small loss of mass and release a large amount of energy.
    - know that nuclear energy is released when small, light atoms are fused into heavier ones.
    - know that the forces that hold the nucleus of an atom together are much stronger than electromagnetic force and that this is the reason for the great amount of energy released from the nuclear reactions in the sun and other stars.

- Demonstrate understanding of the application of the periodic table.
    - know that elements are arranged into groups and families based on similarities in electron structure and that their physical and chemical properties can be predicted.

- Demonstrate understanding of covalent and ionic bonding.
    - know that the vast diversity of the properties of materials is primarily due to variations in the forces that hold molecules together.
    - know that connections (bonds) form between substances when outer-shell electrons are either transferred or shared between their atoms, changing the properties of substances.
    - know that electrical forces exist between any two charged objects.

- Use chemical formulas to write balanced equations and predict reaction products.
    - know the difference between an element, a molecule, and a compound.
    - understand that there is conservation of mass and energy when matter is transformed.

- Explain the behavior of gases in terms of gas laws and kinetic molecular theory.
    - know that temperature is a measure of the average kinetic energy of motion of the molecules in an object.

- Demonstrate understanding of reaction rates and equilibrium.
    - experiment and determine that the rates of reaction among atoms and molecules depend on the concentration, pressure, and temperature of the reactants and the presence or absence of catalysts.
    - know that changes in a component of a system will have unpredictable effects on the entire system but that the components of the system tend to react in a way that will restore the system to its original condition.

- Demonstrate understanding of the dynamics of energy.
    - understand how knowledge of energy is fundamental to all the scientific disciplines (e.g., the energy required for biological processes in living organisms and the energy required for the building, erosion, and rebuilding of the Earth).
    - know that the first law of thermodynamics relates the transfer of energy to the work done and the heat transferred.
    - know that the total amount of usable energy always decreases, even though the total amount of energy is conserved in any transfer.

- Demonstrate understanding of the interactions of chemistry with technology and society.
    - know that each source of energy presents advantages and disadvantages to its use in society (e.g., political and economic implications may determine a society's selection of renewable or nonrenewable energy sources).
    - know that technological problems often create a demand for new scientific knowledge and that new technologies make it possible for scientists to extend their research in a way that advances science.
    - know that scientists can bring information, insights, and analytical skills to matters of public concern and help people understand the possible causes and effects of events.
    - know that those who engage in design and technology to solve practical problems, taking human values and limitations into account, use scientific knowledge.

In Addition students will:

- Define chemistry and matter and distinguish between atoms, elements, and molecules
- Distinguish pure substances and mixtures
- Distinguish between chemical and physical properties and changes
- Practice using correct laboratory technique
- Describe how the atomic theory was devised and is evidence that atoms exist
- Identify the structure of atoms and their electron configurations

HONORS : The honors classes are more challenging than regular classes, requiring more extensive and challenging research assignments; more frequent, complex assignments; and additional questions on the regular quiz, test, and final examination.

Grades 9-12
Physics

Major Concepts/Content
The purpose of this course is to provide opportunities to study the concepts, theories, and laws governing the interaction of matter, energy, and forces, and their applications through exploratory investigations and activities.

Basic Assumptions for Science Education:

- A variety of scientific concepts will be integrated throughout the students learning experience in order to create an understanding of the nature of science.
- As students progress from one course to the next, they will move through various areas of science, building on prior knowledge and expanding their understanding of the basic concepts.

The content should include, but not be limited to, the following:

- unifying concepts and processes of science
- energy
- force and motion
- Newton's laws of motion
- kinematic equations
- momentum
- universal gravitation
- centre of gravity
- temperature, heat, and expansion
- thermodynamics
- sound
- reflection and refraction
- lenses
- quantum theories
- the atomic nucleus and radioactiviy
- nuclear reactions
- dynamics
- wave characteristics
- conservation of energy and momentum
- heat and thermodynamics
- electricity
- magnetism
- interactions among science, technology, and society

Special Note:
This course shall include laboratory investigations which incorporate the use of measurement, problem solving, laboratory apparatus, safety procedures, and experimental procedures. This course should also include the use of mathematical processes, graphical representation, and data analysis.

After successfully completing this course, the student will:

Investigation and Experimentation

Scientific progress is made by asking meaningful questions and conducting careful investigations.
Select and use appropriate tools and technology (such as computer-linked probes, spreadsheets, and graphing calculators) to perform tests, collect data, analyze relationships, and display data.
Identify and communicate sources of unavoidable experimental error.
Identify possible reasons for inconsistent results, such as sources of error or uncontrolled conditions.
Formulate explanations by using logic and evidence.
Distinguish between hypothesis and theory as scientific terms.
Recognize the usefulness and limitations of models and theories as scientific representations of reality.
Recognize the issues of statistical variability and the need for controlled tests.

Demonstrate understanding of the unifying concepts and processes of science

- know that investigations are conducted to explore new phenomena, to check on previous results, to test how well a theory predicts, and to compare different theories.
- know that from time to time, major shifts occur in the scientific view of how the world works, but that more often, the changes that take place in the body of scientific knowledge are small modifications of prior knowledge.
- understand that no matter how well one theory fits observations, a new theory might fit them as well or better, might fit a wider range of observations, because in science, the testing, revising, and occasional discarding of theories, new and old, never ends and leads to an increasingly better understanding of how things work in the world, but not to absolute truth.
- know that scientists in any one research group tend to see things alike and that therefore scientific teams are expected to seek out the possible sources of bias in the design of their investigations and in their data analysis.
- understand that new ideas in science are limited by the context in which they are conceived, are often rejected by the scientific establishment, sometimes spring from unexpected findings, and usually grow slowly from many contributors.

- understand that in the short run, new ideas that do not mesh well with mainstream ideas in science often encounter vigorous criticism and that in the long run, theories are judged by how they fit with other theories, the range of observations they explain, how well they explain observations, and how effective they are in predicting new findings.
- understand the importance of a sense of responsibility, a commitment to peer review, truthful reporting of the methods and outcomes of investigations, and making the public aware of the findings.
- know that scientists assume that the universe is a vast system in which basic rules exist that may range from very simple to extremely complex but that scientists operate on the belief that the rules can be discovered by careful, systemic study.
- know that scientists control conditions in order to obtain evidence, but when that is not possible for practical or ethical reasons, they try to observe a wide range of natural occurrences to discern patterns.
- know that performance testing is often conducted using small-scale models, computer simulations, or analogous systems to reduce the chance of system failure.

- Demonstrate understanding and apply knowledge of wave characteristics, energy, and dynamics.
  - know that the vast diversity of the properties of materials is primarily due to variations in the forces that hold molecules together.
  - know that a change from one phase of matter to another involves a gain or loss of energy.
  - understand that matter may act as a wave, a particle, or something else entirely different with its own characteristic behavior.

- Demonstrate understanding of forces and motions.
  - know that all motion is relative to whatever frame of reference is chosen and that there is no absolute frame of reference from which to observe all motion.
  - know that any change in velocity is an acceleration.
  - know that acceleration due to gravitational force is proportional to mass and inversely proportional to the square of the distance between the objects.
  - know that electrical forces exist between any two charged objects.
  - describe how magnetic force and electrical force are two aspects of a single force.
  - know that the forces that hold the nucleus of an atom together are much stronger than electromagnetic force and that this is the reason for the great amount of energy released from the nuclear reactions in the sun and other stars.
  - know that most observable forces can be traced to electric forces acting between atoms or molecules.
  - explain that all forces come in pairs commonly called action and reaction.

- Demonstrate understanding of conservation of energy and momentum.
    - understand how knowledge of energy is fundamental to all the scientific disciplines (e.g., the energy required for biological processes in living organisms and the energy required for the building, erosion, and rebuilding of the Earth).

    - understand that there is conservation of mass and energy when matter is transformed.

- Demonstrate understanding of interactions of energy and matter.
    - know that nuclear energy is released when small, light atoms are fused into heavier ones.

    - know that temperature is a measure of the average translational kinetic energy of motion of the molecules in an object.

    - know that as electrical charges oscillate, they create time-varying electric and magnetic fields that propagate away from the source as an electromagnetic wave.

    - know that the first law of thermodynamics relates the transfer of energy to the work done and the heat transferred.

    - know that the total amount of usable energy always decreases, even though the total amount of energy is conserved in any transfer.

    - know that the structure of the universe is the result of interactions involving fundamental particles (matter) and basic forces (energy) and that evidence suggests that the universe contains all of the matter and energy that ever existed.

<u>Magnetism</u>

- *Electric and magnetic phenomena are related and have many practical applications*.
- Students know magnetic materials and electric currents (moving electric charges) are sources of magnetic fields and are subject to forces arising from the magnetic fields of other sources.
- Students know how to determine the direction of a magnetic field produced by a current flowing in a straight wire or in a coil.

- Students know changing magnetic fields produce electric fields, thereby inducing currents in nearby conductors

Light

Waves have characteristic properties that do not depend on the type of wave.

Students know radio waves, light, and X-rays are different wavelength bands in the spectrum of electromagnetic waves whose speed in a vacuum is approximately 3×108 m/s (186,000 miles/second).

Students know how to identify the characteristic properties of waves: interference (beats), diffraction, refraction, Doppler effect, and polarization.

Electricity including Ohm's Law

- *Electric and magnetic phenomena are related and have many practical applications*.
- Students know how to predict the voltage or current in simple direct current (DC) electric circuits constructed from batteries, wires, resistors, and capacitors.
- Students know how to solve problems involving Ohm's law.
- Students know any resistive element in a DC circuit dissipates energy, which heats the resistor. Students can calculate the power (rate of energy dissipation) in any resistive circuit element by using the formula Power = IR (potential difference) × I (current) = I2R.
- Students know the properties of transistors and the role of transistors in electric circuits.

Thermodynamics

- *Energy cannot be created or destroyed, although in many processes energy is transferred to the environment as heat.*
- Students know that the work done by a heat engine that is working in a cycle is the difference between the heat flow into the engine at high temperature and the heat flow out at a lower temperature (first law of thermodynamics) and that this is an example of the law of conservation of energy.
- Students know the internal energy of an object includes the energy of random motion of the object's atoms and molecules, often referred to as thermal energy. The greater the temperature of the object, the greater the energy of motion of the atoms and molecules that make up the object.
- Students know that most processes tend to decrease the order of a system over time and that energy levels are eventually distributed uniformly.
- Students know that entropy is a quantity that measures the order or disorder of a system and that this quantity is larger for a more disordered system.

- Demonstrate understanding of the interactions among science, technology, and society.
    - know that each source of energy presents advantages and disadvantages to its use in society (e.g., political and economic implications may determine a society's selection of renewable or nonrenewable energy sources).
    - know that technological problems often create a demand for new scientific knowledge and that new technologies make it possible for scientists to extend their research in a way that advances science.
    - know that scientists can bring information, insights, and analytical skills to matters of public concern and help people understand the possible causes and effects of events.
    - know that funds for science research come from federal government agencies, industry, and private foundations and that this funding often influences the areas of discovery.
    - know that the value of a technology may differ for different people and at different times.
    - know that scientific knowledge is used by those who engage in design and technology to solve practical problems, taking human values and limitations into account.

Special Note
This course shall include laboratory investigations which incorporate the use of measurement, problem solving, laboratory apparatus, safety procedures, and experimental procedures. This course should also include the use of mathematical processes, graphical representation, and data analysis.

HONORS : The honors classes are more challenging than regular classes, requiring more extensive and challenging research assignments; more frequent, complex assignments; and additional questions on the regular quiz, test, and final examination.

Grades 9-12
AP Environmental Science with Lab Online

Major Concepts/Content.
AP Environmental Science is a yearlong examination of the interrelationships of the natural world. Students identify and analyze environmental problems and their effects, and evaluate the effectiveness of proposed solutions. Students learn to think like environmental scientists: making predictions based on observations, writing hypothesis, designing and completing field studies and experiments, and reaching conclusions based on the analysis of data derived from these experiments. ***Lab component included. Some labs may require the use of household items or readily available, low-cost items.***

The content should include, but not be limited to, the following:

- The effects of pollution on the environment
- The effects of overpopulation on the environment
- The concept of sustainability as it relates to resource use
- The positive and negative affect our individual and joint actions have on the biosphere
- Science, matter, and energy
- Population dynamics
- Ecosystems and biodiversity
- Terrestrial biodiversity
- Aquatic biodiversity
- Food, soil, and pests
- Earth systems and resources
- Water and pollution
- Air and pollution
- Environmental hazards and waste management
- Sustainability, economics, and politics

After successfully completing this course, the student will:

- Read, understand, and interpret a variety of scientific information
- Demonstrate proficiency in explaining, analyzing and evaluating environmental problems and their solutions
- Apply the concepts and procedures of scientific reasoning to understanding the natural world
- Perform field studies and experiments, analyze data, interpret the results and communicate results and conclusions
- Discuss environmental problems and learn how to identify resolutions, prevention, and sustainability

Grades 9-12
AP Psychology

Major concepts/content

The purpose of AP Psychology is to introduce students to the systematic and scientific study of the behavior and mental processes of human beings and other animals. Students are exposed to the psychological facts, principles, and phenomena associated with each of the major subfields within psychology.

The content includes, but not be limited to, the following:

- Psychology's History and Approaches
- Research Methods
- Biological Bases of Behavior
- Sensation and Perception
- States of Consciousness
- Learning
- Cognition
- Motivation and Emotion
- Developmental Psychology
- Personality
- Testing and Individual Differences
- Abnormal Behavior
- Treatment of Abnormal Behavior

After successfully completing this course, the student will:

- Understand and appreciate the various theories or orientations which psychologists have developed to explain human and animal behavior.
- Understand the importance of research methodology.
- Explain the various methods by which human beings acquire specific behaviors and build those specific behaviors into appropriate patterns of behaviors.
- Understand how information is collected, organized, processed and recalled by the brain and used to build a database of knowledge in human beings.
- Describe the stages of psychological development and recognize the relationship between physical and chronological development and psychological development.
- Recognize various forms of abnormal behavior, possible causes of those abnormal behaviors and modern therapies to correct abnormal behaviors.
- Recognize the relationship between stress and psychological well being.
- Apply research, study, critical-thinking and decision-making skills and demonstrate the use of new and emerging technology in problem solving.

Goals

- To critically study the exciting and diverse field of psychology and understand the diversity of each perspective, focusing primarily on cognitive, biological, learning, evolutionary and psychodynamic theories

- To enable students the ability to plan, design, enact and analyze their own psychological study while adhering to clearly stated moral and ethical expectations

Objectives

- To analyze the five psychological perspectives listed above while taking into consideration cultural, ethical, gender and methodological considerations

- To approach the study of these five perspectives through their development as accepted perspectives, the major components of each framework, the methodologies used and the application of these perspectives in society

- To use the subject of abnormal behavior to provide the framework for a cross-analysis of each perspective

- To score a 3 or higher on the AP exam

Textbook/Sources

Myers, David G. Myer's Psychology for AP, New York: Worth, 2011.

Grades 11-12
AP Human Geography

COURSE OVERVIEW

AP Human Geography's purpose is to introduce students to the systematic study of patterns and process that have shaped human understanding, use, and alteration of Earth's surface. The students will evaluate the relationship between geographic concepts and human problems.

Major Concepts/Content.
Additionally, students employ spatial concepts and landscape analysis to examine human organization and its environmental consequences. They will also learn about and use the methods and tools used by geographers in their science and practice. This is not a "mapping class"; however, students will need a basic understanding of where countries and regions are located around the world. (Source: AP Human Geography Workshop Handbook)

The content should include, but not be limited to, the following:

- The course provides a systematic study of human geography including the following topics outlined in the Course Description:
    - Nature of and Perspectives on Geography
    - Population
    - Cultural Patterns and Processes
    - Political Organization of Space
    - Agricultural and Rural Land Use
    - Industrialization and Economic Development
    - Cities and Urban Land Use
- The course teaches the use of spatial concepts and landscape analysis to examine human organization of space.
- The course teaches spatial relationships at different scales ranging from the local to the global.
- The course teaches students how to use and interpret maps, data sets, and geographic models. GIS, aerial photographs, and satellite images, though not required, can be used effectively in this course.

After successfully completing this course, the student will:
Interpret maps and analyze geospatial data. Geography is concerned with the ways in which patterns on Earth's surface reflect and influence physical and human processes. As such, maps and geographic information systems (GIS) are fundamental to the discipline, and learning to use and think about them is critical to geographical literacy. The goal is achieved when students learn to use maps and geospatial data to pose and solve problems, and when they learn to think critically about what is revealed and what is hidden in different maps and GIS

applications.

• Understand and explain the implications of associations and networks among phenomena in places. Geography looks at the world from a spatial perspective, seeking to understand the changing spatial organization and material character of Earth's surface. One of the critical advantages of a spatial perspective is the attention it focuses on how phenomena are related to one another in particular places. Students should thus learn not just to recognize and interpret patterns but to assess the nature and significance of the relationships among phenomena that occur in the same place, and to understand how cultural values, political regulations, and economic constraints work together to create particular landscapes.

• Recognize and interpret the relationships among patterns and processes at different scales of analysis. Geographical analysis requires a sensitivity to scale, not just as a spatial category but as a framework for understanding how events and processes at different scales influence one another. Thus students should understand that the phenomena they are studying at one scale (e.g., local) may well be influenced by processes and developments at other scales (e.g., global, regional, national, state or provincial). They should then look at processes operating at multiple scales when seeking explanations of geographic patterns and arrangements.

• Define regions and evaluate the regionalization process. Geography is concerned not simply with describing patterns but with analyzing how they came about and what they mean. Students should see regions as objects of analysis and exploration and move beyond simply locating and describing regions to considering how and why they come into being and what they reveal about the changing character of the world in which we live.

• Characterize and analyze changing interconnections among places. At the heart of a geographical perspective is a concern with the ways in which events and processes operating in one place can influence those operating at other places.
Thus students should view places and patterns not in isolation but in terms of their spatial and functional relationship with other places and patterns. Moreover they should strive to be aware that those relationships are constantly changing, and they should understand how and why change occurs

Students will produce essay responses that:

- Is focused, purposeful, and reflect insight into the writing situation.
- Has an organizational pattern that provides for a logical progression of ideas.
- Has effective use of transitional devices that contribute to a sense of geography
- Has support that is substantial, specific, relevant, and concrete.

- Demonstrates a commitment to and involvement with the subject.
- Uses creative writing strategies as appropriate to the purpose of the paper;
- Demonstrates a mature command of language with precision of expression.

Grades 9-12
High School Art

Basic Assumptions for Art:
Students will discover ideas for art in personal experience and transform ideas to create art. They will learn to analyze a composition using the elements of art and the principles of design and verbalize the basic concepts of composition and design. The curriculum will foster personal development and help students to understand the role of art in society.

Major Concepts/Content:
The purpose of High School art is to foster interest and appreciation for the Fine Arts. Students develop an awareness of the elements and principles of design in natural and manmade forms. They use art as a means of visual communication and expression.

The content should include, but not be limited to, the following:

- Recognize how artists use unity, harmony, balance, movement and repetition to create art.
- Recognize and utilize the principles of design: balance, variety, and proportion.
- Recognize and utilize the elements of art: line, shape, form, color, texture, and space.
- Recognize how artists use line, color, form, texture and composition to make a visual statement.
- Experiment with compositional variations of theme or design.
- Explore ways to enhance the illusion of depth through linear perspective, foreshortening, overlapping, value change, and color.
- Recognize how repetition and variation produce patterns and or order in a composition.
- Experiment with a variety of methods of drawing an image on a flat surface.
- Perceive, describe and evaluate works of art.
- Observe and read accounts of artists' work and working processes.
- Study the effects on artists' work when they adopt a new medium.
- Become aware how various artists regard the importance of skill, dexterity and practice.
- Study the effects on artists' work when they adopt a new medium.
- Identify how artists transmit different beliefs and concerns of people through their work.
- Learn how critics and historians interpret works of art.

After successfully completing this course, the student will:

- Examine how the art critic and historian use design concepts and technical terms in their perception and description of art.
- Understand that judgments about the quality of excellence in art may differ from time to time, person to person, and culture to culture.

- Evaluate art work according to predetermined criteria for design, creativity, and technical execution.
- Become aware of how society uses visual symbols to express and communicate values.
- Identify ways society influences what individuals perceive as art.
- Understand that different people can find various meanings in the same visual image.
- Know career opportunities exist in art and related fields.
- Know ways art/craft skills and interests can be developed as part-time or 'second' careers (e.g. displaying, marketing one's work).
- Know that occupational requirements in art fields may include educational qualifications: proof of skill level, or competence and personal characteristics.

Grades 9-12
AP Art History Online

Major Concepts/Content.
AP Art History is designed to foster in students an understanding and knowledge of architecture, sculpture, painting, and other art forms within diverse historical and cultural contexts. Students examine and critically analyze major forms of artistic expression from the past and the present from a variety of cultures. In addition to visual analysis, this course emphasizes understanding works in context by considering such issues as patronage, gender and the functions and effects of works of art. Prior art training is not a prerequisite nor does the course cater exclusively to future Art History majors.

The content should include, but not be limited to, the following:

- Ancient art
- Art beyond European traditions
- Medieval art
- Renaissance art
- Baroque art
- Nineteenth-century art
- Twentieth-century art

After successfully completing this course, the student will:

- Identify and classify works of art (Architecture, Painting, Sculpture, Minor Arts and Photography) from prehistory to twentieth century.
- Formally analyze works of art by situating them within the correct historical context (the original historical, social, political, and religious setting) in which they were created.
- Analyze visual traditions with a full understanding of the interdependence of disciplines as well as the interconnectivity of cultures.
- Describe works of art in a formal manner using appropriate art history terminology, both descriptive and technical.
- Evaluate media, techniques, and methods employed by artists in the creative process.

Grades 9-12
Personal Fitness

Major Concepts/Content.
The purpose of this course is to acquire knowledge of physical fitness concepts, understand the influence of lifestyle on health and fitness, and begin to develop an optimal level of fitness.

The content should include, but not be limited to, the following:

- Safety practices.
- Assessment of health-related fitness.
- Components of physical fitness.
- Health problems associated with inadequate fitness levels.
- Psychological values of physical fitness, including stress management.
- Evaluation of physical activities in terms of fitness value.
- Fitness program design.
- Biomechanical and physiological principles and their application to maintaining and improving health-related physical fitness.
- Consumer issues.
- Benefits derived from participation in physical activity.

After successfully completing this course, the student will:

- Apply knowledge of safety practices to participation in activities that promote physical fitness.
- Know risks and safety factors that may affect physical activity throughout life.
- Know how to modify games and activities to allow for participation of students with special needs (e.g., physical disabilities).
- Demonstrate understanding of the components of physical fitness.
- Apply knowledge of technology to facilitate personal fitness.
- Use technology to assess, enhance, and maintain fitness and skills.

- Demonstrate understanding of health problems associated with inadequate fitness levels.

- Know that physical activity reduces certain health risk factors.

- Know the role of physical activity in the prevention of disease and the reduction of health-care costs.

- Evaluate and select physical activities according to fitness value.

- Evaluate the effectiveness and use of community resources related to fitness.

- Design and implement a fitness program that meets individual needs and interests.

- Know how to evaluate one's own skilled performances.

- Know how to apply the results of fitness assessments to guide changes in a personal program of physical activity and develop training and conditioning program that enhances individual health-related needs.

- Know how to make changes in an individual wellness plan as lifestyle changes occur.

- Demonstrate understanding of correct biomechanical and physiological principles related to exercise and training.

- Understand how the laws of motion apply to the acquisition and improvement of skills.

- Know how to analyze, evaluate, and implement the mechanical principles of balance, force, and leverage that apply directly to self-selected activities.

- Know how to maintain appropriate levels of cardiovascular fitness, muscular strength and endurance, flexibility, and body composition necessary for a healthy lifestyle.

- Exhibit an improved level of health-related fitness.

- Describe the relationship of individual lifestyle to personal fitness and wellness.

- Demonstrate competency or proficiency in self-selected activities.

- Maintain and improve motor skills and knowledge necessary for participation in beneficial physical activity.

- Participate in games, sports, dances, outdoor pursuits, and other physical activities that contribute to the attainment of personal goals and maintenance of wellness.

- Know how regular physical activity can relieve the stress of everyday life. Identify the effects of age, gender, race, ethnicity, socioeconomic status, and culture on physical activitypreferences and exercise habits.

- Know the correlation between obesity, high blood pressure,and increased physical activity.

- Understand the influence of age, gender, race, ethnicity, socioeconomic standing, and culture upon physical activity preferences and participation.

- Know the ways in which personal characteristics, performance styles, and activity preferences will change over the course of one's life and the effectiveness and use of community resources related to fitness.

- Demonstrate understanding of the benefits derived from participation in physical fitness activities.

- Understand the importance of making a commitment to physical activity as an important part of one's lifestyle.

- Understand the role of physical activity as a potential vehicle for social interaction and cooperative relations within the family and workplace.

In addition:

- Semi-annual Fitness Assessments are conducted on physical components of sound health and active lifestyle.

Grades 9-12
Yearbook

Major concepts/content

Students will plan, create, and publish a school yearbook

The content should include, but not be limited to, the following:

- Staff and Planning
    - Recognize the importance of staff development
    - Learn anatomy of a yearbook
    - Plan a yearbook
    - Have an understanding of the business of yearbooks
    - Recognize theme development
    - Recognize coverage and content
- Layout and copywriting
    - Learn basic layout
    - Learn basic copywriting
    - Learn how to interview
    - Learn how to write a story
    - Learn how to use the caption
    - Learn how to use the headline
    - Learn
- Pulling the parts together
    - Learn proofreading and editing skills
    - Learn elements of typography
    - Learn elements of advanced design
    - Learn how to prepare copy
    - Learn how to copy fit
- Photography
    - Learn the basics of photography
    - Know how to crop
- Legal issues
    - Learn the legal issues concerning yearbooks.

After successfully completing this course, the student will:

- Learn the five functions of a yearbook and know how this year's book will serve those functions
- Develop an awareness of the history of yearbooks and yearbook production
- Recognize the job responsibilities of each staff position
- Learn the difference between the sectional and functional organization of his/her staff
- Know the purpose of each part of the yearbook and how those parts are assembled
- Be familiar with printing terms and concepts as they relate to yearbook production

- Be familiar with yearbook components and the typical organization of those components
- Know the importance of the ladder diagram and how to complete and use it for the yearbook
- Recognize the importance of a deadline, know the deadline schedule, and understand how a missed deadline can affect the delivery of the yearbook
- Recognize the production of a yearbook is a business requiring a set of financial goals and strategies for attaining them
- Know the financial goals of this yearbook and his own business related responsibilities
- Know the sources of yearbook income and expenses
- Learn the steps involved in marketing a yearbook and know the rationale behind the marketing strategies
- Recognize the role of advertising, the various types of advertising, how advertising is sold and, if applicable, the advertising to be sold for this book
- Know how fund-raising can generate supplemental income for the yearbook budget and, if applicable, how it will be used to help meet the staff's financial goals.
- Recognize how a theme provides continuity and creates a unique personality for the yearbook
- Learn how a yearbook theme can be developed
- Appreciate the benefits of brainstorming and how brainstorming can be applied to other creative endeavors
- Recognize the terms "coverage" and "content"
- Appreciate the importance of emphasizing students throughout the yearbook
- Learn ways of making content more interesting and techniques for structuring that content in various sections of the book
- Recognize how content quality can be improved by covering people and events in different and unusual ways
- Appreciate the need for organized design in the yearbook
- Learn about the elements involved in creating a layout and know the importance of designing double page spreads
- Recognize how to place design elements in a creative, orderly fashion
- Recognize layout and column styles that can be used to create consistency throughout a section and the entire yearbook
- Recognize the role of copy in supporting photographs and completing the story
- Learn the difference between news and feature writing styles
- Recognize captions and headlines as important parts of yearbook copy
- Know the purpose of the interview and understand how gathered material improves yearbook copy
- Recognize how to prepare for an interview and how to properly conduct an interview and work with the interview subject
- Learn how to organize the information gathered in preparation of writing the story
- Recognize the most effective writing style for each subject in the yearbook

- Know the purpose of the lead and be able to vary the lead by using different sentence structures
- Recognize the three basic types of quotes in a story
- Know the characteristics of well written copy
- Recognize how complete captions make the yearbook an accurate record of the year
- Know how to work with photographers to collect the information needed to write complete captions
- Learn the rule of headline writing and recognize headline placement and design variations
- Recognize the purpose and value of proofreading copy and who is involved in the proofreading chain
- Know what makes a good picture
- Know the basics of photographic composition
- Know what comprises a libel action and the available defenses a journalist may use
- Know the four forms of invasion of privacy
- Know how to appropriately use copyrighted material in the yearbook
- Know how to appropriately use trademark protected logos and product names in the yearbook

Grades 9-12
Introduction to Business

Basic Assumptions for Business Education:

- Designed to acquaint students with the activities associated with a business.
- Gather a basic understanding of general business, economics, entrepreneurship, business communications, business ethics, and the government's role in business, marketing, and business finance.
- Broad exposure to business operations and a solid background for additional business courses.
-

Major Concepts/Content:

The purpose of this course is designed to introduce students to the exciting and challenging world of business. Through the information and activities covered in class, students will increase their preparation to be a knowledgeable consumer, a well-prepared employee, and an effective citizen in today's economy. Topics focus on four basic areas of business including: Finance, Marketing, Operations, and Management. This course serves as a background for other business courses in high school and college, will present material to prepare the student for future employment or business ownership, make the student a better-informed citizen for an expanding international economy in our world. The student learns about many topics they encounter throughout life as a consumer, worker, and citizen, along with perspectives on business and related life skills.

The content includes, but is not limited to, the following:

- Looking at Needs and Wants
- Economic Resources and Systems
- Economic Activity in a Changing World
- The Role of Government in Business
- Entrepreneurship and Small Business
- Business Ownership and Operations
- Organizational Structures

- Managing Business Finances
- Business Ethics and Social Responsibility
- Marketing in Today's World
- Human Resources Management
- Culture and Diversity in Business

After successfully completing this course, the student will:

- Use communications as applied to personal and professional situations.
- Demonstrate competency by selecting and using appropriate forms of communications in a variety of situations.
- Demonstrate the ability to work and communicate effectively with persons of different ethnicities and culturally diverse backgrounds.
- Compose oral and written business communications that demonstrate the use of critical thinking, decision making and problem solving skills.
- Orally presenting information using appropriate language, style and format; utilize different communication techniques to address the intended audience appropriately.
- Identify steps for setting goals and write personal goals and objectives.
- Examine aptitudes related to career options; relate personal characteristics and interests to educational and occupational opportunities.
- Demonstrate competency by utilizing technology to access, manipulate, and produce information.
- Understand the personal qualities that are the basis for developing leadership skills.
- Understand the development and structure of business environments.