



# Upper School Course Offerings 2020-2021

THE MONTGOMERY ACADEMY

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## English

### English I: Journey to the Self Grade 9 (Year Course)

What is the self and how do we know it? English I is an introductory course to higher-level reading and more sophisticated writing and thinking that invites students to take the ultimate journey: to quest after identity and personhood. Genre-based, the course will explore poetry, short story, novels, drama, nonfiction, and myth with examples from around the world, with special focus on American writers. Through close, active reading of these texts, students will encounter characters on the same odyssey of self discovery that every human being must take. Compositions will include both creative and analytical writing with heavy emphasis on close, active reading and interpretive writing; the writings' goal is for students to write their way to textual and cultural knowledge; aesthetic and critical appreciation of fine writing; self understanding; and wisdom. Collaborative and student driven, the course will often encourage students to choose their own reading texts and to work with one another in group discussions and projects, including Socratic seminars and literature circles. As part of the course's research component, students will examine literary time periods and movements as well as schools of criticism. Drawing together the student's study of literature and composition—and his or her awareness of identity and the self—the course will require a capstone paper/project in spring.

### English II: Ethics of Deciding Grade 10 (Year Course)

English II builds on the skills and knowledge students obtained in English I, both in content and thematic focus. Built upon the ideas of ethical decision making and moral responsibility, the 10th Grade course will ask students to reflect on major literary and philosophical ideas running through world literature. The goal in such an exploration of ideas is to foster greater student awareness of themselves, others, and the larger world of cultures and ideas, a world which demands a strong ethical sense and moral decision making. The class will be discussion based as students are encouraged to ponder their own thoughts and beliefs and then share those with their peers, always in the context of the course's readings. Those readings, occasionally determined by student choice, will be diverse and challenging and compositions personal and analytical/interpretive. Special attention will be given to the traditional analytical/interpretive essay as a mode of student reflection and greater moral awareness through literature and its ideas. In spring the course will require students to complete a research-based capstone paper/project which explores the nature of morality, responsibility, and personal decision making.

### English III: Crime and Punishment Grade 11 (Fall Semester):

During Fall Semester juniors will delve into a study of literary crime and punishment from all corners of the globe. This seminar course will ask students to contemplate moral actions and their consequences as well as the relationship between good and evil—and how society deals with these complex issues. For this seminar students will rely on their study of ethical decision making in English II. Readings will be challenging and engaging and often reflecting student interest and choice. Compositions will be both analytical/interpretive and personal/creative, providing students with a platform to pull together philosophical strands of English I, II, and III as each student continues learning, changing, and maturing.



**English III: Then and Now Grade 11 (Spring Semester):**

This junior seminar encourages students to find universal connections between literature of the past and literature of the present. By pairing archetypal myth and symbols and classic fables and tales with modern renderings and interpretations, the course offers students a vista into the past and its timeless ideas and truisms and invites students to connect these ideas and truths to their own contemporary experience. Often driven by student choice, the readings will be varied and challenging, providing students with a global perspective. Compositions will encourage students to think analytically, interpretively, and above all, creatively, as they continue searching for truths and ideas which will shape their moral sense and identity. Uniting both junior seminar courses, a capstone paper will ask students to think critically and reflectively, and with eloquence and sophistication, examine an idea/question central to their lives.

**AP Language and Composition: Grade 11 (Year Course)**

Advanced Placement English Language and Composition offers an intensive exploration of composition and the language successful authors rely on to achieve their purpose. Analysis as a mode of understanding and constructing meaning focuses on elements of form, style, rhetorical devices, and authorial purpose and choices. Students will examine works in many genres: nonfiction, fiction, and other diverse kinds of writing including speeches, memoirs, advertising, and political writing. Students will also embrace the glorious freedom of choosing many of the major works they will read. Ranging from rhetorical analysis to persuasive writing to personal and creative writing, compositions will enable students to hone their own writing style, pushing ever closer to confidence, eloquence, and unique voice and perspective. At several points during each semester students will “free write” on any topic, in any genre, and in any style they so choose. Their maintaining of a writer’s notebook—a clearinghouse for ideas and personal reflections—will be essential to that creative process. Prerequisites: The standards for admission include at least a 92 average first semester and a 92 average third quarter in English 10 and a meeting with the AP instructor to review course content and expectations prior to scheduling. To be considered for the class, students who do not meet the 92-average requirement for both first semester and third quarter may appeal by completing an appeals essay. Qualified appeals students, those who score adequately on the appeals essay and whom the English Department deems ready for the class’s advanced content, will be admitted as space in the class allows.

**English IV: Heroes and Sheroes Grade 12 (Fall Semester)**

Who is a hero? What is heroism? Some heroes are brawny and brave; others are sassy and scrappy. This course will examine heroes from legend, fiction and real life to determine what it is that causes a person and his or her deeds to seem extraordinary. Katniss Everdeen, Wonder Woman, Huck Finn and Oedipus are among the figures whose exploits students will study. Writings will be analytical, interpretive, and reflective, leading students to seek out the heroic in their worlds and themselves.

**English IV: American Dreaming Grade 12 (Spring Semester)**

America is a dream, many would say, an ideal land where anyone can succeed and be happy. This course will examine the ways that some of Americans’ fondest

dreams have been expressed. Among the works likely to be studied are fiction by Faulkner, Hurston and Fitzgerald and dramatic works such as *Hamilton*, *Hidden Figures* and *Flags of Our Fathers*. Other voices contributing to the chorus will be those of Cheryl Strayed, Walt Whitman, James Baldwin and Jessamyn Ward. Compositions will be both analytical and reflective, providing seniors a platform to showcase their growth and sophistication as young writers.

### AP Literature and Composition: Grade 12 (Year Course)

Ostensibly, the senior AP course focuses on preparing students for the AP exam in May. More important, however, is the course's rigorous emphasis on critical reading and thinking and on writing confidently and effectively. Focusing on literary criticism, thematic and genre studies, and literary interpretation, students will read widely and voraciously all year long. Composition assignments will demand that students engage deeply and creatively with the texts, demonstrating profound and creative insights and the ability to express them clearly, eloquently, and convincingly. Prerequisites: The standards for admission include at least an unweighted 87 average for AP 11 students and 92 for non-AP 11 students for both first semester and third quarter. Students who do not meet the grade requirement may still appeal by completing an appeals essay. Qualified appeals students, those who score adequately on the appeals essay and whom the English Department deems ready for the class's advanced content, will be admitted as space in the class allows.

### Independent Study: Verse World Grades 10-12 (Fall Semester)

Through close reading of individual poems and extended study of major poets, this independent study will guide students not only to appreciate the world's oldest word-based art form but to grow in their knowledge and ability to craft their own verse. Close one-on-one work between instructor and poet will occur during each class as the student's revising/editing skills sharpen and deepen. The course will also ask students to focus on all things poetic through research and special projects, culminating in the student's final "paper": a printed chapbook of his or her own original poetry.

### Independent Study: Mad Lit. Grades 10-12 (Spring Semester)

Insane (or are they???) characters predominate in literature. This independent study will focus on at least five novels—ranging from Bronte's *Jane Eyre* to Kesey's *One Flew Over the Cuckoo's Nest* to Lockhart's *We Were Liars*—in which characters suffer some sort of mental turmoil, which in turn often inflicts suffering on those around them. Of course one of the classic literary (and real-world) questions will dominate the study: What is madness and how do we define it?



## History

### Human Geography: Grade 9 (Year Course)

Human Geography is a year course that takes an in-depth look at the branch of geography dealing with how human activity affects or is influenced by the earth's surface. In this course, students will be introduced to the systematic study of patterns and processes that have shaped human understanding, use, and alteration of earth's surface. Students will learn to employ spatial concepts and landscape analysis to examine human socioeconomic organization and its environmental consequences while studying different cultures on a global scale and learning about the methods and tools geographers use in their research and application.

### AP Human Geography: Grade 9 (Year Course)

The AP Human Geography course is equivalent to an introductory college-level course in human geography. It is a year course that takes an in-depth look at the branch of geography dealing with how human activity affects or is influenced by the earth's surface. In this course, students will be introduced to the systematic study of patterns and processes that have shaped human understanding, use, and alteration of earth's surface. Students will learn to employ spatial concepts and landscape analysis to examine human socioeconomic organization and its environmental consequences while studying different cultures on a global scale and learning about the methods and tools geographers use in their research and application. This course will utilize a diverse teaching strategy that includes, but is not limited to, research papers, student projects, and student presentations. Requirement: Minimum average of 95 in eighth-grade history and completion of an academic assessment. Admission will depend on the outcome of the academic assessment and space available.

### The Modern World: Grade 10 (Year Course)

The Modern World introduces world history from the early modern era (1500) to the present. Topics include global exploration, cultural change, revolution, imperialism, ideologies, industrialization, nationalism, human rights, and globalization. Students will analyze primary and secondary sources and discuss interpretations of major events and problems in world civilizations, also considering how events of the past relate to the present.

### AP World History: Grade 10 (Year Course)

AP World History is a rigorous, college-level course designed to explore human history from 1200 C.E. to the present. We will emphasize the development of analytical and writing skills necessary for success on a collegiate level. To this end, the course devotes considerable time to the critical evaluation of primary and secondary sources, analysis of historiography (principles, theories, or methodology of scholarly historical research and presentation), and inquiry into global connections that have shaped our present world. A special emphasis will be given to preparation for the National AP Exam, including historical writing through essay and document-based questions (DBQ) as well as objective evaluations. Requirement: a minimum (weighted) average of 90 in Human Geography and English for the year immediately preceding AP World History.



### US History: Grade 11 (Year Course)

United States History is a survey of our nation's history from 1450 to the present through a comprehensive thematic approach. In the first semester, students will attempt to define American democracy, tackle issues of diversity and discrimination, and explore the tension between states' rights and federal power. In the second semester, students will investigate the role of government in business and the economy, the evolution of American foreign policy, and the tension between civil liberties and public safety. Throughout the year students will develop their research and writing skills for historical arguments while improving their critical thinking.

### AP US History: Grade 11 (Year Course)

AP United States History is a comprehensive survey of United States history from 1450 to the present designed to expand the students' understanding of the themes, events, and issues in our nation's history and to prepare students for the Advanced Placement Examination in United States History, which students take in the spring. During this intensive study of the American past, students explore our collective heritage as a means of understanding our role and place in history. The focus throughout is upon the significant events and ideas that have led to the development of a modern democratic society. In the process, students gain a comprehensive understanding of the nation's political, social, economic, and cultural development. They will also master skills necessary for successful college-level work: the ability to write effective essays, interpret primary and secondary sources, think critically, conduct research, and communicate their ideas with sophistication. Requirement: Minimum (weighted) average of 90 in AP World or Modern World History and English for the year immediately preceding AP U.S. History.



## AP Capstone Diploma Program

AP Capstone™ is a College Board program that equips students with the independent research, collaborative teamwork, and communication skills that are increasingly valued by colleges. AP Capstone comprises two AP courses—AP Seminar and AP Research—and is designed to complement and enhance the discipline-specific study in other AP courses.

Students who earn scores of 3 or higher in AP Seminar and AP Research and on four additional AP Exams of their choosing receive the AP Capstone Diploma™. Students who earn scores of 3 or higher in AP Seminar and AP Research but not on four additional AP Exams receive the AP Seminar and Research Certificate™.

### AP Capstone Seminar: Southern Culture Studies: Grades 11 and 12 (Year Course)

AP Seminar is a foundational course that engages students in cross-curricular conversations where they can explore the complexities of academic and real-world topics and issues by analyzing divergent perspectives. Using an inquiry framework, students practice reading and analyzing articles, research studies, and foundational, literary, and philosophical texts; listening to and viewing speeches, broadcasts, and personal accounts; and experiencing artistic works and performances. They synthesize information from multiple sources, develop their own perspectives in

written essays, and design and deliver oral and visual presentations, both individually and as a team. Ultimately, the course aims to equip students with the power to analyze and evaluate information with accuracy and precision so they can craft and communicate evidence-based arguments.

Our focus is the study of our own regional culture and the people who made and make us who we are. This begins as a historical reflection that engages directly with the life of the present. This theme allows research topics that explore challenges and opportunities as related to our lives in Montgomery. To qualify for the Capstone Diploma, members of the class of 2022 must enroll in Capstone Seminar as juniors and Capstone Research as seniors. Members of the classes of 2021 and 2022 can enroll in Capstone Seminar as seniors if they choose to pursue only that credit without the Capstone Diploma or Research Certificate. Requirement: Minimum weighted average of 90 in history for the year immediately preceding Capstone Seminar or teacher approval.

### AP Capstone Research, Grade 12 (Year course)

AP Research, the second course in the AP Capstone experience, allows students to deeply explore an academic topic, problem, issue, or idea of individual interest. Students design, plan, and implement a yearlong investigation to address a research question. Through this inquiry, they further the skills they acquired in the AP Seminar course by learning research methodology, employing ethical research practices, and accessing, analyzing, and synthesizing information. Students reflect on their skill development, document their processes, and curate the artifacts of their scholarly work through a process and reflection portfolio. The course culminates in an academic paper of 4,000–5,000 words (accompanied by a performance, exhibit, or product where applicable) and a presentation with an oral defense. Requirement: Completion of AP Capstone Seminar with a weighted 90 average and teacher approval.

### AP Psychology: Grade 12 (Year Course)

The AP Psychology course is designed to introduce students to the systematic and scientific study of the behavior and mental processes of human beings and other animals and to prepare students for the Advanced Placement Examination in Psychology that students will take in the spring. Students are exposed to the psychological facts, principles, and phenomena associated with each of the major subfields within psychology. Students will also learn about the ethics and methods psychologists use in their science and practice. Requirement: Minimum weighted average of 92 in history for the year immediately preceding AP Psychology or teacher approval.

### Introduction to Economics: Grades 11 and 12 (Fall Semester)

This course explores both theoretical and practical approaches to the study of economics. In order to prepare for college-level study, students learn some of the key theories of microeconomics, such as the laws of supply and demand and the effects of monopolies. Students also learn some key theories of macroeconomics, which include government budget policies, banking, and the money supply. In addition to theory, students explore the importance of personal finance and how investment in the stock market works utilizing business data and virtual stock trading through the



Alabama Stock Market Game, a real-time simulation of the market.

### **AP United States Government and Politics: Grades 11 and 12 (Spring Semester offered during 2020-21 school year)**

This college-level course gives students an analytical perspective on U.S. government and politics, including: the Constitution, Federalism, Public Participation, Public Opinion, Media, Interest Groups, Political Parties, Elections, Congress, Presidency, Judiciary, Bureaucracy, Policy Making, Economic Policy, Social Welfare, Environmental Policy, Civil Liberties, and Civil Rights. Requirement: Minimum weighted average of 90 in most recent history class or teacher approval.

### **AP Comparative Government & Politics: Grades 11 & 12 (Spring Semester offered during 2021-22 school year)**

This college-level course gives students an analytical perspective on comparative global governments and politics. An introduction to political theory precedes study of six different political systems, including structures of government, major political issues, and political culture in the United Kingdom, Russia, China, Mexico, Iran, Nigeria, and the European Union. This course is offered to both juniors and seniors for the 2019-2020 school year; it will not be offered for the 2021-22 school year. Requirement: Minimum weighted average of 90 in history for the year immediately preceding AP Government or teacher approval.



## Science

### Physics I: Grade 9 (Year Course)

Physics I is a conceptual-based study of classical mechanics, wave phenomena, electricity and magnetism, including laws of motions, forces, momentum, work, energy, rotational motion, electric charges, electric currents, circuits, magnetic fields and force. The course provides a critical understanding of general scientific principles, with an emphasis on the fundamental principles that govern the physical universe, including the principles underlying physical theories and processes of scientific discovery, and the nature of scientific evidence upon which contemporary physics theories are based. Students will apply physical principles and concepts to problems that affect their lives, in particular, and our society, in general. They will also analyze physical systems, solve problems, and answer questions using basic algebra and right triangle geometry. The course will allow students to clearly communicate fundamental knowledge particular to physics with their peers using appropriate vocabulary and demonstrate a thorough understanding of the basic principles of kinematics, Newtonian dynamics, energy, momentum, electric charge, fields, magnetism, and wave phenomena. Students will also develop a clear understanding of the scientific method and its application in all areas of problem solving.

### Physics I Honors: Grade 9 (Year Course)

Physics I Honors is an algebraic, geometric, and basic trigonometric based study of classical mechanics, wave phenomena, electricity and magnetism, including laws of motions, forces, momentum, work, energy, rotational motion, electric charges, electric currents, circuits, magnetic fields and force. The course has an emphasis on applying the physical laws to problem solving physical situations. Homework problem sets will be challenging and will use mathematics appropriate to physics and perform calculations appropriate to the task. In addition, students will apply physical principles and concepts to problems that affect their lives, in particular, and our society, in general. The course will allow students to clearly communicate fundamental knowledge particular to physics with their peers using appropriate vocabulary and demonstrate a thorough understanding of the basic principles of kinematics, Newtonian dynamics, energy, momentum, electric charge, fields, magnetism, and wave phenomena. Students will also develop a clear understanding of the scientific method and its application in all areas of problem solving. Placement prerequisite: An average of 90 or higher in Algebra I (or Pre-Algebra) and in Physical Science.

### Chemistry: Grade 10 (Year Course)

Chemistry is an extensive study of the composition and properties of matter. This introductory course is designed to provide a strong background in conceptual chemistry with an emphasis on mathematical application. Some of the topics covered in this course include: the Metric System, Types of Chemical Reactions, Balancing Equations, the Law of Conservation of Mass, Thermochemistry, Stoichiometry, Quantum Mechanics, and Lewis Structures. Laboratory experiments are conducted regularly to provide students with practical applications for the concepts covered.



### Chemistry Honors: Grade 10 (Year Course)

Honors Chemistry is similar to Chemistry in that it is an extensive study of the composition and properties of matter. This course differs from the Chemistry course primarily in its depth of coverage, but also differs in its pace so that additional topics will be studied. A greater depth of conceptual understanding is also required in order to solve more difficult problems. Some of the topics covered in this course include: the Metric System, Types of Chemical Reactions, Balancing Equations, the Law of Conservation of Mass, Thermochemistry, Stoichiometry, Quantum Mechanics, Lewis Structures, the gas laws, solution preparation, and acids and bases. Laboratory experiments are conducted regularly to provide students with practical applications for the concepts covered. Some of the laboratory experiments are more complex in nature than those in the Chemistry course. Placement prerequisite: An average of 90 or higher in Geometry or placement in higher-level mathematics course.

### Essentials of Physics: Grade 11 (Year Course)

Essentials of Physics is a study of the basic topics of physics, including the metric system and selected topics from the areas of mechanics, waves and electricity. Although an emphasis is placed on a conceptual understanding of physics, the course encourages a quantitative approach to the study of science through the application of basic laws of physics in mathematical form. Laboratory experiments are an integral part of instruction and emphasize observation and careful measurement techniques as well as the plotting and interpretation of graphs.

### Physics: Grade 11 (Year Course)

Physics is an algebra-based course in which students cultivate their understanding of physical concepts through inquiry-based investigations as they explore the topics of kinematics, dynamics, circular motion and gravitation, momentum, energy, and simple harmonic motion. Mastery of these concepts is tested through qualitative questioning and numerical problem solving. Placement prerequisite: An average of 90 or higher in Algebra II or placement in a higher-level mathematics course.

### AP Physics 1: Grade 11 (Year Course)

AP Physics 1 is an algebra-based, introductory college-level course that includes a qualitative and quantitative approach to physics. It explores topics which include Newtonian mechanics (including rotational motion); work, energy, and power; mechanical waves and sound; and introductory, simple circuits. Through inquiry-based learning, students will develop scientific critical thinking reasoning skills. This course requires that 25% of the instructional time be spent on in hands-on laboratory work, with an emphasis on inquiry-based investigations that provide students with opportunities to apply the science practices. Placement prerequisite: An average of 90 or higher in Chemistry, and placement in Honor PreCalculus or in a higher-level mathematics course.

### Anatomy and Physiology I: Grades 11 & 12 (Fall Semester/Year Course)

### Anatomy and Physiology II: Grades 11 & 12 (Spring Semester/Year Course)



This class emphasizes the complementary nature of structure and function, homeostasis and its regulating mechanisms, and basic human metabolic processes. Students in this course will develop a deeper understanding and appreciation of the human body through a variety of methods: class discussion, case studies, lectures, videos, dissections, and other laboratory exercises. While the main focus of this course is the normal function of the human body, various medical applications and pathological conditions will also be explored. This course is designed to be a yearlong class, but it may be taken for only one semester. The course content is scheduled as follows:

- Anatomy I: anatomical terminology, body tissues, integumentary, skeletal, muscular, nervous systems, and the special senses
- Anatomy II: endocrine, blood, cardiovascular, immune, respiratory, digestive, urinary, and reproductive systems

Prerequisite: Biology

### **Astronomy: Grades 10, 11 & 12 (Fall or Spring Semester)**

This course is an introduction to modern astronomy examining the basic physical processes in stars and the evolution of stars. The nature and production of white dwarfs, neutron stars, and black holes will be covered. An introduction to the properties of galaxies and star formation in galaxies as well as the chemical composition of galaxies and stars will be introduced. Some field trips will be a part of this course since it will not be a traditional lab science.

### **Environmental Science: Grades 11 & 12 (Fall Semester)**

Environmental Science is an interdisciplinary course embracing topics from geology, biology, environmental studies, chemistry, and geography. Environmental Science is designed to increase understanding of the interrelationships in the natural world, to identify and analyze environmental problems both natural and man-made, to evaluate the risks associated with these problems, and to examine solutions for resolving and preventing them. Some topics covered are ecology; conservation; human populations and resource utilization; environmental quality of the atmosphere, soil, and water; earth systems; the circulation of energy and materials; environmental decision-making and tradeoffs. Hands on activities, videos, case studies, lecture, discussion, and labs will enhance student content knowledge and cultivate scientific critical thinking skills. Prerequisites: Biology and Chemistry

### **Organic Chemistry: Grades 11 & 12 (Fall or Spring)**

Carbon creates covalent bonds with itself and with other elements to form a myriad of different structures. In organic chemistry, students will explore reactions that chemists use to synthesize carbon-based structures. They will also learn how to name and classify compounds based on functional groups and how to predict behaviors of organic molecules. Organic chemistry is crucial in fields such as medicinal chemistry, biochemistry and polymer chemistry. Organic chemistry is like constructing amazing structures with molecular Legos. Let's have fun building together! Placement prerequisite: An average of 80 or higher in Chemistry.

### **Physics II: Grade 12 (Year course)**

Physics is an algebra-based course in which students cultivate their understanding of physical concepts through inquiry-based investigations as they explore the topics



of fluid statics and dynamics, thermodynamics, electrostatics, electrical circuits, magnetic fields, and electromagnetism, and geometric optics. Mastery of these concepts is tested through qualitative questioning and numerical problem solving. Placement prerequisite: An average of 85 or higher in Physics.

### **AP Environmental Science: Grades 11 & 12 (Year Course)**

AP Environmental Science is the equivalent of a one-semester, introductory college course in environmental science, through which students engage with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world. The course requires that students identify and analyze both natural and human-made environmental problems, evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving or preventing them. Environmental science is interdisciplinary, embracing topics from geology, biology, environmental studies, environmental science, chemistry, and geography. This course includes a strong laboratory and field investigation component. Students will perform experiments and analyses involving the study of air, water, and soil qualities as an essential core for the lab/field investigation activities. Placement prerequisite: An average of 90 or higher in Chemistry

### **Research in Chemistry: Grade 12 (Spring Semester)**

In this course, ambitious students dive into the research process. The purpose of this course is to advance students' understanding and research experience and to provide them with a foundation for future undergraduate research endeavors. They learn how to analyze and critique research literature; perform bibliographic research to inform rationales, hypothesis, and scientific questioning; collaborate with content area experts; create a competitive research proposal; apply the scientific principles and processes to conduct experimental laboratory research; and communicate their discoveries professionally through a variety of platforms. This course will encourage the students to actively process information, make chemistry connections across disciplines, engage in metacognition and reflective thinking, grapple with personally meaningful problems and justify their thoughts. Placement prerequisite: An average of 90 or higher in Biology and Chemistry.

### **AP Biology: Grade 12 (Year Course)**

AP Biology provides students with the conceptual framework, factual knowledge and analytical skills necessary to deal critically with this rapidly changing field of study. The synthesis of basic biological facts into major concepts and themes is stressed throughout the course. Topics include biochemistry, cellular biology, heredity, molecular biology, evolution, botany, anatomy, and ecology. Placement prerequisite: An average of 90 or higher in Biology and Chemistry.

### **AP Chemistry: Grade 12 (Year Course)**

AP Chemistry is designed to bring all the aspects of chemistry—thermochemistry, chemical kinetics, electrochemistry, acid-base chemistry, and descriptive chemistry—together through a conceptual understanding of the underlying nature of chemical structure. Because reasoning is essential for the advanced chemist, application of these principles is stressed in this course through independent critical thinking, mathematical problem solving, and advanced laboratory skills. Placement prerequisite: An average of 90 or higher in Chemistry and an average of 90 or higher in PreCalculus or a higher-level mathematics course



## Mathematics

### Algebra I: Grade 9 (Year Course)

Algebra I explores linear equations and inequalities, systems of linear equations, exponential, rational, and quadratic functions graphically, numerically, and symbolically. In addition, operations of polynomials, radicals, and rational expressions are studied. Included are the properties of exponents. Problem solving and applications encourage students to model patterns and relationships with variables and functions using algebraic symbols.

### Geometry: Grades 9 & 10 (Year Course)

Geometry emphasizes visualizing and understanding Euclidean geometric properties and mathematical relationships, making and verifying conjectures, and establishing connections between geometric and algebraic properties. After an introduction to logic and reasoning, students develop a thorough foundation in proof writing using theorems and postulates. Students apply their proving and problem solving skills to the concepts of measurement, congruence, proportionality, and similarity. Exploration of geometric properties is completed with a study of right triangle trigonometry, properties of circles, and an introduction to measurement of two and three-dimensional shapes. Placement Prerequisite: Successful completion of Algebra I as determined by the math department.

### Algebra II: Grades 9, 10 & 11 (Year Course)

Algebra II covers the real and complex numbers emphasizing the development, understanding, and practical applications of algebraic expressions, equations, relations, functions, and inequalities. Focus is placed on the graphical, numerical, and algebraic analysis of algebraic and transcendental functions, including a unit on trigonometry. Geometry concepts are integrated into the course. In addition, the course includes an introduction to conics and matrices.

### Algebra II Honors: Grades 9, 10 & 11 (Year Course)

Algebra II Honors incorporates challenging problems that are at the mastery level. The course covers the real and complex numbers emphasizing the development, understanding, and practical applications of algebraic expressions, equations, relations, functions, and inequalities. Focus is placed on the graphical, numerical, and algebraic analysis of algebraic and transcendental functions, including a unit on trigonometry. Geometry concepts are integrated into the course. In addition, the course includes an introduction to linear programming, conics, and matrices. The course moves at a fast pace to allow for exploration of these topics in greater depth. Placement prerequisite: A grade of 92 or higher in Algebra I and Geometry, the Algebra I and Geometry teachers' recommendations, and the score on the placement test.

### Algebra III: Grades 11 & 12 (Year Course)

Algebra III provides a further study of advanced algebraic concepts including equations and inequalities, graphical analysis of algebraic and transcendental functions, trigonometry concepts, and probability and statistics. Placement prerequisite: teacher recommendation.



**PreCalculus: Grades 10, 11 & 12 (Year Course)**

PreCalculus begins with a thorough review and extension of the graphical analysis of algebraic and transcendental functions. Intensive focus is placed on trigonometric and circular functions, including solving triangles, transformations on graphs of trigonometric functions, inverse trigonometric functions, verifying and applying trigonometric identities, and solving trigonometric equations. Additional topics covered include complex numbers, conics, and parametric and polar functions.

**PreCalculus Honors: Grades 10, 11 & 12 (Year Course)**

PreCalculus Honors, designed for students with very strong mathematical ability, covers the properties, the algebra, the language, and the graphs of algebraic and transcendental functions. Intensive focus is placed on trigonometric and circular functions, including solving triangles, transformations on graphs of trigonometric functions, inverse trigonometric functions, verifying and applying trigonometric identities, and solving trigonometric equations. Additional topics covered include complex numbers, conics, and parametric and polar functions. The course moves at a fast pace to allow for exploration of these topics in greater depth. Placement prerequisite: A grade of 92 or higher in Algebra II or an 87 or higher in Algebra II Honors, and the Algebra II teacher's recommendation.

**Statistics: Grade 12 (Year Course)**

Statistics introduces students to the major concepts and tools for collecting, organizing, analyzing, and drawing conclusions from data. Students learn basic statistical vocabulary and techniques using formulae and functions in spreadsheets to systematically solve common statistics problems. This is an introductory statistics course for seniors.

**AP Statistics: Grade 12 (Year Course)**

AP Statistics is an introductory college-level statistics course that introduces students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students cultivate their understanding of statistics using technology, investigations, problem solving, and writing as they explore concepts like variation and distribution; patterns and uncertainty; and data-based predictions, decisions, and conclusions. This is a senior level course.

**Historical Mathematical I: Grade 12 (Fall Semester)**

The study of historical mathematics is intended to introduce students to historically important mathematical ideas, the personalities and forces that shaped mathematical development, and the impact that mathematics has had on the world. Topics for Historical Mathematics I include: early number systems, base systems, alternative arithmetic algorithms, rational and irrational numbers, figurative numbers (triangular, square, etc.), proofs of the Pythagorean theorem, geometric construction, early number theory, primality, and Diophantine equations. Students' interests will also be taken into account in the selection of topics. Pre-requisite: 83 or higher in Pre-calculus. This is a senior level course.

**Historical Mathematical II: Grade 12 (Spring Semester)**

The study of historical mathematics is intended to introduce students to historically important mathematical ideas, the personalities and forces that shaped mathematical



development, and the impact that mathematics has had on the world. Topics for Historical Mathematics II include: the Fibonacci sequence, Napier's bones, analytic geometry, Pascal's triangle, probability, Renaissance number theory, modular arithmetic, and complex numbers. Students' interests will also be taken into account in the selection of topics. Pre-requisite: 83 or higher in Pre-calculus. This is a senior level course.

### Calculus: Grades 11 & 12 (Year Course)

Calculus is a survey of basic differentiation and integration of algebraic and transcendental functions and respective applications by utilizing previously learned mathematics to develop new concepts. The course emphasizes a multi-representational approach to Calculus, with concepts, results, and problems being expressed graphically, numerically, analytically, and verbally. The course covers limits, derivatives, integrals, approximation, and applications and modeling using properties, algebra, and graphs of elementary functions to develop the concepts. These functions include linear, polynomial, rational, exponential, logarithmic, trigonometric, inverse trigonometric, and piece-wise. Placement prerequisite: Pre-calculus

### AP Calculus AB: Grades 11 & 12 (Year Course)

AP Calculus AB emphasizes a multi-representational approach to Calculus, with concepts, results, and problems being expressed graphically, numerically, analytically, and verbally. The themes of AP Calculus AB, limits, derivatives, integrals, approximation, and applications and modeling, are developed using properties, algebra, and graphs of elementary functions. Placement prerequisite: Strong foundation in Algebra, Geometry, and Pre-calculus and a grade of 92 or higher in Pre-calculus or an 87 or higher in Pre-calculus Honors, and the AP Calculus teacher's approval.

### AP Calculus BC: Grade 12 (Year Course)

AP Calculus BC covers the differential and integral Calculus of single variable functions and includes extended applications to parametric, polar, and vector-valued functions as well as units on sequences and series, numerical solutions to differential equations, indeterminate form limits and improper integrals. Placement prerequisite: AP Calculus AB and 4 or 5 on the AP Calculus AB exam.



## World Language

### French

#### French I: Grades 9 or 10 & 12 (Year Course)

French I serves as an introduction to the French language and culture through the four essential skills of language learning: listening, speaking, reading and writing. Activities in class focus on these skills as students build vocabulary and learn basic grammatical structures. We will practice reading comprehension through short readings in various mediums including but not limited to newspaper articles, songs, editorials and much more! Written activities to expand vocabulary and practice new structures using these various forms will assist in daily practice. Students will spend a considerable amount of time using French in a communicative setting through various oral activities and with the use of authentic resources that will emphasize practical usage of the French language. We will also begin an exploration of French and Francophone culture around the world to further emphasize the important role the French language plays in contemporary global societies. My goal for French I students is to reach a middle to high novice level in all four skills while gaining a deeper appreciation and understanding of the importance of learning a second language. Diverse activities both inside and outside of class will compliment our exploration of other cultures as well as assist in building confidence communicating in the target language. Bienvenue à la classe française !

#### French II: Grades 9, 10, or 11 (Year Course)

French II is a continuation of the structures studied in French I with a continued emphasis on the four skills of language learning: listening, reading, writing, and speaking. In French II we will continue to perfect our communicative abilities in the target language as well as explore cultural components of this diverse language. My goal for all students in French II is to reach low to middle intermediate proficiency in all four skills as well as a deeper understanding of the important roles French plays in our global community. Students will build skills to interact more confidently in the target language and explore a variety of tenses in the past, present, and future. Students will learn a large amount of vocabulary included but not limited to: academic life, family and friends, hobbies and extracurricular activities, vacations, and much more! Communication will take place in all covered verb tenses about relevant cultural topics in the French and Francophone world. A variety of assignments and projects will be given throughout the year and students will leave their comfort zones in order to gain confidence communicating in the target language through these activities and daily classroom participation. French is not a spectator sport! In order to succeed, students must take risks and actively engage themselves in every class period. French II is an extremely challenging level. Students will be exposed to large amounts of grammar and vocabulary, among other topics. Students are expected to maintain a strong work ethic and devote appropriate time towards homework, class assignments and projects, as well as daily participation and engagement. Personal organization and strong study skills are mandatory.



### French III: Grades 10, 11, or 12 (Year Course)

French III students will review concepts studied in French II as well as build on these structures to explore more advanced concepts including, but not limited to, grammar and culture. We will use a variety of resources including film and music to experience authentic use of the French language and explore the French and Francophone world, as well as build proficiencies in reading, writing, speaking, and listening skills in the target language. French III students will narrate and describe events in the present, past, and future tenses and will practice skills to help maintain conversations in French with native speakers. Students will also explore current event issues, pop culture, story telling, and many other diverse mediums relating to France and the Francophone world. A variety of assignments and projects will be assigned to compliment these mediums that will allow students to continually improve upon their understanding and knowledge of the target language and cultures. My goal for all of you is to reach a low intermediate to high-intermediate level of French proficiency, including a greater appreciation and understanding of the diverse cultures included in this language.

### French IV: Grades 11 or 12 (Year Course)

French IV students will explore various themes to help nourish higher-level conversational skills in the target language. As a class, we will review previously studied grammar topics but students will move away from a perfection-based outlook of the target language and instead shift towards fluidity of the French language to express ideas, opinions, and other topics. Films, literature, current events, and other mediums will help students open up dialogues to enrich the classroom dynamic and improve communication and understanding of the French language and the diverse cultures that share French as a common language. Reading, writing, listening, and speaking competencies of all students will be explored and challenged and students will be expected to communicate in and remain in the target language for the duration of each class period. The art of conversation will certainly be at the forefront of this course and students will be encouraged to share their experiences to enrich conversations and dialogues with classmates and the teacher. My goal for all French IV students is to reach an advanced level of communication in the target language that allows students to speak confidently, knowing they can successfully convey and exchange ideas and opinions with native speakers on a wide variety of topics.

### AP French Language & Culture: Grade 12 (Year Course)

The AP French Language and Culture course emphasizes communication (understanding and being understood by others) by applying interpersonal, interpretive, and presentational skills in real-life situations. This includes vocabulary usage, language control, communication strategies, and cultural awareness. The AP French Language and Culture course strives not to overemphasize grammatical accuracy at the expense of communication. To best facilitate the study of language and culture, the course is taught almost exclusively in French. The AP French Language and Culture course engages students in an exploration of culture in both contemporary and historical contexts. The course develops students' awareness and appreciation of cultural products (e.g., tools, books, music, laws, conventions, institutions); practices (patterns of social interactions within a culture); and



perspectives (values, attitudes, and assumptions).

## Latin

### Latin I: Grades 9, 10, & 12 (Year Course)

Latin I includes basic vocabulary with English derivatives, an introduction to grammar, the translation of beginning stories, and a study of Roman culture. Culture units include Roman myth, the house, and foods, with each unit relating Roman culture to modern culture. There are weekly quizzes, periodic tests with sections on vocabulary, grammar, and translation, and a project with each culture unit.

### Latin II: Grades 9, 10, & 11 (Year Course)

Latin II includes vocabulary, a review of Latin I grammar and the continuation of the study of grammar, the translation of more difficult material including an in depth analysis of Caesar's de Bello Gallico, and a study of Roman history, with some of the Romans' famous people and events, and culture. There are weekly quizzes, periodic tests, student presentations, and occasional culture projects.

### Latin III: Grades 10, 11, & 12 (Year Course)

Latin III (Pliny / Catullus) emphasizes grammar review, a review of vocabulary and the translation of Pliny's letters and works by the elegiac poets, with a focus on Catullus. The course also includes translation of works by additional Roman authors, a study of the devices of rhetoric and syntax, and a study of Roman history and culture. There are regular tests, weekly quizzes, and occasional projects.

### Latin IV: Grades 10, 11, & 12 (Year Course)

(Ovid/Cicero/Sallust) emphasizes grammar review, review of vocabulary, the translation of Ovid's Metamorphoses history and various works by Cicero, including his First Oration Against Catiline. The course also includes translation of works by additional Roman authors, a study of the devices of rhetoric and syntax, and a study of Roman history and culture. There are regular tests, weekly quizzes, and occasional projects.

### AP Latin: Grades 11 & 12 (Year Course)

The AP Latin course focuses on the in-depth study of selections from two of the greatest works in Latin literature: Vergil's Aeneid and Caesar's Gallic War. The course requires students to prepare and translate the readings and place these texts in a meaningful context, which helps develop critical, historical, and literary sensitivities. Throughout the course, students consider themes in the context of ancient literature and bring these works to life through classroom discussions, debates, and presentations. Additional English readings from both of these works help place the Latin readings in a significant context.



## Spanish

### Spanish I: Grades 9, 10 & 12 (Year Course)

Upper School Spanish I program introduces the basic structures of spoken and written language with specific emphasis on communicative skills. Students will develop vocabulary, grammatical structures, reading comprehension and written and oral expression in Spanish through the integrated skills approach across three communicative modes: Interpersonal (interactive communication), Interpretive (receptive communication) and Presentational (productive communication). The instructor will use a series of computer-based technologies to expand and individualize basic textbook activities. Use of the Internet and select websites provided by adopted textbook will reinforce and broaden concepts learned in the classroom. Digital voice recording and technology-based projects are additional means of students' assessment. At this level, students examine Culture and Civilization of Spain and several Latin American countries with especial emphasis on art, music, history and literature.

### Spanish II: Grades 9, 10 & 11 (Year Course)

Spanish II strengthens the students' language skills, expanding oral and written expression. Level II bridges the introductory programs of Level I and intermediate Level III. Integrated activities will develop reading, writing, listening and speaking skills to foster students' proficiency across three communicative modes: Interpersonal (interactive communication), Interpretive (receptive communication) and Presentational (productive communication). Course highlights include the individual study approach using the latest web site technology as a broadening extension of currently adopted textbooks. Digital voice recording and technology-based projects allow multifaceted student assessment. Students increase their knowledge of the Spanish-speaking world Culture and Civilization with special emphasis on artistic, musical, literary and historical traditions.

### Spanish II Honors: Grades 9, 10 & 11 (Year Course)

This course bridges the basic Spanish I and intermediate Level Spanish III Honors. It is oriented to the students who performed at the top of their classes in Level I and are ready to accept an accelerated course of studies at Level II. Course content expands and refines the basic structures of spoken and written Spanish acquired previously. Integrated activities develop reading, writing, listening, and speaking skills to foster the students' proficiency across three communicative modes: Interpersonal (interactive communication), Interpretive (receptive communication) and Presentational (productive communication). The five major goals of foreign language learning: Communication, Cultures, Connections, Comparisons, and Communities anchor the development and expansion of all three communicative modes. Daily use of Spanish in the classroom helps develop students' interactive and productive communication. Digital voice recording and technology-based projects allow multifaceted student assessment.

### Spanish III: Grades 10, 11 & 12 (Year Course)

This course provides the intermediate level high school student with review and expansion of the structures of spoken and written Spanish learned in Levels I and



II. This course enhances students' command of the language, as well as deepens understanding of the Spanish-speaking peoples and their cultures. Daily exposure to Spanish in the classroom helps develop effective expression in the language. The four distinct areas of reading, writing, listening and speaking are integrated in different activities to foster the students' proficiency across three communicative modes: Interpersonal (interactive communication), Interpretive (receptive communication) and Presentational (productive communication). Students will personalize their understanding of written and auditory selections that contain more complex language concepts reinforcing culture, grammatical structures and vocabulary. They will also learn communicative strategies that allow them to function in real-life situations. Digital voice recording and technology-based projects allow multifaceted student assessment.

### Spanish III Honors: Grades 10, 11 & 12 (Year Course)

This course provides the intermediate level high school student with in-depth review and expansion of the structures of spoken and written Spanish. The primary purpose of this Level III section is to prepare students interested in pursuing Advanced Placement Language Spanish IV the following year. The four distinct areas of reading, writing, listening and speaking will be integrated in different activities to foster students' proficiency across three communicative modes: Interpersonal (interactive communication), Interpretive (receptive communication) and Presentational (productive communication). The five major goal areas of foreign language learning: Communication, Cultures, Connections, Comparisons and Communities anchor the development and expansion of all three communicative modes. Daily use of Spanish in the classroom will help develop the students' interactive and productive communication. At this level, strong verb conjugation, grammatical structure mastery, pronunciation refinement, and vocabulary expansion strengthen all three modes of communication. Digital voice recording and technology-based projects allow multifaceted student assessment.

### Spanish IV: Grades 11 & 12 (Year Course)

This course is intended to continue the development of the student's language skills with particular emphasis on providing communicative strategies for real life situations. Development of the four skills (reading, writing, listening and speaking) will expand at a higher performance level. The reading selections at this level stress the cultures and the current demographics of the Spanish-speaking world. Advertisement, magazine and news articles as well as commentaries are the preferred formats for the reading selections. The students will demonstrate an understanding of the material studied through speaking, writing, and listening activities. Digital voice recording and technology-based projects allow multifaceted student assessment.

### AP Spanish Language: Grades 11 & 12 (Year Course)

This course prepares upper-level Spanish students to sit for the end-of-year College Board Examination. The teacher's near exclusive use of spoken and written Spanish in all facets of the course (and the requirement that students do the same) strengthens students' proficiency, integrating communicative skills through use of authentic materials and sources established by College Board directives in the 2013-2014 Spanish AP Course Description booklet. The four areas of



reading, writing, listening, and speaking are integrated into different activities to foster proficiency across three communicative modes: Interpersonal (interactive communication), Interpretive (receptive communication) and Presentational (productive communication). The five major goals of foreign language learning: Communication, Cultures, Connections, Comparisons and Communities anchor development and expansion of all three communicative modes. The overall purpose of the course is to enhance students' language proficiency to function and communicate effectively in a cultural context other than their own. Daily classroom use of the Spanish language emphasizes grammatical structures, oral expression, and vocabulary expansion.

### Spanish V: Grade 12 (Year Course)

Regular Spanish V continues to refine upper-level students' language skills with particular emphasis on readings of literary selections and individual expression in the language. The reading list consists of selected works from Peninsular and Spanish American literatures. Readings encompass the Medieval and Golden Ages, the XIX and XX centuries, and the representative authors provide a framework of literary contexts to analyze and to develop advanced composition skills. Students will read the literary works entirely in Spanish, as well as discuss them orally and produce essays in the language. In the process, they will be developing and refining their oral skills as they make individual presentations of assigned projects. Daily classroom use of the language will emphasize grammatical structures, oral expression and vocabulary expansion. The purpose is to strengthen students' oral and written use of the language. Digital voice recording and technology-based projects allow multifaceted student assessment. Highlights of this course continue to be Spanish film presentations and discussion as an instrument to gain a deeper understanding of Spanish and Hispanic American societies.

### AP Spanish Literature: Grade 12 (Year Course)

AP Spanish Literature prepares upper-level Spanish students to take the end-of-year College Board Examination. Criteria established by the College Board equate Spanish V-AP Literature to a third-year college Introductory Spanish Literature course, focusing on selected works from Peninsular and Spanish American literary figures. Readings are based on a chronological survey encompassing the Medieval and Golden Ages, and XIX and XX century works selected by the College Board. These works provide the framework to analyze and to develop advanced composition skills. Students will read the literary works entirely in Spanish, as well as discuss them orally and produce written analyses in that language. In the process, they will develop and refine their language skills, acquiring the necessary proficiency to sit for the examination at the end of the year. Daily classroom use of the language emphasizes grammatical structures, oral expression and vocabulary expansion. The purpose is to sharpen students' oral and written use of the language. This course is a challenge and a delight for the student inclined toward literature.



## Electives

### Technology: AP Computer Science Principles: Grades 9, 10, 11, & 12 (Year Course)

AP Computer Science Principles course is designed to be equivalent to a first-semester introductory college computing course. In this course, students will develop computational thinking skills vital for success across all disciplines, such as using computational tools to analyze and study data and working with large data sets to analyze, visualize, and draw conclusions from trends. The course engages students in the creative aspects of the field by allowing them to develop computational artifacts based on their interests. Students will also develop effective communication and collaboration skills by working individually and collaboratively to solve problems, and will discuss and write about the impacts these solutions could have on their community, society, and the world.

### Technology: Intro to Technology: Grades 9, 10, 11 & 12 (Fall or Spring Semester)

Introduction to Technology helps students develop basic computer skills and familiarity with applications needed across their education and into a career. Topics include: word processing, spreadsheets, presentations, website design, and app creation. These topics will be based in a variety of important contexts, such as personal finance, resumes, paper writing, and other skills necessary in today's world.

### Technology: Advanced Computer Science: Grades 10, 11 & 12 (Fall or Spring Semester)

Advanced Computer Science enhances the foundations of computer science and basic programming, with an emphasis on helping students develop logical thinking and problem solving skills. Students will employ higher level thinking while using a variety of programming languages. Prerequisites: AP Computer Science Principles or basic knowledge in a programming language

### Technology: Independent Study: Grades 11 & 12 (Fall Semester)

Independent Study is available to students who have completed at least one AP Computer Science course AND at least one non-AP computer course with the approval of the Instructor, Department Chair, and Division Director. This course will allow students to further their studies in computers and technology, not otherwise provided with the other formal classes listed. Prerequisites: At least one AP Computer Science course AND at least one non-AP computer course. Approval from Computer Instructor, Department Chair, and Division Director.

### Art: Contemporary Drawing: Grades 9 & 10 (Fall Semester)

Learn to draw with ease and confidence! This course uses tried and true methods that allow students to develop their untapped drawing abilities or enhance skills they have already discovered! Students explore traditional and non-traditional drawing techniques through observational and imaginary imagery. This foundational course is also designed to expose students to the variety of disciplines offered in the Visual Art Department. Students are guided through a series of visual exercises designed to foster confidence and success.



**Art: Color and Design: Grades 9 &10 (Spring Semester)**

Through a sustained experience in color media this foundational course reinforces basic design principles and their application on the two-dimensional surface.

Through a variety of projects, students in this studio course will investigate the effective use of color schemes and will investigate the functions and properties of the formal elements (line, shape, pattern, etc.) and their organization through the use of relational schemes (repetition, progression, closure, etc.).

**Art: Painting I: Grades 10 & 11 (Fall Semester)**

This intermediate level course engages students in the use of color media through a variety of experiences that focus on the method and styles of historic and contemporary artists. Through a series of guided experiences with an emphasis on color, composition, content, and contrast. Students will hone their technical skills as they experiment with a variety of wet and dry color media including watercolor, acrylic, and pastel. Students will explore objective and non-objective content derived from observation, original photography, expressionistic, imaginary, and abstracted imagery.

**Art: Painting II: Grades 10 & 11 (Spring Semester)**

Painting I is not required as a prerequisite. This intermediate level course builds upon an understanding of basic color theory and design concepts. It will focus on mixed media and related painting experiences. Students will explore mixed media processes which combine collage, painting, drawing, digital photography photo transfers and other art techniques. Through a variety of contemporary and traditional processes, students will reinforce their understanding of the principles of design, especially pattern, repetition, rhythm, balance, and color. The keeping of a visual journal will also provide opportunities for concept development, observational, and experimental imaging.

**Art: Ceramics: Grades 10 & 11 (Fall Semester)**

This introductory course explores a variety of traditional and contemporary applications in the production of functional, sculptural, and decorative works in clay. Through assignments that focus on a variety of hand-building techniques, students will reinforce their understanding of the elements and principles of 3D design. Students will develop skills in glazing and firing, and work with a variety of different clays including terra cotta and stoneware.

**Art: Sculpture: Grades 10 &11 (Spring Semester)**

This course provides students with an introductory experience in three dimensional design. Through individual projects, group collaborations, and on-site installations, students will experience a variety of processes and materials which emphasize the exploration of the elements of design and their relationship to the principles of form and space. Traditional and contemporary applications will be explored as students gain an understanding and appreciation of the work of contemporary and traditional sculptors.

**Art: Advanced Portfolio: Grades 10 &11 (Spring Semester)**

This course is required for students who plan to take AP Studio Art the following



Fall, but open to any juniors who possess a genuine desire to further explore their artistic gifts. It is designed to help students build a well-rounded portfolio that reflects their understanding of a broad range of drawing and design issues. (It would be rare for a sophomore to take this unless she or he is planning to complete the AP Studio Art Portfolio in their junior year.) Prerequisite: portfolio review and teacher approval.

### **Art: Computer Graphics & Design: Grades 11 & 12 (Fall Semester)**

This course introduces students to graphic design as a form of visual communication through the use of type, image, form, and color. Projects explore design processes in two and three dimensions, communications, and creative problem solving. Students will be required to experiment and begin to master computer image manipulation software such as Adobe Photoshop. This area of study includes work with a practical commercial application including but not limited to logos, product design, CD/book covers, advertising campaigns, font designs, letterhead, and brochures.

### **Art: Ceramics II: Grades 11 & 12 (Spring Semester)**

This course allows students to either continue their experience and expand their technical ability, or ‘get their hands dirty for the first time!.’ Students will apply visual problem solving skills and broaden their design vocabulary as they explore form and space on a deeper level. Students will have opportunities in wheel throwing, constructing, carving, and sculpting. Traditional and contemporary applications will be explored with an emphasis on originality, craftsmanship, experimentation, and concept development. Exposure to the work of 3D artists and museum field trips are an important aspect of this course.

### **Art: Printmaking: Grades 11 & 12 (Spring Semester)**

This course provides an excellent blend of design and drawing practices, allowing students to develop their personal interest and skill level in either or both. This technically rich course introduces and expands on a variety of printmaking and transfer techniques which include: etching, linocuts, collograph, image transfer/lithography, mono-printing and embossing. This course reinforces the principles of good design and the expressionistic use of line and color with an emphasis on experimental and mixed media printing processes. The work of contemporary and traditional artist will be explored.

### **Yearbook: Grades 11 & 12 (Year Course)**

Yearbook students begin the course with terminology and work into layout, design, and copy. After development of these skills, students work independently with their section editors. Teamwork is stressed. Prerequisite: teacher approval

### **Art: AP Studio Art: Grades 11 & 12 (Year Course)**

Students who enroll in this class have expressed a strong desire to engage in the creative process and have exhibited the work ethic and creative drive necessary for the successful completion of the AP portfolio. The student’s originality, technical skill, and artistic voice is expressed through the development of a three part portfolio. The Breadth portion exhibits their understanding of a broad range of drawing and design issues. The Concentration portion requires students to complete a 12 piece investigative study in their area of interest. The Quality portion allows



them to submit what they consider to be their best work. Students will choose one of three following portfolios: 2d Design (including Photography and/or digital work), Drawing, or 3d Design. Students who fulfill the requirements of Advanced Placement Studio Art demonstrate their ability to work conceptually, technically, and creatively on a first year college course level. Students will be required to submit their completed portfolio in the spring. Prerequisite: Advanced Portfolio (Previous Spring) or equivalent. Teacher Recommendation.

### **Art: AP Art History: Grade 12 (Year Course)**

AP History of Art provides the same benefits to a secondary school as those offered by an introductory college course in art history. It gives an understanding and enjoyment of architecture, sculpture, painting, and other art forms within the historical and cultural context. Students examine major forms of artistic expression of the past and the present from a variety of cultures. No prior experience in art history is necessary. Students who have excelled in the humanities are encouraged to enroll. Students will be required to take the AP exam in the spring. Teacher approval is required for this course.

### **Drama: Theater in Action: Grades 9, 10, 11 & 12 (Fall Semester)**

Everyone enjoys movies and television, and Theater in Action is a hands-on approach to the study of acting. As an introduction class, this course will emphasize the fundamental tools of the actor and the director. Studying acting will focus on movement, improvisation, and preparing a role for the stage. Directing will give the students the opportunity to gain a knowledge of the directors process as well, from choosing a script to staging the show while working with their fellow actors. This course combines individual and group exercises with assignments performed in class as well at the state theater competition in November.

### **Drama: Theater in Production: Grades 9, 10, 11 & 12 (Spring Semester)**

This elective allows those students who have a heightened interest in the Dramatic Arts and will build upon past theatre experiences. The class will study theater in conjunction with the Drama Department's Winter and Spring productions. Students will participate in a performance ensemble that will be involved in the development, rehearsal, and performance of these two major campus events. Students will be expected to audition for and participate in various competitions, festivals, and ensembles within the school, community, and state, as well as a student run One Act Play Performance. Supplementary individualized and intensive instruction will occur during class time to rehearse for department productions. Prerequisites: Students must have successfully completed at least 1 semester of US Chorus or any Theater elective, or approval by instructor.

### **Drama: Advanced Acting: Grades 10, 11 & 12 (Fall Semester)**

This course is an advanced acting class for those students who have had some dramatic training and experience. We will work on audition and rehearsal techniques for both MA and collegiate theater programs. This class teaches young performers to develop advanced techniques for working with a script or music, with emphasis on skills required to handle complex characters and heightened language text such as Classical, Shakespeare, and Chekhov. In class and on the Wilson stage we will



more fully explore characterization, vocal work, and physicality in performing. Participation in the Trumbauer Theater Festival competition at semester's end is encouraged. Prerequisite: Theater In Action, Improvisation, or Instructor's Permission.

### **Drama: Theater in Performance: Grades 9, 10, 11 & 12 (Spring Semester)**

Students will study films in and out of class while learning about such areas of production as editing, lighting, cinematography, and production design. Students will also gain an understanding of film history with attention to the role played by genre and auteur theory. While focusing mainly on American cinema, European and Asian cinema will also be discussed.

### **Speech & Debate: Grades 9, 10, 11 & 12 (Fall Semester or Year Course)**

Speech & Speech & Debate provides students the opportunity to develop their ability to stand before a group of people and make a presentation, which manifests itself through competition in debate, speech, and/or interpretation events.

Lincoln-Douglas Debate involves 1 student debating an issue that revolves around propositions of value. Public Forum Debate involves 2 students debating a topic dealing with current events. Speech Events have students developing both prepared and limited prep speeches while the Interpretation Events have students performing selections from published printed novels, short stories, plays, and/or poetry.

Students are graded on participation and effort through involvement in competitive speech and debate tournaments. As a member of the National Speech & Debate Association, The Montgomery Academy Speech & Debate Team has traveled to tournaments in 40 states and has qualified students to the National Tournament for 27 consecutive years. At the state and regional level, MA students have won a combined 154 Individual State Titles and 17 Team State Championships since 1993.

### **Music: Upper School Chorus: Grades 9, 10, 11 & 12 (Fall/Spring Semester or Year Course)**

In Upper School Chorus, students will sing a variety of music from the standard choral repertoire. Students will improve vocal technique and music literacy through their performance of pieces in different languages and from different musical periods. Assessment will take place in the form of participation grades and a final concert at the end of each semester. Additional performance opportunities include: school assemblies, State Choral Performance Assessment, winter tour, and a national competition. Chorus students may audition for All-State Chorus.

### **Music: Music Theory: Grades 10, 11 & 12 (Year Course)**

Music Theory is a course designed to focus on the organization of musical elements: pitch, rhythm, melody, harmony, etc. Students will learn various notational techniques, sight-reading systems, and compositional techniques. Upon completion of this course, students should have the ability to compose simple melodies with accompaniment, arrange familiar pieces, and play simple songs on the piano. Music Theory should provide the foundation to move onto AP Music Theory, if desired;



continuation to AP is not required.

### **Music: AP Music Theory: Grades 11 & 12 (Year Course)**

AP Music Theory is designed to prepare students for the AP exam at the end of the school year. The topics covered are the same studied in a first-year collegiate theory course. By the end of the course, some skills that students will accomplish include: analyzing musical compositions, expressing musical ideas by composing and arranging works, and recognizing by sight and ear all intervals within an octave. The prerequisite for the course is a basic understanding of music theory. The ability to: read notes on the treble and bass clef, recognize basic rhythmic patterns, and perceive differences in pitch (i.e. The second note is higher than the first.) is essential to this course. Students are not required to take the Music Theory course before enrolling in AP Music Theory.

### **Health & Physical Education: Grade 9 (Year Course)**

Health & Physical Education is a required course for all ninth grade students in the Upper School. The Upper School Physical Education curriculum is based on improving the students fitness level and teaching students to live a healthy lifestyle after high school. The Upper School program includes activities that develop cardiovascular and respiratory endurance, muscular strength and endurance, flexibility, and agility. Weight training, core training, circuit training, cross country running, cross training, stretching, and various forms of aerobics are included as activities to build on each students health-related fitness. Health related topics include; nutrition, basic exercise standards and guidelines, monitoring cardiorespiratory exercise, medical considerations of exercise, psychological benefits of fitness and leadership skills. Methods and measuring techniques of determining and improving fitness levels are taught to enable students to design their own fitness program in later years. In addition, the rules, skills, and strategies of major and minor competitive and lifetime sports are taught and practiced. Physical Education uniforms are required.

### **Study Hall: Grades 9, 10, 11 & 12 (Fall/Spring or Year Course)**





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