

***MILLER SCHOOL
OF ALBEMARLE***

COURSE DESCRIPTIONS

134TH Session

2011-2012

School Mission

With a unique emphasis on minds, hands, and hearts, Miller School of Albemarle prepares young women and men for success in college and life.

Distinguished by a rigorous and supportive program, talented faculty and staff, meaningful leadership opportunities, and small classroom settings, our congenial community builds responsible citizens, insightful thinkers, and compassionate individuals.

MILLER SCHOOL OF ALBEMARLE COURSE OF STUDY

2011-2012

Curricular Offerings

English

English 8
Human 9 (Anc Lit)
English 10 (Eur Lit)
English 11 (Amer Lit)
AP Eng. Lang. & Comp
English 12 (Art of Reading & Writing)
AP Eng Lit & Comp
Creative Writing

History

World Cultures & Geography
Human 9 (Anc. History)
Modern European History
AP European History
U.S. History
AP U.S. History
Government
AP Government & Politics
Economics I
AP Macroeconomics

Science

Earth Science
Physical Science
Biology I
Honors Biology
Chemistry
Honors Chemistry
Physics
Honors Physics
AP Environmental
Human Anat. & Physio.
AP Biology

Mathematics

Pre-Algebra
Algebra I
Geometry
Algebra II
Alg II/ with Trig
Pre-Calculus
Algebra III
Calculus
AP Calculus AB
Statistics
AP Statistics
Math for Economics

Language

Latin 8
Fren I/Span I/Latin I
Fren II/Span II/Latin II
French III/Span III/Latin III
French IV/AP French Lang
Span IV/AP Spanish Lang
Latin IV
Adv. French V
Span V/AP Spanish Lit
Latin V/AP Latin
English as a Second Lang I
English as a Second Lang II

Fine Arts

Art I
Art II
Adv. Art (III-V)
Honors Studio Art
Graphic Des./Yearbook Prod.
Studio Music (I-V)
Singing (I-V)
Design/Build (I-IV)
Woodworking (I-IV)
Beginning Photo
Intermediate Photo
Photography III
Photo (Ind Study)

Other

Study Skills

GRADE 8

ENGLISH

English 8 - Introduction to Literature

Eighth grade students read and study a variety of literature, including Edith Hamilton's *Mythology*, *The Giver*, *Animal Farm*, *Lord of the Flies*, *The Sea Wolf*, and *A Midsummer Night's Dream*. These texts provide a glimpse of the essential components of both the individual and his community and the relationship between natural order and civilized order. Students address themes such as what it means to be an individual, how an individual relates to a society, and what responsibility each has as a member of that society. Formal vocabulary and grammar study begins, and a portfolio approach to writing develops the student's ability in composition, personal writing, and the analytical essay.

MATHEMATICS

Pre-Algebra

This course is designed to provide the necessary foundation to assist students in the transition from elementary mathematics to Algebra. Students discover the underlying concepts and principles of algebra and geometry and how they relate. Topics include percents, probability, statistics, multi-step equations, geometric relationships and formula, and the coordinate plane. An exploratory and discovery approach will be emphasized in this course.

Algebra I (Prerequisite: Pre-Algebra)

This course serves as the first in the sequence of college preparatory mathematics. Concepts are introduced in the context of real-world problems in order to increase the conceptual development of the student. This course covers graphs in the coordinate plane, linear equations and inequalities, radicals, polynomials, quadratics, and data analysis. The concept of functions is emphasized using graphical, verbal, numerical, and algebraic methods.

SCIENCE

Earth Science

This course introduces students to the basic concepts of Earth Science. Specific topics include mapping Earth's surface; minerals, rocks and the rock cycle; plate tectonics, earthquakes, and volcanoes; surface processes; Earth's freshwater and saltwater systems; weather and climate; and astronomy. Class discussions and written homework assignments emphasize mastery of topics. Frequent lab and field exercises encourage students to master and use inquiry and critical thinking skills. Projects are designed to allow students to explore topics in depth

and to develop skills in organization, the use of library and online resources, and writing carefully documented science reports.

SOCIAL STUDIES

World Cultures and Geography

This class examines the cultures and geography of the continents and major nations of the world in order to provide students with a perspective on “global” issues, such as the environment, human rights, and economic interdependence. Students have the chance to learn how location and topography can affect a country’s culture and interaction with the rest of the world. The class emphasizes the development of map skills, knowledge of specific locations, and an appreciation for the cultures of the world.

ELECTIVES

English as a Second Language (ESL)

ESL at Miller School of Albemarle is a support program intended to develop students’ English proficiency while advancing their achievement in regular academic courses. After an initial assessment during the admissions process and a follow-up evaluation during orientation, students are placed by level.

LATIN 8

This 8th grade required exploratory language course is designed to provide a foundation for success in the upper school language courses. Students are introduced to the study of foreign language through a program in Latin. This class focuses on mythology, Roman culture, derivatives, and the basic language skills of reading comprehension, vocabulary acquisition, syntax and grammar. A close relationship between Latin and the other world languages are emphasized. This course is a prerequisite to Latin I, Spanish I or French I.

FINE ARTS

Art I

Art I is an entry-level art class designed for students in grades 8-12 who have no prior art credits at the secondary level. Through opportunities and challenges in the studio arts of drawing, painting and sculpture, students will gain artistic knowledge and skills. The emphasis of the course is on art production. Art history is integrated into the curriculum through the study of various artists and art periods, usually as they relate to the students’ projects.

Singing I

This class is open to all skill levels and offers individual and group voice coaching and performance opportunities for young singers. Students receive individualized instruction tailored to their musical ability and singing experience, and are assigned time slots for daily practice during the class period. Because classes are typically small, students receive one-on-one coaching in vocal technique, proper breathing, posture, tone and diction, and are encouraged to explore classical, blues, jazz, pop and Broadway musical styles. In addition, the instructor provides an introduction to music theory, sight singing, solfeggio, music listening and ear training, all of which contribute to well-rounded training for high school musicians. Students will track and analyze their own musical growth in a detailed journal or blog.

Throughout the year there are opportunities to participate in several performing events, including Parents Weekend; school assemblies; holiday concerts; fall and winter recitals; the Valentine's Day Concert and the Spring Honors Ceremony. Miller School of Albemarle students may enroll in Singing Class for up to five academic years.

Studio Music I

Open to instrumentalists of all skill levels, this class offers individual and ensemble coaching and performance opportunities. Students receive instruction tailored to their musical ability and playing experience, and are assigned time slots for daily practice during the class period. Because classes are typically small, students receive one-on-one coaching in instrumental technique to include articulation, bowing, proper breathing, posture, tone production, and are encouraged to explore classical, blues, jazz, pop and global musical styles. In addition, the instructor provides an introduction to music theory, sight reading, music listening and ear training, all of which contribute to well-rounded training for high school musicians. Students will track and analyze their own musical growth in a detailed journal or blog.

Throughout the year there are opportunities to participate in several performing events, including Parents Weekend; school assemblies; holiday concerts; fall and winter recitals; the Valentine's Day Concert and the Spring Honors Ceremony. Young pianists, in particular, have frequent chances to accompany other students. Miller School of Albemarle students may enroll in Studio Music Class for up to five academic years.

UPPER SCHOOL

Miller School of Albemarle offers a rigorous college preparatory curriculum for students from average to above-average ability. Students learn through traditional classroom methodology and also receive instruction through the philosophy of “mastery” learning, which includes a demonstration of that mastery through a variety of formats during their academic career.

Classes are offered through a standard core curriculum with the addition of many opportunities for interdisciplinary learning, possible by the frequent interaction of faculty on joint projects and cooperative learning for all. Furthermore, the School’s service and athletic programs complement the learning experience. Successful completion of the requirements for graduation prepares students to continue that academic progress in college.

GRADUATION REQUIREMENTS

Miller School of Albemarle requires the following to qualify for a diploma:

- 4 credits in English
- 4 credits in History (including U.S. History and American Government)
- 3 credits in Mathematics (including Geometry and Algebra II)
- 3 credits in Science (including Biology and Chemistry or Physics)
- 3 credits in Foreign Language
- 2 credits in the Arts
- 2 credits in Health and Physical Education (completed during participation in athletics)
- 2 credits in elective courses
- Successful completion of a Senior Chapel Talk

23 credits – Total Requirement

ENGLISH

The English curriculum is designed to reinforce and develop a student’s ability to think, read and write. Students explore connections between literature and the human experience, learning to consider increasingly complex questions through the analysis of readings and texts that correspond thematically to the history curriculum. The study of grammar continues although at the junior and senior level, students are expected to have mastered formal grammar studies and have increased responsibility for the application of grammar in the context of their writing. Students regularly assess the progress of their writing through the use of portfolios, which follow them through each grade level.

Humanities 9 (English 9)

This course is designed in conjunction with the 9th grade course in Ancient History, and much of the literature studied reflects the time periods and themes of past civilizations. Students gain knowledge of man's earliest stories, many of which are now part of Western culture, including examples from the Bible, mythology, and ancient epic poetry. Other texts give more modern interpretations of mythic prototypes and themes that attempt to answer questions that man has asked since the beginning of time. Formal study of grammar and vocabulary is emphasized as students begin to master the formal writing process.

English 10—European Literature

This course is a survey of the history of European literature that begins with Homer, moves through Shakespeare and the Renaissance, and concludes with Modernism and the 20th century. Texts studied include the *Iliad*, the *Aeneid*, *Beowulf*, the *Inferno*, *1 Henry IV*, Machiavelli's *The Prince*, *Paradise Lost*, *The Rape of the Lock*, *A Tale of Two Cities*, *The Importance of Being Earnest*, and *Things Fall Apart*. The course studies how literature is influenced by historical events and how literature in turn influences society. The course is designed in conjunction with the 10th grade course in Modern European History and provides an historical framework for understanding the history of literature and literary genres in Europe. Formal study of grammar and vocabulary continue. Writing portfolios begun in the 9th grade continue to develop skills, emphasizing thesis, attention to development, and proper research procedure.

English 11 – American Literature

In this course, students read a variety of works by 17th through 21st century American writers, studying prose and poetry throughout America's history. Through reading, discussion, and written analysis, students learn to evaluate and discuss the qualities that define the American hero. They further explore how this character changes with the values and culture of various periods in history. Students also learn to identify and understand the beliefs that influence human thought, such as those inspired by the Puritans and the Enlightenment thinkers. From there, the students move on to examples of romanticism, transcendentalism, realism, naturalism, and modernism. Writing portfolios track each student's progress in the essay and other forms of academic written expression.

AP Language and Composition (Instructor Approval Required)

A.P. Language and Composition is a study of American literature from the founding of the nation to the present day, focusing on its continuities and discontinuities with British literature. Students look at what is distinctive about the American experience, especially the problem of creating a democracy in a new land. They study the representation of minorities in American literature, including African-Americans and Native Americans, as well as the phenomenon of regionalism, with special attention to New England, the South, and the Western frontier. Students also study the way the great events in American history, such as the Civil War, have been reflected in American literature.

Drawing upon the venerable American tradition of oratory, embodied in figures such as Abraham Lincoln, the course expands the students' awareness of the rhetorical possibilities of language. Throughout the course they analyze the way the shaping of a new American culture involved the shaping of a new American rhetoric. The teaching of grammar is integrated into the course.

English 12 - The Art of Reading and Writing

Why do we read? Why do we write? How do these two actions help us find our place in our worlds? And, furthermore, how does writing and reading help us to think—or, how does thinking help us to write and read? This course proposes that thinking and writing and reading are inextricably linked, and, therefore, that the students' ability to think critically will enhance their ability to further develop writing skills they have begun developing in their earlier high school years. Through engaging poetry, essays, and texts such as Shakespeare's *Hamlet*, Marcus Zusak's *The Book Thief*, Sara Gruen's *Water for Elephants*, Cormac McCarthy's *The Road*, and Ray Bradbury's seminal text *Fahrenheit 451*, the students will sharpen their own emotional intelligence as they pursue such time-worn themes as individual responsibility, ethical dilemmas, and the pursuit of knowledge. The composition and presentation of their senior Chapel Talks, and *Poetry Out Loud* and Shakespeare recitations also satisfy the major public speaking component of the course.

AP Literature and Composition (Instructor Approval Required)

This course hones the advanced English student's ability to render close literary analysis of literature in order to prepare him or her for the AP Exam and college-level courses. Students sharpen their close reading skills while examining various rhetorical styles in poems, novels, and plays. In a university seminar-style environment, students pay particular attention to their own use of style and rhetoric in timed and extended essays, and compose their own poems according to the forms presented in *The Making of a Poem*. In addition to a wide-range of poetry, authors studied include Orhan Pamuk, Mervyn Peake, Muriel Spark, Emily Bronte, and Jane Gardam. The plays of Shakespeare, Eugene O'Neill, Tennessee Williams, and Arthur Miller provide rich examples of how rhetoric and style are delivered in dramatic works. The composition and presentation of their senior Chapel Talks, and *Poetry Out Loud* and Shakespeare recitations also satisfy the major public speaking component of the course. Final assessments of their writing portfolios allow each student to analyze and reflect on their growth in written expression.

Creative Writing

The course allows students the freedom to write prose and to expand their knowledge of the written word. From close observation of contemporary poetry and short stories, we examine what it takes to be a successful writer. The class focuses primarily on poetry to begin the school year and then later on in the year focuses on the craft of writing short stories. Creative Writing may be taken on a semester basis for ½ credit.

FINE ARTS

As a reflection of the School's Mission, the Fine Arts Program enables students to create with their own minds, hands, and hearts a variety of works of art and projects. Students can also develop their own vocal talents, write, conduct, and perform music. Specific projects enable students to learn a process that includes planning, construction, and evaluation. The goals of the Fine Arts Program are to instill a desire for excellence, increase creativity, and expand knowledge of the arts.

Art I

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Art II

Art II is a course designed for students who have earned at least one studio art credit at the secondary level. Students will build upon their knowledge of perspective, color theory and observational drawing to produce a variety of projects in the studio arts of drawing, painting and sculpture. Art II students who are new to Miller School of Albemarle may be required to complete some of the projects from the Art I curriculum, in order to ensure that they have the necessary skills for the more challenging projects typically found in the Advanced Art classes.

Advanced Art (III-V)

Advanced Art is for students who have earned at least two studio art credits at the secondary level. Advanced Art is a course for the serious art student who is motivated to further develop his or her art skills and knowledge. Through the exploration of various techniques and materials, students will have opportunities for creative self-expression through drawing, painting and sculpture projects. A student may take the Advanced Art course for more than one year, earning credit each year that the course is taken.

Honors Studio Art (Instructor Approval Required)

Honors Studio Art is an intensive portfolio-based course for art students in their senior year, contingent upon approval by the instructor. Students will produce numerous 2-D or 3-D works that show their skills, versatility, and originality, working from observation or from their own photographs. This course is recommended for students who plan to apply to art schools or who plan to major in art in college.

Graphic Design/Yearbook Production (Instructor Approval Required)

Students enrolled in the Graphic Design/Yearbook class will help to design and produce the School's yearbook, under the supervision of the faculty yearbook coordinator. This Fine Arts elective is a computer-intensive course, with a maximum of two openings available. Students should have good general computer skills. Experience with Adobe Photoshop is preferred, but not required. Students who are interested in registering for this course must complete a Graphic Design Course application and provide at least two teacher recommendations. Preference will be given to seniors, but juniors may also apply.

Singing Class (I-V)

Open to Grades 8 through 12 and all skill levels, this class offers individual and group voice coaching and performance opportunities for young singers. Students receive individualized instruction tailored to their musical ability and singing experience, and are assigned time slots for daily practice during the class period. Because classes are typically small, students receive one-on-one coaching in vocal technique, proper breathing, posture, tone and diction, and are encouraged to explore classical, blues, jazz, pop and Broadway musical styles. In addition, the instructor provides an introduction to music theory, sight singing, solfeggio, music listening and ear training, all of which contribute to well-rounded training for high school musicians. Students will track and analyze their own musical growth in a detailed journal or blog.

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Studio Music (I-V)

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Design/Build (I-IV) (There is no prerequisite for level one. All other levels require successful completion of the previous level.)

Design/Build will educate our students in the process of design and fabrication in wood, metal and other materials. (This will include learning to weld and cut metal with a variety of tools including a plasma torch.) These courses are project-driven and enthusiastic participation is integral to success. Students will graduate with a Design/Build portfolio, and a comprehensive hands-on knowledge from working safely with a variety of tools and materials. Various areas of engineering and design will be covered over the course of the four-year program. Rubber soled leather boots are required for the course, steel toes are preferable.

Woodworking (I-IV) (There is no prerequisite for level one. All other levels require successful completion of the previous level.)

Students in grades 9-12 will learn to work safely with a variety of hand and power tools to design and fabricate various projects out of different woods. Courses will be project-driven and enthusiastic participation is essential for success. Creativity will be encouraged and students will be asked to design and build furniture and other projects that will test their abilities. Students in level III and IV might be asked to complete a project that will directly benefit the school.

Beginning Photography

Beginning Photography is an entry level course designed for students in grades 9-12 who have no prior photography credits at the secondary level. Students investigate the use of cameras and other machines associated with photo production. Lessons include the characteristics of film, exposure time, depth of field, composition, chemical processing, and the ethics associated with photography. In addition to working in the darkroom, students have weekly photo assignments and participate in class discussions and critiques. A student-furnished Single Lens Reflex (SLR) 35mm camera with manual override of shutter speeds and aperture is required for the course. Film and paper are sold at the school bookstore at discounted prices for photography students.

Intermediate Photography (Prerequisite: Beginning Photography)

Intermediate Photography is a continuation of the Beginning Photography course. Students build upon their knowledge of black and white photography in the areas of composition, exposure, and darkroom technique, and they learn advanced techniques in processing film and printing negatives. A variety of photographic subject matter is discussed and explored in this course. A student-furnished Single Lens Reflex (SLR) 35mm camera with manual override of shutter speeds and aperture is required for the course. Students are also introduced to digital photography, scanners, and digital concepts. Film and

paper are sold at the school bookstore at discounted prices for photography students.

Photography III (Prerequisite: Intermediate Photography)

In the Photo III course, students are introduced to digital capture in photography and in motion pictures. Students become familiar with the tools of digital capture such as computers, software (Adobe Photoshop CS, Final Cut Pro), flatbed scanners, digital cameras and digital video cameras. Through a hands-on approach, students learn the similarities and differences of a digital workflow. This course is offered to 11th and 12th grade students who have completed the Intermediate Photography course.

Photography Independent Study (Prerequisite: Intermediate Photography)

Photography Independent Study is open to students who have completed both Beginning and Intermediate Photography and who wish to explore specific issues or techniques in order to build their photography portfolio.

FOREIGN LANGUAGE

The Foreign Language Department offers instruction in English as a Second Language, French, Latin, Chinese and Spanish. Students in level IV of French and Spanish have the option of taking the Advanced Placement exam in Language. Students in level IV of Latin have the option of taking the Advanced Placement exam on Virgil. Students in level V of Spanish have the option of taking the Advanced Placement exam in Literature. In the spring of each year French, Latin, and Spanish students take the National Exams related to their levels. In order to graduate a student must complete three credits of foreign language study. While an underlying goal of the Department is to help students develop a greater awareness of the world as a whole, the specific area of concentration is on effective communication skills in the target language, that is, fluency. The traditional skills of listening, speaking, reading, and writing encourage students to understand and produce both spoken and written forms of the language, thus permitting them the means to communicate effectively with native speakers.

French I

French I is an introduction to the French language as well as francophone countries. French is spoken in class from the onset, enabling students to recognize as well as be comfortable with the language. Students develop skills in reading, writing, listening, and speaking. Over the course of the year, students are exposed to vocabulary and language structures to develop a basic ability to communicate in the language. They compose basic sentences and paragraphs communicating about themselves in French. Students also learn cultural aspects of France and other francophone countries. The goal of the course is to develop a strong foundation in the language and culture to build upon in future levels.

French II (Prerequisite: French I)

French II improves upon the foundation built in French I by adding more involved language structures and verb tenses as well as increasing the vocabulary base. French II students expand upon their basic knowledge of the language and culture, developing skills in reading, writing, listening, and speaking. This course is conducted principally in French, allowing students to increase their comfort with the language as well as gain the ability to commence thinking in the language. Students develop further knowledge concerning the cultural aspects of francophone countries and build a stronger foundation to increase their overall knowledge of the French language and the francophone world.

French III (Prerequisite: French II)

French III builds upon the foundations built in levels I and II, enhancing pronunciation skills, augmenting grammar skills, improving writing, and expanding general vocabulary. Students develop a greater understanding of the similarities and differences between French and American cultures, as well as build upon their knowledge of French history, all through the use of the French language. Pronunciation emphasizes the patterns of university-level French. Writing includes formal essays, journal entries, critiques, and short research papers in French. Vocabulary study includes words of everyday situations, groups of a topical nature, and words associated with the readings. In the spring semester students read *Le Petit Prince*. Students are encouraged to express their own thoughts in standard French.

French IV/AP French Language (Prerequisite: 85+ in French III)

French IV has a dual purpose in that it develops the student's overall proficiency in the French language with concentrations on literature, writing, and speaking while also preparing them to take the Advanced Placement Examination in French Language. Students read a variety of literature of the ages as well as contemporary works. Written work comprises textual analysis, essays, and a limited amount of creative writing. The class is conducted in French allowing students to further develop their pronunciation, vocabulary, and grammar skills. The second semester emphasizes the development of a familiarity with the AP exam format.

Advanced French V (Prerequisite: Competency in French and 85+ in French IV)

Initially, a student studies and learns traditional French explication de texte, that is, textual analysis. Emphases include the mastery of French terms associated with critique, structure, themes, the "life of words", originality, and a technique for examining the various literary genres (poetry, prose, and drama).

Latin I

Latin I introduces students to Latin vocabulary, sentence construction, grammatical rules, syntax and the richness of Roman culture. Students acquire beginning translation and construction skills for the written word, as well as learn

proper pronunciation and inflection for oral reading. This is a proficiency-based course, which provides active practice in listening, speaking, reading and writing in the Latin language. It is also enriched with numerous elements of the Roman civilization, including daily life, customs, architecture, and historical relevance.

Latin II (Prerequisite: Latin I)

Latin II builds upon the Latin I foundation and exposes the students to more complex linguistic structures. The addition of these elements allows the students to significantly broaden the depth of their reading and writing. This is a proficiency-based course, which provides active practice in listening, speaking, reading and writing in the Latin language. Students in this course are exposed to key events in Roman history and mythology through more in-depth readings, including adaptations of great Roman authors, as they continue their study of Roman civilization and culture.

Latin III (Prerequisite: Latin II)

Latin III is designed for the accomplished and self-motivated Latin student who is interested in solidifying his/her understanding of grammar from Latin I and II, and in gaining a broader translation experience in the language. Sample works from some of the great Roman writers are translated within a historical context, and continued emphasis is placed on cultural appreciation.

Latin IV (Prerequisite: 85+ in Latin III)

This course is designed for those students who have successfully completed three years or more of high school Latin with an average of 85 or higher. In some cases, admission to the course will also require permission of the instructor or a written test. The focus of this class will be an advanced study of original Roman texts and will include the writings of authors such as Cicero, Catullus and Ovid, among others. Students will learn to interpret and analyze original texts, with special attention given to stylistic devices, thematic elements and metrics. Students will explore the development of different literary genres and evaluate the contribution various authors have made to those genres. The works of the authors studied will also be considered in respect to their historic, social and literary context.

Latin V/AP Latin (Prerequisite: 85+ in Latin IV)

This course is designed for those students who have successfully completed four years or more of high school Latin with an average of 85 or higher. The focus of this class will be an advanced study of Virgil's Aeneid. Students will learn to interpret and analyze Latin poetry, with special attention given to metrics, stylistic devices and thematic elements. Students will explore the development of epic and evaluate the contribution various authors have made to this genre. The Aeneid will also be considered in respect to its historic, social and literary context. The course will follow the syllabus for the AP exam on Virgil. Those students who perform exceptionally well will be encouraged to take the AP Examination in May.

Spanish I

This beginning course is designed to help students develop oral and written communication skills in Spanish. It introduces students to Spanish vocabulary, grammar and syntax as well as the diverse cultures represented in Spanish-speaking countries. Students are expected to participate fully in class activities, and to complete nightly assignments and long-term projects. Students are assessed on class participation, and oral and written mastery of vocabulary and grammar.

Spanish II (Prerequisite: Spanish I)

In Spanish II, students continue to develop proficiency in oral and written communication skills in the target language. Grammar elements and vocabulary and tenses are recycled from Level I to provide a comprehensive review. At this level students extend their knowledge to work at a more advanced level of communication as well as expand their cultural knowledge of Spanish-speaking countries. Students are expected to use more complex sentence structure in their work and to read and understand longer, more involved selections in Spanish. Students in this level must have completed Spanish I successfully. At this level students are expected to arrive in class with nightly assignments complete, and to participate fully in the target language. Students are assessed on oral and written mastery of vocabulary and grammar.

Spanish III (Prerequisite: Spanish II)

In Spanish III, students continue to develop proficiency in oral and written communication skills in the target language. Students learn to use more precise vocabulary as well as a variety of verb tenses and structures in their work. There is a general review of topics and structures presented in the first two levels of Spanish; in addition students are expected to acquire the majority of tenses in Spanish and be able to use them correctly. Students read and understand authentic selections of Spanish authors and continue to expand their cultural knowledge base in addition to producing longer, more complex written and oral communications. Students are assessed on oral and written mastery of the material. Students in this level must have completed Spanish II successfully.

Spanish IV Honors/AP Spanish Language (Prerequisite: 85+ in Spanish III)

In Level IV Spanish, students continue to develop their proficiency in communicative competence. Students are expected to interact with other speakers of the language, understand oral and written communication in Spanish, and make oral and written presentations in Spanish. They are able to support opinions on a variety of topics related to contemporary and historical events and issues. Students comprehend spoken and written texts from a variety of authentic sources as well as produce compositions containing well developed ideas on various topics. Students use Spanish to access information in other subject areas and are able to compare and contrast cultural elements in Spanish speaking countries with each other and their own. In essence, students are expected to move beyond the memorization and isolated application of verb forms and vocabulary to more creative production and use of the language.

Additionally, many of the practice activities are presented in the same format as the AP Spanish Language Exam so that students may have the option of presenting this exam in the spring. Students who seek to pursue this class as an AP offering will be required to take an entrance exam and/or write an essay.

Spanish V/AP Spanish Literature (Prerequisite: 85+ in Spanish IV)

This course is intended to be the equivalent of a college introduction to Spanish Literature course, covering selected works from the literatures of Spain and Spanish America. Additionally, the literary selections chosen for this course are compatible with those on the AP reading list in order to prepare students to successfully complete the Advanced Placement Literature exam through an analysis and appreciation of Spanish Literature. Students study works which cover a variety of genres: short stories, plays poetry and short novels. Their study of poetry includes analysis for style, technique, and content. Students also are presented with the historical, biographical and cultural factors that influenced these works. Furthermore, students are expected to engage with the literature in a personal and analytical way, developing critical thinking skills along with mastery of the language, especially as they develop their ability to write analytical essays. Students who seek to pursue this class as an AP offering will be required to take an entrance exam and/or write an essay.

English as a Second Language (ESL)

ESL at Miller School of Albemarle is a support program intended to develop students' English proficiency while advancing their achievement in regular academic courses. After an initial assessment during the admissions process and a follow-up evaluation during orientation, students are placed by level.

ESL I

The focus in ESL I is on student improvement in the four areas of language acquisition: listening, speaking, reading, and writing. Students develop vocabulary acquisition skills in the study of morphemes, expand pronunciation skills through the analysis of sounds, syllables and phrases, as well as improve writing skills through a focus on grammar. Students explore and discuss aspects of American culture as well as share their respective cultures. Instruction includes assistance with assignments from the regular content courses as well as improving general study habits and test taking strategies.

ESL II

Students in ESL II further develop their listening, speaking, reading and writing skills through advanced, differentiated instruction and activities. Students improve their vocabulary acquisition skills through the study of morphemes and refine their pronunciation skills through the analysis of sounds, syllables and phrases. They also improve their writing abilities as they study ESL-specific grammar, paraphrasing and summarizing techniques, and the conventions of American academic writing. Instruction encompasses individualized assistance

with assignments from the regular content courses as well as a focus on improving study skills and self-monitoring techniques.

HISTORY

The History and Social Studies curriculum reinforces the development of academic skills through the analysis of the cultures and heritages that make up both the Miller School of Albemarle community and the world in general. The progressive development of note-taking from lecture and printed materials, analytic thinking and writing, and research skills is achieved through a core curriculum of four classes: Ancient and Medieval History, Modern European History, United States History, and American Government. While the curriculum emphasizes “western” history, the strong foundation in such knowledge enables students a basis from which to compare other cultures and heritages. Students from non-western countries make presentations related to their own cultures and heritages during the school year.

Humanities 9 (Ancient History)

Ancient History is the first half of a two-year course of study. In this course students examine the events, cultures, ideas, and personalities which shaped world development and, subsequently, laid the foundation for our contemporary world. The course emphasizes the “roots” and development of Western Civilization. However, because the western world did not develop in isolation we spend a good deal of time exploring non-western cultures and traditions. As a class, we develop an awareness of world history in our lives through the study of the lives of “regular” people and by continually linking these lives and events of the past with our world today. This course also addresses skills we need in everyday life.

Modern European History

Students learn how to understand and evaluate historical information, to improve basic research skills, to write analytical essays and research papers and make formal presentations. The interaction between the forces that comprise history, such as the drive for individual freedom, culture, religion, economics, politics and technology are considered as the factors that define eras of history. Lessons derived from that analysis are applied to current and future events. The course is Euro-centric, but includes interaction with American and Asian cultures and the migration of ideas and ideals throughout the world. The period covered runs from the late Middle Ages through Korea, Vietnam, Detente, and the onset of the global religiously justified terrorist movement in the current century.

AP European History (Requires Instructor Approval)

AP European History is an extremely rigorous college-level course offered to sophomores, juniors, and seniors contingent upon approval by the instructor. In addition to providing a basic narrative of events and movements, the goals of the

Advanced Placement Program in European History are to develop (a) an understanding of the principal themes in modern European history, (b) an ability to analyze historical evidence, and (c) an ability to express historical understanding in writing.

United States History

The U. S. History course is a survey of American history from pre-colonial exploration to the present. The course looks at America's past from a number of historical perspectives, including political history, social history, economic history, intellectual history, and the history of popular culture and the arts. Students in this course are encouraged to act as historians would --- collecting, connecting, and interpreting information in attempts to answer the difficult questions of history. In addition to a textbook this course draws upon a wide range of both primary and secondary source material, and students do significant reading and writing. The goals of the course are threefold: 1) to educate students about American history; 2) to foster critical thinking; 3) to encourage specific skills, including note taking, organization, research, test preparation and academic writing.

AP United States History (Requires Instructor Approval)

The purpose of AP United States History is to provide students with the analytic skills and factual knowledge necessary to deal critically with the problems and materials in United States history. The class prepares students for intermediate and advanced college courses by helping them learn how to assess historical materials - their relevance to a given interpretive problem, their reliability, and their importance – and to weigh the evidence and interpretations presented in historical scholarship.

American Government

This senior-level class reviews the formation of the federal government in the United States as well as state and local governments. Particular emphasis is placed on helping students to understand the mechanisms of government and the role they play in guiding our nation. Course content and skills are assessed through a wide range of measures including tests with objective as well as analytical responses, simulations, research or position papers, and class presentations.

AP United States Government and Politics (Requires Instructor Approval)

The course in AP United States Government and Politics is a topical study which begins with various modern economic and political systems, and proceeds through those subjects which are emphasized by the College Board's United States Government and Politics Advanced Placement Test. The goal is to produce future members of the "informed public" and, thus, in our own small way, help contribute to the future viability of our American democracy. The theme of the course is the following: there are both privileges and responsibilities involved with holding American citizenship. There is a direct relationship between the

knowledge and understanding one has of the American political and economic system, and the contributions one makes to society.

Economics I (Elective) (This course is limited to 11th & 12th –graders)

This course introduces economic theory through the fundamental principles of macroeconomics as well as the economic challenges that confront our world daily. Learning the function of and how to invest in the Stock Market is an interesting part of the course for students.

AP Macroeconomics (Elective) (Prerequisite: Economics I/Requires Instructor Approval)

This course continues the study of Macroeconomics by applying the theories and concepts mastered in Economics I to current events. This course requires students to stay attuned with current economic situations and statistics and use this dynamic information to assess situations. A portion of this course will be project based, as well as traditional classroom discussion.

MATHEMATICS

The Mathematics Department provides a curriculum to help students develop the knowledge and skills for entrance into and success in college as well as an awareness, which enables them to apply mathematical principles in other academic disciplines. Students begin by establishing a solid base in algebra and geometry, emphasizing logical reasoning, problem solving, the interpretation of data, functions, and the use of computers and calculators.

Algebra I (Prerequisite: Pre-Algebra)

This course serves as the first in the sequence of college preparatory mathematics. Concepts are introduced in the context of real-world problems in order to increase the conceptual development of the student. This course covers graphs in the coordinate plane, linear equations and inequalities, radicals, polynomials, quadratics, and data analysis. The concept of functions is emphasized using graphical, verbal, numerical, and algebraic methods.

Geometry (Prerequisite: Algebra I)

This class emphasizes two- and three-dimensional reasoning skills, coordinate and transformational geometry, and the use of geometric models to solve problems. Concepts are introduced in the context of real-world problems in order to increase the conceptual development of the student. A variety of application problems and problem-solving skills are included. This course covers properties of geometric figures, definitions, informal proofs, trigonometric relationships, logic, and justification techniques.

Algebra II (Prerequisite: Geometry)

This is the first course in a two-year series for the study of Algebra II and Trigonometry. It is designed to move at a slower pace than Algebra II and

Trigonometry in order to give the student a strong connection between algebraic, numerical, verbal, and graphical representations of functions. It includes a review of basic algebra skills at the start of this course. A thorough study of advanced algebraic topics is done based on the study of functions, parent functions and their families, equations, inequalities, systems, quadratics, radicals, exponents, and logarithms. Emphasis is placed on applications and word problems. A graphing calculator is required for this course.

Algebra II with Trigonometry (Prerequisite: Geometry)

Algebra II and Trigonometry is designed for advanced students who are capable of a more rigorous course at an accelerated pace. This course provides the foundation for students to pursue a sequence of advanced mathematical studies from Pre-calculus to AP Calculus. Students learn an integrated approach to technology and the skills required to manipulate, display, and interpret mathematical functions and formulae used in problem solving. Topics include simplification of algebraic expressions, evaluation of functions, solving algebraic, linear, exponential, power, radical, logarithmic, and trigonometric equations. A variety of technology is used to enhance the student's learning and visualization of functions and their properties. Upon completion, students should be able to demonstrate an understanding of the use of mathematics and technology to solve problems and analyze and communicate these results. A graphing calculator is required for this course.

Pre-Calculus (Prerequisite: Algebra II/Trigonometry)

In this course students study functions introduced through their applications. An emphasis is the use of elementary functions to investigate and analyze applied problems and questions, supported by the use of appropriate technology and the effective communication of quantitative concepts and results. The goals in this course are to learn not only how to manipulate functions and formulae, but also to understand the concepts involved. Such understanding is best gained from the combined viewpoints of geometry, algebra, logic, and numerical experiment. This course emphasizes the development of visual, numerical and logical intuition to complement the usual algebraic intuition. A graphing calculator is required for this course.

Algebra III (Prerequisite: Algebra II)

This is the second course in a two-year series for the study of Algebra II and Trigonometry. It is a continuation of the textbook from Algebra II. There is a basic review of Algebra II topics at the start of this course. Students continue with a study of polynomial functions, rational functions, exponential functions, and trigonometric functions. Emphasis is placed on applications and multiple representations of functions. A graphing calculator is required for this course.

Calculus (Prerequisite: Pre-Calculus)

Standard Calculus is designed to be taught with the intention of learning the basic topics of Calculus without following the college level rigor and intensity of

Advanced Placement Calculus. Generally, the first semester is devoted to differential calculus while the second semester teaches integral calculus. The primary aim of this class is to develop the student's understanding of the concepts of calculus and provide experience with its methods and applications. Since there is no AP test to prepare for, this course will be able to spend more time with these topics, completing more hands on labs to help reinforce the methods and applications covered. A graphing calculator is required for this course and successful completion of Pre-Calculus is required.

AP Calculus AB (Prerequisite: Pre-calculus/Requires Instructor Approval)

AP Calculus AB is designed to be taught with the intention that the student will earn college credit or placement. This course follows the requirements set out by the College Board. Generally, the first semester is devoted to differential calculus while the second semester teaches integral calculus. The primary aim of this class is to develop the student's understanding of the concepts of calculus and provide experience with its methods and applications. A graphing calculator is required for this course.

Statistics (Prerequisite: Algebra II/Trig or Algebra III/Requires Instructor Approval)

Statistics covers methods of data gathering, representation, analysis, and inference. Significant time is dedicated to design, administer, and tabulate results from surveys and experiments. Topics include correlation and regression, probability, binomial and normal distributions, and hypothesis testing.

AP Statistics (Prerequisite: Algebra II/Trig/Requires Instructor Approval)

AP Statistics is a year-long high school equivalent of a one semester, introductory college statistics course. In this course, students develop strategies for gathering, representing, analyzing, and drawing conclusions from data. Students design, administer, and tabulate results from surveys and experiments. Probability and simulations aid students in constructing models for chance phenomena. Sampling distributions provide the logical structure for confidence intervals and hypothesis tests. Committed successful students are prepared to take the AP Statistics exam in May.

Math for Economics

This course is designed to give the student a comprehensive foundation in mathematical ideas. It reviews basic algebra skills as well as applications of those concepts. Students use critical thinking skills in problem solving to analyze mathematical models relevant to business situations. Topics include taxes, investments, payroll, loans, and statistics. Students learn to analyze data sets and develop mathematical techniques used in decision making in a diversity of disciplines. This course is designed to give students the basic intellectual tools and aptitudes they need to meet today's business challenges.

SCIENCE

The mission of the Science Department is to develop students' scientific literacy as well as to provide a sound foundation of knowledge and skills for those students who pursue the study of science in college. Course designs and instructional methodologies are aimed at increasing the students' awareness of science as a process of discovery as well as a body of knowledge about the natural world. Emphases are placed on developing students' understanding of the presence of natural processes in daily occurrences and the importance of basic science knowledge and problem-solving abilities as essential parts of the skills and mindsets of educated people.

Physical Science (Must Have Had or Be Taking Algebra I)

This course uses an integrated approach as a foundation for upper level science classes and is designed to introduce basic physics and chemistry concepts using a minimum of math (Algebra I level) while emphasizing laboratory and project experiences that use examples and situations drawn from everyday life.

Biology (Prerequisite: Physical Science)

This course develops students' understanding of life forms and processes. Specific topics covered include the scientific method and SI measurement, cell structure and function, DNA and genetics, the six kingdoms of life, and basic ecology. Important themes in the course are the nature of scientific inquiry, the relationship between structure and function in living things, and change and adaptation of life forms in their environments. Class discussions, homework exercises, and tests emphasize not only information recall, but also application of learned material. Laboratory assignments are an important part of the course and develop the students' skills in measurement, forming and testing hypotheses, observing and inferring, graphing and analyzing data, and drawing conclusions based on data. Projects involve both hands-on as well as library and online research, and they are designed to enhance students' ability to write carefully documented science papers.

Honors Biology (Prerequisite: Physical Science/Requires Instructor Approval)

This course covers the same topics as the general biology course, but it goes into more depth in several areas. While the requirements of the course are, generally, the same, labs and activities differ in being more quantitative and more complex, and they are more inquiry-oriented than simply illustrative of concepts.

Chemistry (Must Have Had or Be Taking Algebra II or Algebra II/Trig)

The course in chemistry explores the nature of matter on the atomic as well as macroscopic level. Students complete written assignments, labs, and mathematical problems as they seek an understanding of what things are made of and how these things can undergo different types of changes. Projects relating the theoretical to the "real world" or chemistry's practical applications are also completed. A graphing calculator is required.

Honors Chemistry (Must Have Had or Be Taking Algebra II/Trig/Requires Instructor Approval)

While exploring the same topics and employing the same text as the general chemistry course, Honors Chemistry covers more material in depth and demands more independent problem-solving. Students solve more complex mathematical problems and are required to synthesize ideas on their own. The lab exercises are more intensive and may require time out of class to be completed. A graphing calculator is required.

General Physics (Prerequisite: Chemistry and Must Have Had or Be Taking Algebra II/Trig or Algebra III)

This course uses a non-calculus based approach to cover the traditional concepts of physics and mathematical operations. Topics covered are mechanics, including Newton's laws, energy, momentum, and circular motion; wave phenomena, including sound and light; electricity and magnetism; and modern physics, including quantum theory and the theory of relativity. Frequent labs are employed so that students use scientific inquiry skills to develop a practical and mathematical understanding of each major concept.

Honors Physics (Must Have Had or Be Taking Pre-Calculus/Requires Instructor Approval)

Honors Physics has the same objectives and outline as regular Physics with additional emphasis on basic engineering precepts. There are also additional expectations which include a greater emphasis on the discovery approach, requiring students to apply a higher level reasoning skills to solve additional mathematical and conceptual problems in class, during labs, on homework assignments and on tests. Honors students also design and build a demonstration apparatus which is shared with the entire student body each spring.

AP Environmental Science (Prerequisite: Biology or Honors Biology and Chemistry/Requires Instructor Approval)

AP Environmental Science is an interdisciplinary course that aims to provide students with the scientific principles, concepts, and methodologies required to understand the interrelationships in the natural world and to identify and analyze environmental problems. Specific topics covered include: Earth's systems and cycles; ecological principles; the flow energy and biological productivity; sustaining living resources; water, atmospheric, soil, energy, and mineral resources; human population dynamics; and environment and society. Lab and field exercises, computer simulations, and other data analysis activities involve students in the practice of science. Independent research projects and class presentations are designed to develop students' skills in research, preparing carefully documented science papers, and effectively communicating their ideas. Emphasis is placed on perceptions and choices with regard to the world around us. Students enrolled in this course should expect to be assigned an average of one hour of homework each night. Students who complete this course should be

prepared for the AP Environmental Science Exam. **PLEASE NOTE: A QUALIFYING ASSIGNMENT IS REQUIRED PRIOR TO ENROLLING IN THIS COURSE.**

Human Anatomy and Physiology (Prerequisite: Chemistry and a grade of A or B in Biology)

This course presents a systematic approach to the study of the human body. Lecture presentation will begin with an introduction of anatomical terminology, the study of cells, tissues and then an overview of the body systems. Students will learn about the following systems: skeletal, muscular, integumentary, nervous, circulatory, respiratory, digestive, and urinary. Dissection of mammalian organs and a fetal pig will compliment course work. This course is designed for college preparation, especially for biology and health career majors. Be prepared to work hard and learn new words.

AP Biology (Prerequisites: Biology and Chemistry)

AP Biology is designed to be similar to an introductory level college course about the science of our living world. This class covers three main topics:

1) molecules and cells, 2) heredity and evolution, and 3) organisms and populations. For each of these topics, students will develop an in-depth understanding of how they work, their function in the world, and their impact on life and society. AP Biology has an extensive lab component, comprising about 25% of the class time. The lab work provides hands-on experience for understanding the material, develops good problem solving skills, promotes critical thinking, and applies each topic to everyday life situations. This course will help students develop a conceptual framework for modern biology and an appreciation of science as a process.

SPECIAL PROGRAMS

Study Skills

The Study Skills class is provided for qualified students. The class meets daily throughout the year, and the maximum class size is four students. This is an intensive, individualized approach to basic academic needs such as organization, time management, prioritization, goal setting, accountability, note taking, research writing, test preparation, and self-advocacy. Students receive a grade for this class as they do in any other class. There are also specific materials required. Admission to this class is not by simple request due to the limited class size. Space is granted on the basis of need, after the Admissions and Study Skills committees have reviewed documentation and spoken to parents and teachers. Students can also be admitted to the program during the course of the school year when referred by teachers, parents, or even self-referral, if the process of eligibility is satisfied. If a student is admitted to the Study Skills class, a list of strengths, weaknesses, and necessary accommodations for classroom and/or testing is given to all classroom teachers. A student typically spends one

school year in the Study Skills class and then has the ability to matriculate into the regular program without direct support. All students dismissed from the Study Skills program have an exit report given to the next year's teachers that list any accommodations that may best support continued success. There is a fee associated with this class that is in addition to the standard tuition.