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# GRAY STONE DAY SCHOOL

## COURSE CATALOG

2014-2015

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## **MISSION STATEMENT**

Gray Stone Day School will offer students in grades 9-12 a rigorous college preparatory curriculum in an environment that fosters the development of strong character. Graduates of Gray Stone will be prepared to excel in higher education and to provide leadership in their communities. Integrity, responsibility and service to others will be hallmarks of the Gray Stone graduate.

## **OVERVIEW**

Gray Stone Day School is a regional school that provides a college preparatory curriculum for students in grades 9-12 who live in a rural area. While developing strong character, students engage in highly challenging courses that will require them to work diligently in and out of the classroom. University professors and high school teachers alike create the teaching staff as students are exposed to daily university campus life. It is a state-supported charter school and therefore there is no charge to any state resident that is of high school age.

Gray Stone Day School is located on Pfeiffer University's campus in Misenheimer, North Carolina. Because of its location, it serves students from eight different counties. It is located in a rural area and with the partnership with Pfeiffer, students can receive educational opportunities similar to those of students in urban areas. Students have use of select university facilities such as exceptional science laboratories and the G. A. Pfeiffer Library. The chapel and the fine arts buildings, including Goode Hall, have been utilized for special events, such as honor society inductions and commencement. Moreover, dual enrollment between the two schools for qualifying students offers the possibility of earning high school credit and college credit simultaneously.

The Pfeiffer connection has afforded students opportunities beyond those normally available, particularly in a rural setting. Gray Stone strives for the most highly qualified teachers, among both high school instructors and shared college professors. Pfeiffer students provide tutoring as part of their service commitment and students may request individual assistance or attend regularly scheduled extra help or review sessions.

The charter school offers a large variety of classes for a small school. The traditional core high school courses are offered, as well as Advanced Placement classes. Along with dual enrollment, students have a greater variety of quality class options. They also take courses at Stanly Community College or other community colleges in the area. Students have been able to participate in college performances in drama and music, as well. It is a curriculum that challenges the advanced student and the highly motivated average student who chooses the academic setting. Because the high school students are on an actual college campus, they see firsthand what it entails and begin to understand the necessity of developing good study habits necessary to master the skills needed to succeed in a college setting.

Gray Stone Day School requires students during their junior and senior years to complete a community service project as a part of their graduation requirements. The seniors will work in an area of interest providing leadership to support their community and leave a positive impact when they graduate. Some students may choose to have projects that are perpetual with students in successive classes continuing the activity.

The school practices a unique schedule for high schools. Similar to a college schedule, it allows students to blend their high school schedule with a college schedule more easily. Time is allotted to integrate student enrichment. For example, volunteers from the community may come and discuss life skills like "Personal Budgeting Skills" or "Building a Resume." Tutoring sessions and appointments with teachers can also be worked into the schedule. Students can participate in clubs during the school day and not have to stay after school.

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## INTRODUCTION

The course offerings described in the following pages have been developed for Gray Stone Day School. They have been designed to provide both depth and breadth in the instructional program. An effort is made to accommodate the student's individual interests, with final decisions on any year's course offerings based on staff availability and satisfaction of minimum enrollment requirements.

Students' initial placement in certain courses may be based on testing, previous instruction, and other course placements. The administration requires all transferring upperclassmen to have a registration meeting during which an agreement will be reached as to how to place students in particular courses. Certain courses are required for graduation and each student should work with the graduation counselors to determine the appropriate course of study. Please refer to the section entitled *Graduation Requirements* for more information.

Grade reports are issued to students and parents at the mid point and end of each trimester. Some classes may provide grade reports on a more regular basis.

All courses, unless otherwise noted, are scheduled to meet for one trimester and earn a half unit of credit. More information regarding credits needed for graduation is available in the section entitled *Graduation Requirements*.

## DEFINITION OF ACADEMIC RIGOR

Academic rigor is a difficult concept to explain to incoming students. Most students entering the school go through a transitional phase in which they must relearn basic study skills, test preparation methods, and basic work ethic. At Gray Stone, academic rigor is defined as a multi-faceted concept that encompasses curricular, contextual, institutional, student and faculty behaviors, which reflect a core belief system. That belief system is centered on the fact that growth cannot occur without hard work and that growth is essential to achieving the overall mission of the school: to prepare students to be successful at major regional universities. Put another way, academic rigor is teaching, learning, and assessment, which promotes student growth in knowledge of the discipline and the ability to analyze, synthesize, and critically evaluate the content under study. Academic rigor results in assessment outcomes, which clearly reflect the full range of academic achievements among students.

Students entering Gray Stone should expect a heavy workload that requires a minimum of twenty (20) minutes of study, reflection, and written homework for each class, each night. In addition, students are expected to complete various outside of class assignments such as research papers, test preparation, group and individual presentations, reading assignments with journaling, and much more.

## GRADING SCALE

The grading scale below is adopted from and approved by the North Carolina Department of Public Instruction.

A+	4.000	B	3.000	C-	1.667	F	0.000
A	4.000	B-	2.667	D+	1.333	WF	0.000
A-	3.667	C+	2.333	D	1.000	WP	NoCred
B+	3.333	C	2.000	D-	0.667	NC	Attendance WF

## GPA SCALE

Grade Point Averages (GPAs) are calculated based on a quality point conversion. The basic, accepted 4.0 scale is used with some exceptions. Gray Stone courses with an "Honors" notation carries one extra quality point. Students enrolled in college courses that are eligible for transfer to a state university are eligible for one extra quality point. Courses with an "Advanced Placement" (AP) notation carry two extra quality points.

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## **CLASS RANK**

Gray Stone Day School does not rank student based on GPA. At a college preparatory school with as many gifted students as are typically enrolled at GSDS, it is very difficult to measure student success by comparing performance. Those students who have a GPA near the median are not necessarily performing at an average level. Many years, the median GPA at Gray Stone would be in the top 20% at other traditional schools. In lieu of releasing ranking, our Guidance Office provides an in depth profile of the school with every issued transcript so that colleges and scholarship committees can better understand the caliber of the school as it relates to the student's performance.

## **ADVANCED PLACEMENT COURSES**

Advanced Placement (AP) is a program of college level courses and examinations that gives advanced, motivated students an opportunity to earn college credit, college placement, or both while they are still in high school. Gray Stone is committed to supporting students in their desire to take advantage of the college credit and placement opportunities afforded by the AP program.

A number of Gray Stone courses are designed to prepare students for the AP examination in that subject. Such courses include "(AP)" in the course title. Some other courses include concepts from the AP examination (see course descriptions for specifics). While students who master the material in these courses are generally prepared for the AP examination in that subject, extra review materials are offered in many of these subjects for students who wish to further prepare. Students enrolling in AP Courses are not required to take the end of the year AP Examination.

## **STRUCTURE OF COURSES**

Beginning with the 2014-2015 school year, all courses will be taught on a twelve week trimester system with each course receiving 0.5 credits. These courses will meet four days per week with an extensive amount of outside of class work. Each course has a culminating assignment such as a final exam that is a major portion of the student's grade in the class. For more information on the daily schedule or the yearly calendar, please reference our website: [www.graystoneday.org](http://www.graystoneday.org).

## **GRADUATION PLANS**

All students at Gray Stone will follow the new graduation plan approved by the Board of Directors for beginning with the fall of 2014. This plan requires students to complete 56 out of a possible 60 trimester courses for a total of 28 credits. This includes 8 courses in English, 8 courses in Math, 7 courses in Science, 7 courses in Social Studies, 5 courses in foreign language, 2 physical education courses, 2 technology courses, 2 life skills courses, 9 academic electives, and 6 general electives. Course requirements will be pro-rated for students who transition to the trimester system by reducing the number of elective courses.

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# COURSE OFFERINGS

## ENGLISH LANGUAGE

### EN101 Grammar & Writing Honors

English 101, Grammar and Writing, is a required course on the foundations of English. This course covers the basic materials needed for students to be successful in higher level literature and writing courses. Students will learn and practice basic writing skills, including, but not limited to: thesis statements, essay organization, MLA format, and the format of various types of essays. Students will also complete some grammar and mechanics practice on basic fundamentals. Lastly, students will complete some small reading assignments in order to practice and refine their literary analysis skill set.

### EN102 Research Methods Honors (EN101)

In this requisite, foundational course, students will learn the dynamics and protocol of effective research and how to abide by MLA and APA formats. The epistemic identification and discerning of information will be enforced to establish the essentials of research conduct and application of information. The skills acquired have a multifaceted application. Students will apply these acquired skills to research assignments and query practices demanded in later courses. Imperative query concepts and plagiarism avoidance will serve as the premise of this course instruction. The course delivery will be interactive and tech-heavy. There will be no summer reading assignment.

### EN103 Introduction to Shakespeare Honors (EN102)

English 103, or Introduction to Shakespeare, is a required course about the greatest writer of all time. This course will dive deep into the life and writings of William Shakespeare. Students will learn about the format and fundamentals of Shakespearean writing, while reading some of his most famous comedies, histories and tragedies. Information from this course will prepare students for the difficulties of the higher level literature courses.

### EN201 Epics & Mythology Honors

Epics and Mythological Literature, is an English elective course that scours the world discovering the different epics and myths of varying cultures. Traveling through time and geography students will encounter literature from the famous Greeks and Romans all the way to the lesser known writings of the Norse, Native American and many others. The course will focus on the comparing and contrasting these diverse cultures and histories through their epics and myths.

### EN202 Debate Honors

This course is open to students of all grades. Students will study and practice the art of public discourse, effective communication, and argument. The art of debate encompasses a wide variety of expressive styles that will be explored and routinely practiced in class. Students will also receive the opportunity to overcome the seemingly insuperable barrier of "stage fright" commonly experienced by people. Debate conduct and etiquette will be established to create an environment conducive of learning. Ultimately, this course will enhance student rhetorical understanding and argumentative execution. There will be no summer reading assignment required for this course.

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### EN203 Literature of Film Honors

Film is not only a cherished facet of our cultural identity, it is also a universal language that has the power to beguile our emotions. This elective will provide students with an introduction to the various processes which comprise modern film-making, and will help them develop an understanding of the historical and cultural contexts of this powerful vehicle of communication. Students will hone their understanding of both the technical and thematic aspects of film through careful study of its components, analysis of some influential examples, and synthesis of their own original films (i.e. they will study how films come to develop meaning and then employ this understanding to produce films of their own). This course is intended for a mature audience; films will be studied as entire works of art and will not be edited for language or content.

### EN204 Science Fiction Literature Honors (EN101)

Science Fiction Literature is an English elective course that dives into the adventurous world of science fiction. In this world of the weird, curious, mysterious, and bizarre no stone will be left unturned. Students will get a chance to experience and examine science fiction from numerous time periods and genres, while even having the opportunity to write a little of their own. Through examining the literature and studying the time periods, students will come to understand the political, social, and ethical issues the literature addresses and the impact it had on the region, country, or even the world. No summer reading is required for this course.

### EN205 Graphic Novel Literature Honors (EN101)

Open to anyone who has completed the grammar and writing course requirement and wishes to partake in exploring the visual medium often mistaken for "comic books," this course, designed to improve visual literacy, will also work with students' critical thinking, reading, research, and writing skills as they explore what makes a graphic novel a unique, but growing medium. We will read texts that find ways to express social, political, and cultural movements and experiences from the perspective of an individual or culture. Combining fiction, nonfiction, history, and some mythology, students will explore the inception of the graphic novel until its current form, while continuing to explore the historical, social, and political landscapes used to assist in the novel's storytelling. Creative, expository, persuasive, and research writing will bring to light these ideas, with students maintaining an understanding of grammar, mechanics, and usage. No summer reading is required of this course.

### EN206 Leading Ladies Literature Honors(EN103)

Through much of history, women have played second fiddle in the literary world. How have women come from objects to heroines? How has society taken them from hiding behind pseudonyms to becoming best-selling authors? This class is designed to provide students with an in-depth look at the role women have played in literature, and how that role has evolved over the course of time. We will spend time examining both female authors and main characters in novels, short stories, and poetry. No summer reading is required for this course.

### EN 207 Minority Voices Honors (EN103)

While great authors like Mark Twain, JD Salinger, and Louisa May Alcott have their place in literary history, there is a side of the American story they are unable to tell. In this course, students will examine the American story through the eyes of various minorities. In addition to extensive class discussions, students will engage in creative and research based writing to further their understanding of the cultures and viewpoints portrayed in an assortment of genres. No summer reading is required for this course.

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EN208 Dystopian Literature Honors (EN103)

"Power tends to corrupt, and absolute power corrupts absolutely. Great men are almost always bad men." - Lord Acton  
What happens to a society when a totalitarian government takes over? Maybe after a major nuclear disaster or a catastrophic environmental accident? What about when technology and science take over with no respect for human life and privacy? This elective is designed to examine these questions and how modern authors have addressed current problems by warning their readers of the future that could be waiting for them. Along with examining the novels themselves, we will also analyze the time periods in which they were written to discuss the author's possible inspirations. Students who sign up for this course should be prepared to read and discuss novels that may have some mature language and content.

EN209 Twisted Literature Honors (EN101)

Open to anyone who has completed the grammar and writing course requirement and wishes to partake in exploring the twisted, bizarre, sometimes funny, and always slightly weird side of literature, this course is designed to work with students critical thinking, writing, reading, and research skills while exploring the Gothic to the Grotesque to the Fantastical. Students will explore the tales of Edgar Allen Poe, travel down the rabbit hole with Alice in Wonderland, and meet other dark and twisted narrators who propel us into their imaginations and experiences. Creative, expository, and research based writing will bring to light the ideas of these authors as well as those of the students, while maintaining an understanding of grammar, mechanics, and usage. No summer reading is required of this course.

EN210 Romantic Literature Honors (EN103)

This course is open to students of all grade levels. In this course, students will examine multiple works of Romantic literature and the motives behind the Romantic Movement in both America and Britain. Students will witness the parallelism between Romantic composition and Romantic philosophy. From the epic plot and emotion of Frankenstein to the aesthetic poetry of William Wordsworth, students will immerse themselves in an epoch of incredible pathos and heart-wrenching composition. There will be no summer reading assignment required for this course.

EN211 Young Adult Literature Honors (junior status)

Depression. Love. Hate. Abuse. Friendship. Loss. This course is a survey of modern young adult (YA) literature and will touch on major social and global issues that plague today's high school students. Most of the reading in this course will be self-selected, based on a topic or genre the class will discuss during that unit. This is an ideal opportunity for students to read books that interest them, but are also outside of the "literary canon." Students who sign up for this course should be prepared to read and discuss novels that have some mature language and content.

EN301 Early American Literature Honors (EN103)

This course, intended for sophomore and junior level students, encompasses canonistic, American literature composed from the spawn of our nation to post-Civil War reconstruction. Students will be immersed in a study of both fictional and nonfictional works from America's monumental, iconic voices. From Native American literature to Transcendentalist interpretation, students will view the transformation of our nation through written and visual language. Such studies enlighten the students on the power of literature and how it congruently expresses the implemented changes our nation experienced in its formative, pivotal years of development. There may be a required summer/preliminary reading assignment.

EN302 Modernist Literature Honors (EN103)

Around the turn of the 20th century, the world was at the cusp of a major cultural and ideological shift. Industry was changing, values were changing, the world would soon be at war, and there was a major new movement happening in literature. Authors were breaking away from the standards set by their Victorian era predecessors and were really showing

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their individuality through their work. This course will examine authors like James Joyce, T.S. Eliot, Virginia Woolf, and Charles Darwin (and their contemporaries) and discuss how their works were a reflection of that cultural and ideological shift. There may be a required summer reading assignment.

#### EN303 Contemporary American Literature (EN103)

This course is intended for sophomores and juniors. The readings entail an eclectic compilation of America's most influential voices from the late 19th century to our modern time. This repertoire of literature portrays the progression of human thought and the evolution of written and visual language as a tool of prodigious rhetoric. The students will also receive the opportunity to read from authors still living. This intriguing aspect of the course will allow students to develop a concrete understanding of American literature and its correlation to current modes of thinking and interpretation. Research and expository writings will be included in the course. There may be a required preliminary reading assignment as well.

#### EN311 English Language I Advanced Placement (EN103)

#### EN312 English Language II Advanced Placement (EN311)

This rigorous, yet intriguing course is typically intended for juniors wishing to precociously immerse themselves into a collegiate-level environment. Students will be enlightened on the various methods of rhetoric in a chronological fashion. From the disputes of the ancient philosophy kings to the indelible speeches of modern, iconic figures, students will analyze and explore the power of language. This course is intended for students wishing to expand on their understanding and application of language. Many authors and rhetoricians are explored as well as the intricate construction of their style and voice. Students will be challenged to synthesize, formally evaluate, and create works of rhetoric. Another primary objective of this course is for students to engage in diverse modes of discernment and language comprehension. Multiple methods of reading and language conveyance will be enforced in this course. Intensive writing and study will be implemented into the course to simulate collegiate intensity. A summer/preliminary reading assignment will be required.

#### EN401 Medieval Literature Honors (EN103)

This course is designed for both juniors and seniors who have met previous core requirements as freshmen and sophomores in the English curriculum. Students have the opportunity to improve reading, writing, speaking/listening and critical thinking skills through literature. Throughout the course students will take on literary adventures as they battle dragons, visit King Arthur and the knights of the round table, travel on a pilgrimage to another land, and follow Dante as he traverses between heaven and hell. Students will conclude their journey by determining if something truly is rotten in the state of Denmark, where Shakespeare's Hamlet will take center stage. Throughout this course students will engage in literature, writing, and exploration of the English language, its evolution, and its influence on social and cultural landscapes. Expository, narrative, persuasive, and research writing will bring to light these ideas, with students maintaining a strong level of grammar, mechanics, and usage. A summer reading assignment is required if taken during the first trimester of the year.

#### EN402 Renaissance Literature Honors (EN103)

This course is designed for both juniors and seniors who have met previous core requirements as freshmen and sophomores in the English curriculum. Students have the opportunity to improve reading, writing, speaking/listening and critical thinking skills through literature. In one sweeping movement we will experience the Enlightenment of John Donne, get lost in Paradise with Milton, have tea with eloquent Victorians and experience the joys of Joyce and his rejection of his homeland as the sweeping ideas of Modernism come into play. Students will explore poetry, plays, novels, and various forms, genres, and modes of writing and reading and its influence on social and cultural landscapes. Expository, narrative, persuasive, and research writing will bring to light these ideas, with students maintaining a strong level of grammar, mechanics, and usage. A summer reading assignment is required if taken during the first trimester of the year.



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#### EN403 Advanced Shakespearean Studies Honors (EN103)

This course is designed for sophomores, juniors, and seniors who seek a more complete familiarity with the work of the greatest dramatist the world has ever known. Tragedy, history, comedy, and romance will all be on display, as students will occasionally perform scenes for their peers, translating the bard's drama from the page to the stage. The primary focus of this course, however, will be to encourage scholarly analysis of Shakespeare's plays with extensive reading, research, note-taking, discussion, and writing.

#### EN411 English Literature I Advanced Placement (EN103)

#### EN412 English Literature II Advanced Placement (EN411)

This course is designed for juniors and seniors who have met previous core requirements as freshmen and sophomores in the English curriculum. Through the close study of selected works, students in this Advanced Placement® course will learn to apply aspects of interpretive literary theory to a range of texts which chronicle the development of our language from its infancy to the twentieth century. Students will encounter courage and cowardice in the epics of Scandinavia, honor and opulence in the legends of medieval England, murder and mayhem in the dramas of Elizabethan tragedy, nonage and nature in the poetry of the Romantics, and love and loss in the novels of the Victorians. In the process, students will hone reading, writing, speaking, listening, analysis, research, and critical thinking skills commensurate with those required for success on the AP English Literature and Composition Exam®. This course will employ the study of writing not only as a vehicle to improve students' communication, but to help them understand their connection to the thinking of the past, to broaden their view of the world in which they live today, and to foster their intellectual growth tomorrow.

### **MATHEMATICS**

#### MA101 Structures of Mathematics

This introductory course is designed for students who did not complete Math I in middle school. In this required course we will study number theory, exponents, rational numbers, radicals, describing data all in preparation for being able to solve equations.

#### MA102 Equations (MA101)

Using the previously learned techniques from Math 101, students in this course will solve linear equations, inequalities, absolute value problems, and quadratic equations. Methods of solving will include multi-step equations, factoring, the square root property, and working with polynomials.

#### MA201 Functions Honors (MA102)

This course is going to cover basic functions. We will study definitions, composition, inverse, graphing, analyzing, linear functions, quadratic functions, and regression. Successful completion will prepare students for Advanced Functions.

#### MA202 Advanced Equations Honors (MA201)

Mathematics is about solving problems, and problems are often represented as equations. Finding solutions to problems often requires the student to solve equations of an advanced nature. Students enrolled in Advanced Equations at the honors level should expect a thorough consideration of algebraic techniques and procedures for finding solutions to a variety of equations including linear and non-linear systems of equations, higher-order polynomials, radical and rational equations, exponential and logarithmic equations, and inequalities in a variety of contexts.

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#### MA203 Spatial Analysis Honors (MA201)

This course is an overview of geometric topics, including lines and their relationships, quadrilaterals, and inductive and deductive reasoning. There will also be a heavy concentration on the study of triangles: similarity, congruence, right triangles, oblique triangles, and special segments within triangles.

#### MA301 Advanced Function Honors (MA202)

In this course students will extend their learning of functions and equations to more advanced functions types. These functions will include square root, cubic, exponential, logistic, logarithmic, as well as others. Students will learn to graph, transform, and analyze special characteristics of each function type.

#### MA302 Advanced Spatial Analysis Honors (MA202)

In this course students will focus on different conic shapes, including parabolas, ellipses, circles, and hyperbolas. We will study circles in depth including but not limited to the following topics: radians, degrees, arc length, sectors. The course will also extend its study of conics into surface area and volume of 3-dimensional figures.

#### MA401 Trigonometry Honors (MA203, MA301)

This trigonometry course will help students develop skills surrounding the trigonometric functions including graphing, evaluating, and solving the functions. In addition, basic trigonometric identities, analytical trigonometry, and applications of the trigonometric functions will be studied.

#### MA402 Differential Calculus with Limits Honors (MA401)

Differential Calculus with Limits is a rigorous first course in Calculus and is the pre-requisite for subsequent courses in Advanced Placement Calculus. Beginning with the classic *tangent line problem*, students will quickly discover the necessity of the limit as the basis for differential Calculus. A thorough study of limits and continuity will fuel the development of the derivative and important procedures for finding, evaluating, understanding, and interpreting derivatives of elementary functions. Course content will be consistent with the objectives and curriculum requirements of the Advanced Placement program as outlined by College Board.

#### MA403 Fundamental Statistics Honors (MA301)

Fundamental Statistics is the first course in the AP Statistics course sequence in which students will be introduced to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. In this particular course, students are exposed to three broad conceptual themes: (1) Exploring Data: Describing patterns and departures from patterns, (2) Exploring Relationships in Bivariate Data: Correlation and linear regression, and (3) Sampling and Experimentation: Planning and conducting a study.

#### MA404 Discrete Mathematics Honors (MA301, MA302)

Discrete Mathematics is an upper-level math elective designed to give students a survey of diverse mathematical topics that will offer valuable experience in organizing and analyzing information. This course includes topics such as statistics and probability, matrix operations, optimal networks and critical paths, and sequences and series. These topics will include applications of business, economics, and social sciences.

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#### MA405 History of Mathematics Honors

History of Mathematics is an upper-level math elective in which students will develop mathematical thought and study the evolution of mathematical ideas in a historical setting. Biographical and historical content will be supplemented and reinforced by study of techniques and procedures used in earlier eras.

#### MA406 Sports Statistics Honors (MA202)

The purpose of this course is to introduce the student to the use of mathematics, statistics, and probability in the analysis of sports performance, sports records, and strategy. Topics include mathematical analysis of the physics of sports and the determinations of optimal strategies. The objective is for students to use these tools over the duration of the course to develop new diagnostic statistics and strategies for sports.

#### MA407 Math in Literature Honors (MA202)

This is not a numbers, formulas, and algorithm course. This course is designed for students to read literature that involves the usage of mathematics within their plot lines. We will explore several genres of mathematical literature (novels, short stories, movies, plays etc.) in the hope of expanding our understanding of the nature of mathematics and human experience. Students who sign up for this course should be prepared to read and discuss novels that have some mature language and content.

#### MA501 Calculus I AP (MA402)

Students enrolled in Advanced Placement Calculus 1 will begin with a study of applications of first and second derivatives and will include related rates problems, locating extrema, discussing concavity and identifying inflection points, curve sketching, and optimization problems. After an introduction to antiderivatives, students will discover Riemann Sums and revisit limits to solve another classic conundrum, *the area problem*. The course will conclude with basic rules, techniques, and procedures for finding antiderivatives and evaluating or approximating definite integrals. Course content will be consistent with the objectives and curriculum requirements of the Advanced Placement program as outlined by College Board and students are expected to take the Advanced Placement Exam in May.

#### MA502 Calculus II AP (MA501)

Successful completion Advanced Placement Calculus 2 will mark the conclusion of the Advanced Placement curriculum and preparedness for the Advanced Placement Exam in May. Students will learn advanced integration techniques, study derivatives and antiderivatives of transcendental functions, interpret and apply the definite integral as an accumulation function, use the definite integral determine solutions to area problems, calculate the volume of a solid of revolution, and compute the volume of solids with known cross-sections. Students will also solve and apply differential equations and interpret slope fields. Course content will be consistent with the objectives and curriculum requirements of the Advanced Placement program as outlined by College Board and students are expected to take the Advanced Placement Exam in May.

#### MA511 Statistics I AP (MA403)

#### MA512 Statistics II AP (MA511)

In continuation of the statistical concepts learned in Fundamental Statistics (MA403), this course will focus on anticipating patterns by exploring random phenomena using probability and simulation. This course will include topics including but not limited to basic probability methods, Bernoulli probability models, and discrete and continuous random variables. The final course in the AP Statistics sequence will concentrate on statistical inference: estimating population parameters and testing hypotheses. Methods of inference will include confidence intervals as well as significance tests for proportions and means, distributions of categorical data, and linear regression.

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## PHYSICAL AND LIFE SCIENCES

### SC101 Foundations of Biology Honors

This is the first of the two courses that are necessary to fulfill the graduation requirement for biology. Fundamental concepts that will be covered include biochemistry, cell structure and function, cellular transport, cell energetics, and cell division (mitosis and meiosis).

### SC102 Applications of Biology Honors (SC101)

This second half of the required biology course is a natural progression from where SC101 left off. Students will study Mendelian genetics, protein synthesis, molecular biology, evolutionary biology, taxonomy, and ecology.

### SC201 Foundations of Chemistry Honors (SC102)

This is the first of the two courses that are necessary to fulfill the graduation requirement for chemistry. Topics that will be covered include atomic structure, elements, organization of the periodic table, periodic properties, writing and naming chemical formulas, and balancing equations.

### SC202 Applications of Chemistry Honors (SC201)

This second half of the required chemistry course begins with writing and predicting chemical equations and continues with stoichiometry, gases, solutions, acid and base chemistry, and simple oxidation-reduction (redox) reactions.

### SC301 Physics - Mechanics Honors

This course is a must for those planning for a future in engineering/physical sciences. This class studies the motion of objects when acted upon by forces. The course uses a considerable amount of math and calculator skills involving general algebra and basic trigonometry. Topics of study will include speed, velocity, acceleration, vectors, scalars, projectile motion, forces, momentum, energy, work, and conservation laws.

### SC302 Physics - Wave Theory Honors

This class is recommended for anyone planning a future in engineering/physical sciences. This is a very informative course for everyone and is light on mathematics. Topics of study will include wave properties, types of waves, reflection, refraction, Diffraction, acoustics, optics, ray diagrams, and lens equations.

### SC303 Physics - Electricity & Magnetism Honors

This course is a must for those planning a future in engineering/physical sciences and would be a great course for anyone wanting to understand the technology of today's world. This course uses a considerable amount of basic algebra and calculator skills. Topics of study will include static electricity, current electricity, electric fields, electric circuits, magnetic fields, interactions between electric and magnetic fields, current, voltage, and resistance.

### SC304 Physics - Relativity Honors

This course investigates what happens at high speeds (relative to the speed of light). Strange almost unbelievable things happen: time slows, mass increases, length contracts. This course will investigate how mass affects space-time. Mass tells space how to curve and the curve of space tells mass how to move. The real world of physics is more amazing than any science fiction. This course requires a written paper and class presentation. Little math is required. Topics of study will include special and general relativity.

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#### SC305 Physics - Quantum Mechanics Honors

Relativity is strange but quantum mechanics is almost beyond belief. In the world of the really small, the laws of classical physics fail to express what really happens. This course investigates what really happens on the small scale. This course requires a written paper and class presentation. Little math is required. Topics of study will include uncertainty, entanglement, bell theorem, Planck vs Einstein debate, quantum computing, Schrodinger's Theory, Schrodinger's Cat, black holes, and cosmology.

#### SC306 Physics - Particle Theory Honors

This course is an investigation of the fundamental constituents of nature and how they interact and the force involved. Students will study nature on the really small scale. Strange things appear when you look at the basic/fundamental pieces of matter. This course uses Quantum Mechanics to help us understand the action of these basic particles. Little math is required. This course requires a written paper and a class presentation. Topics of study will include standard model of particle physics, particle zoo, fields and forces, quarks, QED, QCD, neutrinos, Higgs, and cosmology.

#### SC401 Zoology Honors (SC102)

Zoology will cover the classification, morphology, and evolution of invertebrate and vertebrate animals. This is a course surveying the diversity of animals. Although all animal groups will be discussed, this course will focus on the more complex classes that make up Phylum Chordata. Dissection/Lab will be an integral part of this course.

#### SC402 Forensic Science Honors (SC102)

Forensic Biology is the application of science to those criminal and civil laws that are enforced by police agencies in a criminal justice system. It has become a comprehensive subject incorporating Biology, Chemistry, Entomology, Earth Science, Anatomy and Physiology as well as other aspects of science. Major topics include processing a crime scene, collecting and preserving evidence, identifying types of physical evidence, organic and inorganic analysis of evidence, hair, fibers, and paint, toxicology, arson and explosion investigations, serology, DNA, fingerprints, firearms, and document analysis. The main focus of this course will be to emphasize the evidential value of crime scene and related evidence and the services of what has become known as the crime laboratory. This course combines basic theory and real laboratory experiments, creating an experiment based situation for the better understanding of the students. The experiments used reinforce previously learned scientific principles rooted in Biology.

#### SC403 Marine Biology Honors

Marine biology is the study of life in the oceans and other saltwater environments such as estuaries and wetlands. All life forms are included from the microscopic pico-plankton to the majestic blue whale, the largest creature in the sea. The study of marine biology includes a wide variety of disciplines such as astronomy, biological oceanography, cellular biology, chemistry, ecology, geology, meteorology, molecular biology, physical oceanography, zoology and the science of marine conservation biology which draws on many longstanding scientific disciplines such as marine ecology, biogeography, zoology, botany, genetics, fisheries biology, anthropology, economics and law. Students will learn about diverse marine ecosystems, impacts of humans on marine ecosystems, as well as the role of the oceans in determining our global climate.

#### SC404 Nutrition Honors (SC202)

Food is essential for maintaining the physical and psychological needs of the human body. Food Science and Human Nutrition explores these needs along with how personal food selection is impacted by social, regional, and religious customs. This course focuses on a hands-on-learning approach to the vast world of food and its role in our bodies. This enduring knowledge will be the basis for healthy food choices and achieving optimum dietary decisions. Throughout life and on a daily basis, our students will constantly hone their acquired skills whether they decide to cook as a career, nourishment, or for personal enjoyment.

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SC405 Biochemistry Honors (SC202)

This course will be a study of the structure and function of biologically important compounds. Topics include buffer systems, functional groups, chirality, enzymology, cell membranes, carbohydrate and lipid metabolism, protein structure and function, and the interdependence of some major biochemical pathways.

SC406 Diseases Honors (SC102)

How do viral and bacterial infections differ? Why do some diseases kill within months while others progress slowly, sometimes lingering for decades before claiming their victims? What mechanisms do cancer cells use to shut down entire organ systems? What about autoimmune diseases in which the body attacks itself? This class will explore a sampling of scourges that have affected humankind throughout history--from the more familiar to rare "orphan" diseases, discovering what takes place even at the cellular level. Students will be engaged in lecture, discussion, and individual research in order to expand their knowledge within the field of biological sciences.

SC407 Animal Behavior Honors

This course will be a study of the mechanisms and evolution of animal behavior. This course will involve both lecture and lab. Topics include methods for the observation and quantification of behavior, natural selection and evolution of behavior, behavior genetics, neural and physiological mechanisms of behavior, communication, aggression, sexual reproduction, parental investment, and mating systems.

SC408 Human Anatomy I Honors (SC101)

This course provides an overview of Human Anatomy involving organizational levels, survival needs, homeostasis and a summary of the body's organ systems. It also introduces the language of anatomy including anatomical, directional, and regional terminology. Basic Chemistry, cytology, and histology will be reviewed. This is an excellent course (and those- 409 and 410 - that follow) for students who are considering a medical career.

SC409 Human Anatomy II Honors (SC408)

This course involves numerous laboratory experiences that provide detailed analysis of the body's tissues including epithelial, connective, muscle and nerve tissues. Comparative anatomy studies that include dissection of cats and various mammal organs will provide students with hands on activities that offer a better understanding of human anatomy. Each organ system will be addressed in detail.

SC410 Human Anatomy III Honors (SC409)

This course will be a continuation of the laboratory studies of human organ systems and their functions. Developmental anatomy will also be addressed. It is expected that students will take all three Anatomy courses consecutively.

SC411 Human Physiology Honors (SC408, SC201)

This course is designed to provide students with an understanding of the function & regulation of the human body and physiological integration of the organ systems to maintain homeostasis. Course content will include neural & hormonal homeostatic control mechanisms, as well as study of the musculoskeletal, circulatory, respiratory, digestive, urinary, immune, reproductive, and endocrine organ systems. Principles of exercise physiology will be emphasized throughout the term.

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SC412 Advanced Chemistry Honors (SC202)

This chemistry course serves as a bridge from first year chemistry to AP chemistry. The course begins with a review of atoms as the building block of matter. Topics that will also be covered include naming all types of compounds including organic functional groups, molecular geometry, significant figures, and an introduction to quantum mechanics.

SC413 Medical Chemistry Honors (SC201)

This course is designed to provide students with an understanding of how new drugs are developed and tested. Students will learn the basic concepts and methods used by medicinal chemists. Students will explore the basics of pharmacology and drug design and development. In the process of doing so, basic concepts in chemistry, biology, and mathematics will be learned and applied to one or more medicinal chemistry problems. Students will be expected to apply their knowledge of the basic sciences to medicinal chemistry.

SC414 Advanced Biology Honors (SC202)

This course will focus on the new approach as deemed by the College Board for AP Biology: "The revised Advanced Placement Biology course shifts from a traditional teacher-directed 'content coverage' model of instruction to one that focuses on helping students gain enduring understandings of biological concepts and scientific evidence that supports them. This approach enables students to spend more time understanding biological concepts while developing reasoning skills essential to science practices used throughout their study of biology." Students will learn how to conduct their learning in an inquiry setting by modeling the behavior of scientists by discovering knowledge for themselves as they observe and explore advanced biological topics. NOTE: This course should be taken during the spring trimester of the year before a student plans to take AP Biology; only current rising seniors (class of 2015) will be permitted to proceed with AP Biology without taking SC417.

SC415 Ecology Honors

Principles of Ecology is a one-trimester introduction to basic principles of ecology, and the use of these principles to predict possible consequences and uncertainties associated with human-related changes in the environment. This lab based course will examine both biotic (living) and abiotic (non-living) elements of the environment that influence the distribution and abundance of organisms. The course covers topics in the area of population, community, and ecosystem ecology, as well as humanity's effect on natural systems.

SC416 Biotechnology Honors (SC102)

Biotechnology is the "collection of scientific techniques that use biological molecules to conduct research, make products or solve problems." Students will use laboratory investigations, computer simulations, research projects, and class discussions to explore the practices, significance, and ethics of such topics as genetic engineering, forensics, stem cells, gene therapy, and genetic profiling. Students will explore the applications of this science to industry, agriculture, and pharmaceuticals. Through hands-on experience, students will learn how to use a micropipette, perform and analyze a gel electrophoresis, sequence DNA, and perform PCR.

SC417 Sports Medicine Honors (SC102)

Primary discussions in this class will be focused on basic first aid and recognition of athletic injuries. Students will also gain a basic knowledge of human anatomy with a focus on functional evaluation and treatment of injuries. Students will be expected to manually diagnose and discuss treatment options and procedures for injuries sustained during various forms of athletic competition. This would also include pre-, post-, and off season treatment and conditioning programs as well as surgical recovery and rehabilitation.

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SC418 Sports Medicine Internship (SC417, by permission)

Students choosing to participate in this program will be individually assigned and responsible for the care and monitoring of a team winter or spring sport. Involvement will include game and practice coverage, occasional travel, as well as pre-game set up and post game evaluation and clean up. Students will work closely with and communicate regularly with coaches and Head Athletic Trainer in regarding athlete rehabilitation and treatment records.

SC501 Biology I AP (SC414)

SC502 Biology II AP (SC501)

AP Biology is designed to be equivalent to a college introductory Biology course. The class is conducted at the college level and students are expected to work accordingly. A main goal of the course is for students to focus on enduring, conceptual understandings, and the content that supports them. The course is designed around the new AP Biology curriculum framework that focuses on the Big Ideas in biology and their connections. The curriculum provides a basis for students to develop strong conceptual understanding in biology and the opportunity to integrate that knowledge through inquiry-based activities and laboratory investigations. There is less memorization and more content depth. Reading skills are extremely important for the format of the new test.

SC511 Chemistry I AP (SC412)

SC512 Chemistry II AP (SC511)

AP Chemistry is designed to be equivalent to a college introductory Chemistry course. The is conducted at the college level and students are expected to work accordingly. The course is designed around the new AP Chemistry curriculum framework that focuses on six Big Ideas in chemistry. The course focuses on core scientific principles, theories, and the processes governing chemical systems. There is less memorization and more in-depth discussion of important concepts and how they relate to life beyond the classroom.

SC521 Environmental Science I AP (SC202)

SC522 Environmental Science II AP (SC521)

The goal of the AP Environmental Science course is to provide students with the 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. Environmental science is interdisciplinary; it embraces a wide variety of topics from different areas of study. Yet there are several major unifying constructs, or themes, that cut across the many topics included in the study of environmental science. Students will learn how to apply scientific processes to analyze and solve problems by interpreting scientific data and drawing logical conclusions. The class will be unique in that the concepts learned can be widely applied to real life. Emphasis will be on developing process laboratory skills including data collection and analysis, evaluation of information, and oral and written communication of experimental results.

## **SOCIAL STUDIES**

SO101 The Ancient World Honors

This is an introductory survey course that will examine human evolution, the growth of human civilization from village to empire across the globe, and an in-depth study of ancient Greece and Rome. This course allows students to explore recurring themes of the human experience common to civilizations during ancient times from a global perspective. Students will build a strong foundation upon which a further exploration of world history can be built. There will be a particular emphasis on the importance of geography, chronology, religion, and establishing cause-and-effect relationships.



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#### SO102 Foundations of America Honors

This is an introductory survey course that will explore the growth of Colonial America from the voyage of Columbus to the ratification of the Constitution. In addition, this course will examine principles of American government. Major topics that will be covered included exploration, colonization, salutary neglect, the American Revolution, the Constitution, federalism, and democracy. This course will set the stage for all other American history classes as well as prepare students to be informed and engaged citizens.

#### SO201 The World in Flux Honors (SO101)

This is a survey course that covers world history from the time period of CE 500 - 1500. Major topics include, but are not limited to: the rise of Islam, the European Middle Ages, the Renaissance and Reformation, and empires in Africa and the Americas. This course will allow students to broaden their historical perspective as they explore how societies around the world have dealt with continuity and change. SO101 is a prerequisite, and students who plan to take SO202 and/or SO203 will greatly benefit from taking this course.

#### SO202 A New Global Stage Honors (SO101)

This is a survey course with a world history perspective; however, a particular emphasis will be given to the emergence of Western Europe as the dominant global power. Topics covered in the course include, but are not limited to: The Age of Exploration, Absolutism and Constitutionalism, the Scientific Revolution and the Age of Enlightenment, the French Revolution and the spread of its ideas across Europe and the world, and the Industrial Revolution. SO101 is a prerequisite for this course.

#### SO203 Emergence of the Modern World Honors (SO101)

This survey course is the final installment for the study of world history. The main emphasis of this course will be the devastating global conflicts of the 20th century. Major topics covered include, but are not limited to: The Age of Imperialism, the World Wars, the Russian Revolution, the Cold War, Decolonization in the post-war world, the collapse of Communism, and current issues affecting the world. SO101 is a prerequisite for this course.

#### SO211 History of Europe Honors (SO101)

This course is a prerequisite for AP European History and requires a summer assignment. This course, along with the accompanying AP courses, will be taught using the PERSIAN (Political, Economic, Religious, Social, Intellectual, Artistic, and Near/Geographic) model to examine the history of the European continent. Topics of study in this course include, but are not limited to: the Terrible 14th Century, the Renaissance and Reformation, the Age of Religious Wars, European Expansion, the Age of Absolutism and Constitutionalism, the Scientific Revolution, and the Age of Enlightenment. This course will be taught at the collegiate level and requires true dedication on the part of the student.

#### SO212 European History I AP (SO211)

#### SO213 European History II AP (SO213)

This is a college-level course which aims to prepare students to succeed on the AP examination in May; students can potentially earn college credit for passing this exam. Students who take this course should be highly motivated self-starters who are prepared for an increased workload. SO101 is a prerequisite course, and the PERSIAN model will be used in this course as well. Major topics in the first course include, but are not limited to: the French Revolution, the Age of Napoleon, the Industrial Revolution, the Age of Reform, the Revolutions of 1830 and 1848, and the Rise of Nationalism. Major topics in the second course include, but are not limited to: the Age of Imperialism, World War I, the Interwar Period, World War II, the Cold War, the Fall of Communism, and Current Issues affecting Europe.

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SO301 Civil War & Reconstruction Honors (SO102)

This is a survey course that examines US History from 1789 - 1877. The goal of this course is to see how the United States developed and grew during the first 100 years of its existence. The major themes discussed from this period will be westward expansion and sectionalism. Students will analyze how these issues contributed to the causes of the Civil War and the development of America. In addition, students will seek to understand the consequences of the war as well as the difficulties the United States faced in recovering from the war.

SO302 America on the Global Stage Honors (SO102)

This survey course is designed to examine the transformation of the US from a country with a modest role in world affairs at the onset of industrialization, into a world superpower by the end of WWII. The primary topics to be covered will include: Industrialization, Imperialism, World War I, and World War II. While this course has a global focus, it will be taught from the US point of view and is the second course in the US history series.

SO303 The American Century Honors (SO102)

This survey course will cover the US in the twentieth century, with particular emphasis on the Cold War period (1945-1991) and the 1990's. The course will begin with a brief overview of the domestic developments in the US including the following topics: The Progressive Age, The Roaring Twenties, and The Great Depression. Then the course will delve into its primary focus and examine the domestic and foreign policy developments from 1945-1999. This is the third course in the US series and is highly recommended for students taking AP I and II.

SO311 US History I AP (SO102)

SO312 US History II AP (SO311)

The AP US History course is a college level course designed to provide students with the analytical skills and factual knowledge necessary to deal critically with the problems and material in US history. The program prepares students for intermediate and advanced college courses by making demands upon them equivalent to those made in introductory college courses. Students should learn to assess historical materials - their relevance to a given interpretive problem, reliability, and importance - and to weigh the evidence and interpretations presented in historical scholarship. This course will 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. The first section will cover US history from Colonial America through the social, economic and political changes of the Antebellum period. This second section will cover US History from the development of the Civil War through WWII.

SO401 World Religions Honors

An academic survey of the five major religions of the world (Buddhism, Hinduism, Islam, Judaism, and Christianity), this course will be driven by lecture and class discussion combined with student reading, research, and writing. The goal of the course is that by studying the history, beliefs, and practice of each religion, students will develop a basic understanding of the tenets of each religion. Other religions may also be considered as time allows.

SO402 The Wild West Honors

The Wild West is a history elective that will focus on the history of the Western United States during the second half of the 19<sup>th</sup> Century. The Wild West is a popular topic for movies and books, but much of what is seen is romanticized from the true history. This class will bring together the truth of the history and the exaggerations that followed through examination of the geography, history, culture, and folklore.

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#### SO403 Geography Honors

Contrary to popular belief, geography is not just the study of land masses and their earthly locations. Geography consists of so much more. This course will take an overall look at the people of the world and why populations differ in different regions. It will transport you from region to region in order to explore the different landscapes, people, and cultures. Students will also look into the current events of each region and unsheathe the various connections to its geography. This course will install a global perspective that students will find helpful in future social studies courses.

#### SO404 Civil Rights Honors

This course traces the development of civil rights activism in the US as a result of exclusion and persecution of individuals/groups based upon race, ethnicity and gender. Students will examine issues, organizational and philosophical developments, strategies, and key individuals who played significant roles in producing civil rights changes in the US. While the primary focus of this course will build up to the Civil Rights Era (1945-1975), students will gain an understanding of the depth of civil rights history going back to Colonial America and how the struggle for civil rights is still ongoing today.

#### SO405 Leadership Honors (EN102)

This course is designed to cultivate the leader within each student by providing them with an understanding of different leadership styles, effective leadership at all levels, and the skills required to lead. Each student will be required to participate in class discussions, individual and group projects, and a variety of assessments that will challenge each student to build successful leadership habits.

#### SO406 Music History Honors

This course will examine the development of western music from the Gregorian chant of the Middle Ages to the variety of music of the modern day. Students will explore multiple eras, genera, and formats of music throughout this course. In addition students, will learn basic concepts of music theory such as reading music and aural skills.

#### SO407 History of Sports Honors

This course will examine the evolution of the active life and sports from their earliest development in ancient world civilizations up through the recreational, amateur and professional sports of the modern day. Students will analyze how sports mirror the economic, political and social developments in society, how sports adapt to the changing society, and how sports become big business. While this course will emphasize sports history in the US, there will also be a world view analysis that is essential to understanding the development of sports.

#### SO408 Military History Honors

This course will explore the development of military tactics and strategy over the course of history and explain how warfare has led to the development of the world as we know it. Students will pay particular attention to how warfare has shaped political, social, and economic changes. This course will examine warfare from the ancient world to the modern day.

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#### SO409 Art History Honors

Open to anyone who wishes to partake in exploring the history of Art in the western world, this course, designed to improve visual literacy, will also work with students' critical thinking and writing skills as we read both the paintings and critical ideas about works of art. Students will learn to read works of art, discover the social, political, and cultural commentary contained within each work, and explore the historical and cultural conditions under which the work was developed. We explore everything from Degas' ballerinas and the impressionist movement to why millions of people visit the Sistine Chapel each year. Munch will make us scream while Francisco Goya will haunt out nightmares with his Disasters of War before we move on to the dots of Toulouse-Lautrec's pointillism. The Dada artists will help us move into modernist movement where "found art" becomes the avant-garde before exploring artist propaganda of both World Wars. Students should have experience in writing from previous English courses. No summer reading is required of this course.

#### SO410 Religion & Society Honors

Students will study the role of religion in contemporary society, including implications in politics, foreign policy, and popular culture. Students will learn to recognize religious concerns in a variety of contexts and analyze the influence of religious faith on secular human interaction.

#### SO411 Intro to Criminology Honors (EN102)

Criminology is the scientific study of the causation, correction, and prevention of crime. This course will cover the causes and patterns of criminal and deviant behavior, as well as possible applications of theory for treatment and prevention.

### **FOREIGN LANGUAGE**

#### SP101 Spanish 101

This is an introductory course to the Spanish Language. This course is required for all beginning Spanish students in order to introduce them to basic Spanish conversational skills as well as practicing basic listening, reading and writing skills. Students will begin building their Spanish vocabulary and grammar knowledge that will be useful in everyday life experiences. Students acquire some insight into how languages and cultures work by comparing the target language and culture(s) to their own.

#### SP102 Spanish 102 (SP101)

This course builds on vocabulary and grammar skills acquired in Spanish 101, continuing the study of the present tense of verbs and adding the present progressive tense. While practicing the four skills of listening, speaking, reading, and writing, students will increase their vocabulary and related grammatical knowledge with thematic units based upon practical, everyday life experiences. Students acquire some insight into how languages and cultures work by comparing the target language and culture(s) to their own.

#### SP111 Spanish Culture

In this course taught primarily in English, students will travel all over the Spanish-speaking world to learn about a variety of customs, traditions, foods, festivals, art, literature, music, dance, and more. We will also delve into some of the history that gives context to the target cultures. Students will also learn by comparing the target cultures with each other and their own.

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SP201 Spanish 201 (SP102)

This course provides students with opportunities to continue the development of their listening, speaking, reading, and writing skills. Students participate in simple conversational situations by combining and recombining learned elements of the language orally and in writing. In addition to using previously learned present verb tenses, they will learn how to speak about the past with the acquisition of the preterite tense, related grammar skills, and practical vocabulary presented within the context of thematic units.

SP202 Spanish 202 (SP201)

This course builds on knowledge and skills acquired in Spanish 201, reviewing previously learned verb tenses and adding imperfect, present perfect, and pluperfect tenses. Students are able to satisfy basic survival needs and to interact on issues of everyday life in both present and past time periods. They compose related sentences, which narrate, describe, compare, and summarize familiar topics from the target culture. While building grammatical knowledge, students will increase their knowledge of practical vocabulary through thematic units.

SP203 Spanish 203 Honors (SP202)

This course builds on knowledge and skills acquired in Spanish 202, reviewing previously learned verb tenses and adding present subjunctive, future, and conditional tenses. While continuing to practice the four essential skills of listening, speaking, reading, and writing, students further increase their vocabulary knowledge through the use of thematic units. In addition, they develop a better understanding of the similarities and differences between cultures and languages as they examine the influence of the beliefs and values of the target culture(s).

SP211 Spanish Conversation Honors (203)

In this intermediate Spanish course which emphasizes oral communication, students will engage in mock conversations, skits, and discussions on a variety of topics that will enhance their oral proficiency and listening comprehension and increase fluency. This elective course will greatly benefit students in their current Spanish courses, as well as in future endeavors in Spanish.

SP301 Spanish 301 Honors (SP203)

This honors course provides students with the opportunity to continue the development of their listening, speaking, reading, and writing skills. This course reviews and builds on previously learned verb tenses and provides students with a more in-depth study of the subjunctive tense. With an emphasis on improving written composition and oral communications, students will identify main ideas and significant details in discussions, presentations, and written texts within a cultural context, read and interpret authentic materials, narrate and describe in sentences, cohesive paragraphs, and short, cohesive compositions. In addition, they develop a better understanding of the similarities and differences between cultures and languages as they examine the influence of the beliefs and values of the target cultures.

SP302 Spanish 302 Honors (SP301)

This honors course builds on knowledge and skills acquired in Spanish 301, reviewing previously learned verb tenses and adding the imperfect subjunctive tense. While continuing to practice the four essential skills of listening, speaking, reading, and writing, students further increase their vocabulary knowledge through the use of thematic units. Students will further increase their fluency through a focus on oral communication and written composition, as they identify main ideas and significant details in discussions, presentations, and written texts within a cultural context, read and interpret authentic materials, narrate and describe in sentences, cohesive paragraphs, and short, cohesive compositions. In addition, they develop a better understanding of the similarities and differences between cultures and languages as they examine the influence of the beliefs and values of the target cultures.

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SP312 Spanish Film Honors (SP201)

This course will offer students a chance to see more of Spanish culture and influences from the perspective of film. The students will watch films of varying topics ranging from specific influential Spanish people, to culture topics, to films that are created by Spanish artists in Spanish speaking countries. Students will be able to compare and contrast their own culture as well as the art of film from those of the target culture and language. Students will continue practicing their Spanish listening, reading, writing and speaking skills.

- CH101 Chinese 101  
CH102 Chinese 102 (CH101)  
CH103 Chinese 103 (CH102)

This course is open to students of all grades. This course is an introduction to the study of Chinese language and its culture. Students perform the most basic functions of the language and become familiar with some elements of its culture. The emphasis is placed on the development of the four skills of listening, speaking, reading, and writing within a given context extending outside of the classroom setting when possible. The context focuses on the students' lives and experiences and includes an exposure to everyday customs and lifestyles. Grammar is integrated throughout the course and is selected according to the language conventions. A general introduction to the culture, its products (e.g., literature, laws, foods, games,) perspectives and practices is integrated throughout the course. Students acquire some insight into how languages and cultures work by comparing the target language and culture(s) to their own.

- CH201 Chinese 201 (CH103)  
CH202 Chinese 202 (CH201)  
CH203 Chinese 203 (CH202)

Open to anyone who has completed the Chinese1 course requirement. This course provides students with opportunities to continue the development of their listening, speaking, reading, and writing skills. Students participate in simple conversational situations by combining and recombining learned elements of the language orally and in writing. They are able to satisfy basic survival needs and interact on issues of everyday life in the present time and past time inside and outside of the classroom setting. They compose related sentences, which narrate, describe, compare, and summarize familiar topics from the target culture. Focus is placed on understanding main ideas. They develop a better understanding of the similarities and differences between cultures and languages and they examine the influence of the beliefs and values on the target culture.

## **PHYSICAL EDUCATION**

PE101 Health & Lifetime Fitness

Students in Health & Lifetime Fitness will examine the five components of fitness: muscular strength, muscular endurance, cardiovascular fitness, flexibility, and body composition. Students will get an academic understanding of these topics, develop a fitness plan with these topics with regarding, and put that plan into action. Students will work to identify ways to implement the fitness plan in a way that is sustainable and encourages a lifetime of fitness, health, and well being. Additional topics will include basic nutrition, substance abuse, and more.

PE201 Team Sports

Students choosing this elective course in health & physical education will learn the basics of a number of team sports. A focus will be on the rules, rudimentary skills, basic strategy, and competition of the selected sports.

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## PE202 Individual Sports

Students choosing this elective course in health & physical education will learn the basics of a number of individual sports. A focus will be on the rules, rudimentary skills, basic strategy, and competition of the selected sports.

## PE301 Strength Training (PE101)

Students involved in this class will be expected to participate in group and individual strength programs. Over the course of the program, Students will learn basic technique and strength training theory to facilitate individual program development.

## PE302 Speed, Agility, & Quickness (PE101)

Students will participate in fundamental development and completion of various agility drills and plyometric exercises. Emphasis will be placed on speed and agility and it's relationship with athletic performance.

## PE303 Advanced Fitness (PE101)

The purpose of this course is to motivate students to strive for lifetime personal fitness. To encourage and promote students to set and reach fitness goals while in class and throughout life. Students will be introduced to multiple different fitness formats and programs in order to discover the options available for them to be able to reach personal goals in a healthy, long term way. This course is designed for female students only.

## **TECHNOLOGY**

### TE101 Computer Applications

This course provides students with the opportunity to master beginning and advanced skills in the areas of word processing, database management, spreadsheet, telecommunications, and desktop tool applications. Emphasis is on concepts of desktop publishing and presentation graphics as well as skill development in computer application software; ethical issues pertaining to information systems; and computer information system careers. Communication and critical thinking skills are reinforced through the software applications.

### TE201 Web Design

This course is an introduction to the design, creation, and maintenance of web pages and websites. Students learn how to critically evaluate website quality, learn how to create and maintain quality web pages, learn about web design standards and why they're important, and learn to create and manipulate images. The course progresses from introductory work on web design to a culminating project in which students design and develop websites.

### TE202 Video Production

This course is an introductory-level video production class and it will focus on basic techniques of studio and field productions. Students will cover pre-production, production, and post-production skills through hands-on exercises. The class will particularly emphasize basic directing, editing, shooting, and audio techniques.

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TE301 Knight Life Productions I (by permission) | TE311 Knight Life Productions IV Honors (by permission)  
TE302 Knight Life Productions II (TE301) | TE312 Knight Life Productions V Honors (TE311)  
TE303 Knight Life Productions III (TE302) | TE313 Knight Life Productions VI Honors (TE312)

This course provides students a broad-base foundation in the digital media field. An emphasis is placed on the fundamental concepts of audio and video design, various digital media technologies, non-linear editing, product development and design, and career development. Communication and critical thinking skills are strengthened throughout the course by the use of a collaborative environment that will be utilized to plan, produce, edit and publish videos through various social networking platforms. A second year, honors level course is available for select students.

## **FINE ARTS**

### FA101 Photography

The course will start with a foundation in art elements, design principles, color theory, and composition. Digital photography, graphic design, and basic drawing skills will be taught, with photojournalism incorporated. Students will learn to critique works of art, from masterpieces to their own artwork.

### FA102 Drawing

The course will start with a foundation in art elements, design principles, color theory, and composition. Drawing will be taught in pencil, oil pastel, conté crayon, ink and collage. Subject matter will include landscape, still life, perspective, and life drawing. Students will learn to critique works of art, from masterpieces to their own artwork.

### FA103 Painting

The course will start with a foundation in art elements, design principles, color theory, and composition. Painting will include watercolors in a variety of subject matter, with an emphasis on real life subjects, and will incorporate the study of Impressionism. Preliminary prep will be in pencil and colored pencil. A three-dimensional project will be completed. Students will learn to critique works of art, from masterpieces to their own artwork.

## **LIFE SKILLS**

### LF101 Personal Finance

Personal Finance is a course designed to help students understand the impact of individual choices on occupational goals and future earnings potential. Real world topics covered will include income, money management, spending and credit, as well as saving and investing. Students will design personal and household budgets; simulate use of checking and saving accounts; demonstrate knowledge of finance, debt, and credit management; and evaluate and understand insurance and taxes. This course will provide a foundational understanding for making informed personal financial decisions.

### LF401 Senior Seminar (senior status)

This senior level course will be taught seminar style, meaning that students will have to attend a set number of seminars on topics such as interview skills, resume writing, professional etiquette, healthy relationships, and interpersonal problem-solving skills. Students will also write their senior paper during this course. This class will meet outside the regular school day during the second trimester. Students will have some outside of class assignments to complete in addition to the senior paper. This course is a Pass / Fail course and is required for graduation.



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## LEADERSHIP

Gray Stone Day School is governed by a Board of Directors who have final authority on all matters pertaining to the organization and administration of the school. The daily operations of the school are delegated to the school administration. Those wishing to address a member of the administration should schedule an appointment through the main office. Those wishing to address the Board of Directors should notify the school 48 hours in advance of the regularly scheduled board meetings. The schedule of meetings can be found on the school's website.

### BOARD OF DIRECTORS

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Mrs. Pat Bramlett

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Mr. Ron Garrow

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Mr. Jeff Morris, *Associate Director*

Mr. Richard Miller, *Academic Dean*

Mrs. Sarah Ince, *Director of College Counseling*

Mrs. Ann Sutlive, *Guidance Counselor*

Mrs. Sara Leonard, *Director of Student Services*

Mr. Gregg McCollister, *Instructional Technologist*

Mrs. Lisa Deese, *Distance Learning Coordinator*

Mrs. Sherri Sherrill, *Registrar*

Mrs. Shannon Lisk, *Office Manager*

Mrs. Marilyn Kinsey, *Executive Assistant*

Mr. Jeff Carter, *Facility Manager*

Mr. Calvin Veal, *Maintenance*

Mrs. Inez Vaughn, *Custodian*

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## TEACHING FACULTY

Gray Stone Day School prides itself in maintaining a diverse staff of educators dedicated to student success. As the school is designed to be college preparatory, instructors request that students take the initiative to approach them regarding any problems they may be having in the class. Instructors are available for meeting with students on a daily basis. Parents are requested to contact staff via email on an as needed basis. The Guidance Office can arrange parent conferences as needed.

**Mr. Zack Allen**, Instructor of English Language  
B.A., Pfeiffer University

**Ms. Amber Ayscue**, Instructor of Mathematics  
B.S., North Carolina State University  
M.A., University of North Carolina at Charlotte

**Mr. Daniel Blalock**, Adjunct Instructor of Physical Sciences  
B.S., North Carolina State University

**Mr. Chris Brown**, Instructor of Mathematics  
B.A., Pfeiffer University

**Mrs. Lisa Deese**, Instructor of Technology  
B.S., University of North Carolina at Charlotte  
M.S., University of North Carolina at Charlotte

**Mrs. Sheri Efird**, Instructor of Physical and Life Sciences  
B.S., Ferris State University  
M.Ed., University of North Carolina at Charlotte

**Mrs. Mary Catherine Ellis**, Instructor of Spanish  
B.A., Wake Forest University

**Mrs. Lori Evans**, Instructor of Mathematics  
B.S., Pfeiffer University

**Mr. Robert Fanzo**, Instructor of English Language  
B.A., Duquesne University  
M.A., Seton Hall University

**Mrs. Allison Faulkenberry**, Instructor of Mathematics  
B.A., University of North Carolina at Chapel Hill

**Mrs. Heather Ferguson**, Instructor of Life Sciences  
B.S., Western Carolina University

**Mr. Michael Furr**, Instructor of Life Sciences  
B.S., University of North Carolina at Charlotte

**Mr. Andrew Hodges**, Instructor of English Language  
B.A., Providence College  
M.A., University of York

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**Mr. Clay Honeycutt**, Instructor of Social Studies  
B.A., Wake Forest University  
M.A.Ed., Wake Forest University

**Ms. Anya Huneycutt**, Instructor of Spanish  
B.A., Gardner-Webb University

**Mrs. Jamie Hraczo**, Instructor of Physical Sciences  
B.S., North Carolina State University

**Mrs. Marilyn Kinsey**, Adjunct Instructor of Fine Arts  
B.S., Atlantic Christian College  
M.Ed., University of North Carolina at Greensboro

**Mr. Gregg McCollister**, Adjunct Instructor of Mathematics  
B.A., Pfeiffer University

**Mr. Jeff Morris**, Adjunct Instructor of Social Studies  
B.S., Berry College  
M.S.S., United States Sports Academy

**Ms. Olivia Pettigrew**, Instructor of Spanish  
B.A., University of North Carolina at Greensboro

**Ms. Sarah Richardson**, Instructor of English Language  
B.A., University of Great Falls  
M.A., University of Connecticut

**Mr. R. Doyle Shaw**, Adjunct Instructor of Life Sciences  
B.A., Pfeiffer University

**Mr. Robert Stack**, Instructor of Social Studies  
B.A., University of Albany  
M.A., Winthrop University

**Mrs. Erin Talbert**, Instructor of Social Studies  
B.A., Pfeiffer University

**Ms. Jing Yan**, Adjunct Instructor of Chinese  
M.A., Heilongjiang University