## 2023-2024 Upper School Course Offerings and Course Description Packet

## Course Offerings

|  | ENGLISH | MATH: <br> Students need through Algebra II | SCIENCE | HISTORY | LANGUAGE: <br> Students need through the third level of a language |
| :---: | :---: | :---: | :---: | :---: | :---: |
| GRADE 9 | 688 World <br> Literature | Course recommended by department | 145 <br> Biology OR 559 Honors Biology | 178 Intro to Global Studies | Course recommended by department; students may also start a new language |
| GRADE 10 | 689 American Literature | Course recommended by department | 149 Conceptual Chemistry OR 148 Chemistry OR 150 Honors Chemistry | 574 Modern <br> World History OR <br> 139 AP World History | Course recommended by department; students may also start a new language |
| GRADE 11 | 146 British <br> Literature OR <br> 128 AP English Language and Composition | Course recommended by department | $208$ <br> Conceptual Physics | 233 US History OR 138 AP US History | Course recommended by department; students may also start a new language |
| GRADE 12 | 229 Thematic Literature OR <br> 439 AP English Literature and Composition | Course recommended by department | Science electives are available | $\begin{gathered} 232 \text { US } \\ \text { Government } \\ \text { OR } \\ 130 \\ \text { AP Comp } \\ \text { Government } \end{gathered}$ | Course recommended by department; students may also start a new language |

## Graduation Requirements

(NOTE: Full year courses equal 3 credits; term courses equal 1 credit)

- English: 12 credits
- History: 12 credits, including Introduction to Global Studies, Modern World History or AP World History, United States History or AP United States History, and United States Government or AP Comparative Government.
- Math: 9 credits in the Upper School and must complete Algebra 1, Geometry, Algebra 2
- Science: 9 credits, including Biology, Chemistry, and Conceptual Physics
- World Language: 9 credits in the Upper School and through level 3 of chosen language
- Fine Arts: 3 credits
- Physical Education: Students must participate in three athletic seasons during their four years in the Upper School. This requirement may be fulfilled by: athletic participation or team management. Transfer students must participate as well; however, this requirement will be adjusted appropriately.


## NOTES:

- Rising 9th grade students need a total of $\mathbf{7 5}$ credits to graduate.
- Rising 10th grade students need a total of 75 credits to graduate.
- Rising 11th grade students need a total of $\mathbf{7 5}$ credits to graduate.
- Rising 12th grade students need a total of 72 credits to graduate.
- The normal core-course load is five classes (Math, Science, History, English and World Language). In addition, chosen electives and one study hall section will be individually scheduled for each enrolled student.


## World Language Courses

| Latin | French | Spanish | Chinese |
| :--- | :--- | :--- | :--- |
| 189 Latin 1 | 169 French 1 | 220 Spanish 1 | 694 Chinese 1 |
| 191 Latin 2 | 166 French 2 | 692 Spanish 2 |  |
| 192 Latin 3 (GS) | 170 French 3 (GS) | 222 Spanish 3 (GS) |  |
| 193 Latin 4 (GS) | 171 French 4 (GS) | 223 Spanish 4 (GS) |  |
| 132 AP Latin (GS) | 172 French 5 (GS) | 224 Spanish 5 (GS) |  |
|  | 129 AP French (GS) | 728 Spanish 6 (GS) |  |
|  |  | 134 AP Spanish Lang. (GS) |  |
|  |  | 135 AP Spanish Lit. (GS) |  |

## Math Courses

| 176 Geometry <br> 118 Algebra 1, Part 2 <br> 121 Algebra 2 | 556 College Algebra \& Trig. <br> 211 Precalculus <br> 147 Calculus | 123 AP Calculus AB (ST) <br> 124 AP Calculus BC (ST) <br> 136 AP Statistics (ST) |
| :--- | :--- | :--- |

## Elective Courses

| Full Year Electives (3 credits) | Term Electives (1 credit) |
| :---: | :---: |
| 236 Yearbook (FAD*) <br> 187 Journalism (FAD*)(GS) <br> 691 Introduction to Graphic Design (ST)(FAD) <br> 690 Intermediate Graphic Design (ST)(FAD) <br> 180 Advanced Graphic Design (ST)(FAD) <br> 445 Introduction to Studio Art (FAD) <br> 226 Intermediate Studio Art (FAD) <br> 225 Advanced Studio Art (FAD) <br> 209 Portfolio (FAD) <br> 137 AP Studio Art (FAD) <br> 228 Symphonic Band (FAD) <br> 152 Chorale (8th-12th grades) (FAD) <br> 438 Astronomy (ST) <br> 133 AP Physics (ST) <br> 122 AP Biology (ST) <br> 125 AP Chemistry (ST) <br> 139 AP World History (GS) <br> 569 AP European History (GS) <br> 156 Introduction to Computer Science (ST) <br> 127 AP Computer Science A (ST) <br> 126 AP Computer Science Principles (ST) <br> 230 Sports Business/Entrepreneurship <br> 572 Economics and Personal Finance <br> 678 Introduction to Engineering (ST) <br> 131 AP Human Geography (GS) <br> 742 Forensic Science (ST) | 561 Film Studies (FAD) (Fall, Winter, and Spring Terms) <br> 563 Localism/Political Leadership (Spring Term) <br> 564 Public Speaking (Fall Term) <br> 565 Shakespeare (Winter Term) <br> 568 Leadership Development (Winter Term) <br> 696 Creative Writing (Fall Term) <br> 702 Introduction to Theatre (Fall Term) (FAD) <br> 731 History and Film (Winter Term) (FAD) <br> 732 Who are the Russians? (Fall Term) <br> 733 Theatre Arts: Production Tech (Winter <br> Term) (FAD) <br> 734 Theatre Arts: Acting (Spring Term) (FAD) <br> 735 Art of the 21st Century (Fall Term) (FAD) <br> 736 Gallery Studies (Spring Term) (FAD) <br> 695 Philosophy, Evolutionary Psychology, and Other Stuff (Fall and Spring Terms) <br> 737 Introduction to Aviation (ST) (Fall Term) <br> 738 Aerospace History (ST) (Winter Term) <br> 739 Aerospace Engineering (ST) (Spring Term) <br> 741 Introduction to Psychology (Spring Term) <br> 730 Introduction to Italian Language and <br> Culture (Fall Term) |

$(F A D)=$ Course qualifies for Fine Arts Distinction credit
$\left(F A D^{*}\right)=$ Course qualifies for $1 / 2$ credit for Fine Arts Distinction credit
$(G S)=$ Course qualifies for Global Studies credit

## $(S T)=$ Course qualifies for STEM credit

## English Course Descriptions

## 688 - World Literature (English 9)

9th graders are introduced to analytical reading and writing through selected texts as well as an intensive grammar review. One of the major goals of English in ninth grade is for students to develop stronger and more astute thinking skills. The course also focuses on identifying the tone and opinions of each author. Along with the texts, the class uses articles and other supplementary materials. Students are evaluated using a variety of assessments including tests, quizzes, papers, and projects. Representative texts: Homer's Odyssey, The Penelopiad, Things Fall Apart, and The Merchant of Venice.

## 689 - American Literature (English 10)

Students explore American literature as both text and culture in this survey course that places increasing emphasis on the relationship between critical reasoning and oral and written analysis. This course is structured by posing guided questions as the students read their way through American literary movements and genres. The students will study novels, short stories, poetry, and non-fiction. Students will read the poetry and short fiction of American authors beginning from before the colonies until the twenty-first century in a historical progression and survey. Longer works include The Ox-Bow Incident, The Great Gatsby, Passing, and The Crucible. The course culminates in a three-part exam including a research paper on an American event or person, an analysis of literature associated with that event or person, and a presentation of the student's findings to a panel of upper school faculty members.

## 146 - British Literature

This course is a survey of British literature focusing on a broad range of genres and styles with a continued emphasis on critical, analytical, and argumentative writing
to prepare students for more advanced work in their senior year and college. Representative readings include:
Beowulf, selections from Chaucer's Canterbury Tales, Hamlet, and novels representative of the Victorian and contemporary periods. Poetry studies focus on the Renaissance, Romanticism, and modern poetry. Several historically significant short stories and essays are also included in the curriculum.

## 229 - Thematic Literature (Full Year Course)

Thematic Literature is intended to expose students to a wide variety of texts and viewpoints. Works studied will include selections from many cultures related to various themes. Representative works are Sophocles's Antigone, Shakespeare's Othello, Silko's Ceremony, and McEwan's Black Dogs. Students will also study poems and short stories representing various cultures. Class discussions will encourage students to consider underlying themes and identify key strategies the authors use to convey them. Composition assignments focus on analysis and persuasion.

## 128 - AP English Language and Composition (Full Year Course)

AP English Language and Composition is designed as a college-level introductory course in rhetoric. The purpose of the course is to prepare students to read complex texts with understanding, to analyze techniques used by successful prose writers, and to write effectively. The analytical component of the course will include an introduction to the tenets of logic which form the basis for expository, analytical, and argumentative writing. Students will be required to read several assigned articles each week, to be prepared to take quizzes exhibiting comprehension, and to complete evaluative assignments on the articles. Students will also utilize these foundational skills in their own writing, producing several compositions of various types throughout the year. The course is open to juniors by departmental recommendation only. All AP English Language students are required to take the AP exam in May (additional cost of approximately \$95.00)

## 439 - AP English Literature and Composition (Full Year Course)

AP English Literature and Composition is designed as a college-level introductory literature course. The purpose of the course is to prepare students to read sophisticated literary works with understanding, to analyze techniques used by authors, and to write effectively about literature. Literature studied will include novels, short stories, plays, and poetry. The primary text is the current edition of Literature: Structure, Sound, and Sense. Representative long works include plays by Aeschylus and Sophocles, Shakespeare's Richard II, Bronte's Jane Eyre, Chopin's The Awakening, Miller's Death of a Salesman, and Ellison's Invisible Man. While composition assignments focus on literary analysis, there will also be a short research paper. Other assessments include vocabulary quizzes, reading quizzes, and tests on literary terms. Students who elect to take this course should be aware that at times the homework reading load is quite heavy. The course is open to seniors by departmental recommendation only. All AP English Literature students will be required to take the AP exam in May (additional cost of approximately $\mathbf{\$ 9 5 . 0 0}$ )

## Math Course Descriptions

## 118 - Algebra 1 - Part 2

This course is a continuation of Algebra 1 - Part 1 and is designed to complete the study of fundamental algebra concepts. This continuing exploration of algebra will include topics of inequalities, rational expressions, laws of exponents, polynomials, systems of equations and radical expressions. An emphasis is placed on appropriate use of graphing calculator technology to enhance the study of function properties and graph behavior. Successful students will be prepared for Algebra 2 and/or Geometry. This course requires the use of a graphing calculator (a TI-83/84/89/Nspire series model or similar).

## 176-Geometry - (Prerequisite - Algebra 1 or equivalent)

Students investigate the basic structure of Euclidean plane and solid geometry and right-triangle trigonometry through both deductive proof and problem solving with
geometric structures and related algebraic operations. Spatial and visualization skills are developed and reinforced through practical applications of geometrical relationships. This course incorporates a practical, hands-on approach to the study of geometry by emphasizing manipulative aids in instruction as well as exploratory and collaborative approaches to learning. The course also emphasizes the development of deductive reasoning skills. Students may enroll following either Algebra 1 (preferred) or Algebra 2. This is a graduation requirement.

## 121 - Algebra 2 (Prerequisite - Algebra 1 or equivalent)

This course continues the algebra sequence beyond Algebra 1 through a comprehensive study of advanced algebra and trigonometry topics. The use of abstraction and unknown quantities introduced in Algebra 1 is extended to a detailed examination of polynomial, rational, radical, exponential and logarithmic expressions and equations, graphs of nonlinear equations, and a thorough introduction to irrational and complex numbers. Emphasis is placed upon the relationship between the algebraic and graphical method of solving equations as well as upon problem-solving skills allowing algebraic methods to be applied in practical contexts. The course also includes a rigorous introduction to trigonometry. A graphing calculator (a TI-83/84/89/Nspire series model or similar) is required. This is a graduation requirement.

## 556 - College Algebra and Trigonometry - (Prerequisite - Algebra 2)

This course is intended to enrich the mathematics experience for students who desire to prepare for success in collegiate mathematics. Emphasis is placed upon mastery of new algebra and trigonometry concepts complemented by the reinforcement of material introduced in earlier courses. An emphasis will be placed upon the appropriate use of graphing calculator technology to enhance the study of function properties and graph behavior. Successful students will be prepared for Precalculus. This course requires the use of a graphing calculator (a TI-83/84/89/Nspire series model or similar).

## 211 - Precalculus - (Prerequisite - Algebra 2;

Permission of the department)
This course prepares students for the study of calculus in future math classes. Course content includes a study of polynomial, rational, exponential, logarithmic, and trigonometric functions with emphasis on synthesizing numerical, graphical, and analytical properties of these and on using functions to represent relations between variable quantities. Additional topics include parametric equations and graphs, polar coordinates, sequences and series, and an introduction to limits. Attention is devoted to refining previously acquired algebraic skills, but success in the course assumes a fundamentally sound command of algebra achieved through the Algebra sequence. This course requires the use of a graphing calculator (a TI-83/84/89/Nspire series model or similar).

## 147 - Calculus - (Prerequisite - Precalculus; Permission of the department)

This course offers qualified students an alternative to AP Calculus AB . The slower pace and in-depth investigations provide students with a unique opportunity to investigate topics not available in the faster-paced AP alternative. Many of the same topics will be covered as in AP Calculus (limits, continuity, derivatives, maximum and minimum problems, related rates, modeling, and integration, as time permits), but with additional time devoted to review of relevant material from algebra and precalculus. The use of technology and the alternative pacing create opportunities for the investigation of situations that can be modeled and analyzed using calculus. Applications from physics, geometry, and engineering are included. Successful completion of this course will prepare students for a college-level calculus course, including AP Calculus. This course requires the use of a graphing calculator (a TI-83/84/89/Nspire series model or similar).

## 123-AP Calculus AB - (Prerequisite - Precalculus;

 Permission of the department) (ST)This course provides a study of differential and integral calculus applied to both algebraic and transcendental functions. Course content corresponds to the syllabus established by the College Board Advanced Placement

Program and equates to approximately 1 semester of college calculus. Students will take the AP Calculus AB Examination in May from which placement or credit may be awarded at the collegiate level if a qualifying score is achieved. Topics included in the curriculum are limits and their properties, differentiation, integration, elementary differential equations, and applications of these in the sciences and engineering. This course requires the use of a graphing calculator (a TI-83/84/89/Nspire series model or similar). All AP Calculus AB students are required to take the AP exam in May (additional cost of approximately $\$ 95.00$ ).

## 124-AP Calculus BC (Prerequisite - AP Calculus AB; Permission of the department) (ST)

This is a follow-on course to Calculus AB. The student completing both AP Calculus courses will have completed the equivalent of one full year of college-level calculus. Course content corresponds to the syllabus established by the College Board Advanced Placement Program. The successful student will be prepared to participate in the AP Calculus (BC) Examination in May. Emphasis will be placed upon refining previously acquired calculus skills as well as the introduction of new material including integration by partial fractions, integration by parts, differentiation and integration of parametrically defined equations, polar area, work and arc length, improper integrals, sequences and series including Taylor polynomials, Maclaurin series and power series. This course encourages the use of the TI-89 or Nspire graphing calculator. All AP Calculus BC students are required to take the AP exam in May (additional cost of approximately $\$ \mathbf{9 5 . 0 0}$ ).

## 136 - AP Statistics - (Prerequisite - Precalculus; Permission of department) (ST)

The AP Statistics course is equivalent to a one-year, introductory, non-calculus-based college course in statistics. The course introduces students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. There are four themes in the AP Statistics course: exploring data, sampling and experimentation, probability, and statistical inference. Students use technology, investigations, problem solving,
and writing as they build conceptual understanding. The successful student will be prepared to participate in the AP Statistics Examination in May. This course requires the use of a graphing calculator (TI-83/84/89/Nspire series). All AP Statistics students are required to take the AP exam in May (additional cost of approximately $\mathbf{\$ 9 5 . 0 0}$ ).
$(S T)=$ Course qualifies for STEM credit

## Computer Science Course Descriptions

## 156 - Introduction to Computer Science (Open to 9th 12th graders) ( $S T$ )

This course will introduce students to a variety of topics central to modern computer science and its applications. Topics will include problem solving with computers, web development, computer graphics and animation, software and game design, computer hardware and circuit design, AI and machine learning, and the social role of computers. During the course, students will learn to write code in Javascript, HTML, and CSS and will be introduced to Python and Java in preparation for more advanced computer science courses. This course requires no prior familiarity with computer science or programming and is intended primarily for students in grades 9 and 10 . Most of the course will follow the Computer Science Discoveries curriculum on Code.org, which will be supplemented with additional material from other sources when appropriate. Students will need to have their own computers for this course; smartphones and tablets will not be sufficient. Lab Fee: $\$ 50$

## 126 - AP Computer Science Principles (ST)

This course is an introduction to computer science, covering programming, data, the internet, and the impact of computing on society. Students will learn fundamental concepts such as algorithms, data types, and data structures, and use a high-level programming language to solve problems. The course also covers ethical and legal considerations related to computing. The programming language taught in this class is Python which they will use
to create a program at the end of the year to be submitted as part of the AP test. This class is designed as a college-level course for students in grades 11 and 12 and should be taken before AP Computer Science A. Most of the course will follow the AP Computer Science Principles curriculum on Code.org, which will be supplemented with additional material from other sources when appropriate. Students are required to have their own computers. All AP Computer Science Principles students are required to take the AP exam in May (additional cost of approximately \$95.00). Lab Fee: $\$ 50$

## 127-AP Computer Science A (ST)

This course is equivalent to a first-semester, college-level CS1 course in computer science. The course introduces students to computer science with fundamental topics that include problem solving, design strategies and methodologies, organization of data (data structures), approaches to processing data (algorithms), analysis of potential solutions, and the ethical and social implications of computing. The course emphasizes both object-oriented and imperative problem solving and design using the Java programming language. These techniques represent proven approaches for developing solutions that can scale up from small, simple problems to large, complex problems. Prerequisites for this course are AP Computer Science Principles and Algebra II. Students who have only completed Intro to Computer Science must have a teacher recommendation. Most of the course will follow the AP Computer Science A curriculum on CSAwesome.org, which will be supplemented with additional material from other sources when appropriate. Students are required to have their own computers. All AP Computer Science A students are required to take the AP exam in May
(additional cost of approximately \$95.00) Lab Fee: $\$ 50$
$(S T)=$ Course qualifies for STEM credit

## Science Course Descriptions

## Required Courses

## 208 - Conceptual Physics (Required for all 11th grade students)

A course in Physics focuses mostly on qualitative explanations of the natural world. Topics in the traditional physics canon, such as mechanics, conservation laws, ray optics, and waves, will be surveyed. In addition to physics concepts and the necessary equations, several themes will be covered in the course, such as the wonder of the natural world, the role of science in life and society, how the discipline of science operates in practice, and the interdisciplinary nature of the field of science. Physics consists of lectures, laboratories, laboratory reports, demonstrations, homework assignments, and in-class problem solving. With a conceptual foundation, students experience using math as the language of physics in order to support problem solving. Students will learn how to write lab reports based on laboratory activities and class demonstrations. Lab fee: $\$ 60$

## 149 - Conceptual Chemistry

This is a full year chemistry course in which students explore the structure and behavior of matter, describe chemical and physical properties and processes, and study historical approaches in chemistry to understand the scientific method. Laboratory activities extend lecture concepts and emphasize standard procedures and safety considerations. This course is designed to meet the needs of students with less advanced math and science skills. Lab fee: $\$ 60^{* *}$ Note: This class fulfills the chemistry requirement for NCS.

## 148 - Chemistry (Required for all 10th grade students)

This is a full year chemistry course designed for 10th grade students. Students explore the structure and behavior of matter, describe chemical and physical properties and processes, calculate quantitative relationships, examine gas law relationships and thermochemistry, and are introduced to acid/base and solutions. Laboratory activities extend lecture concepts and emphasize standard procedures and safety considerations. Students interested in Honors Chemistry will enroll in Chemistry and will begin in the fall with the Honors Chemistry curriculum. Students earning an A or B in the Honors material at the
end of the fall term will have their course registration changed to Honors Chemistry for the year. Lab fee: $\$ 60$

## 150 - Honors Chemistry (Permission of instructor is required)

Honors Chemistry is designed to address the needs of more advanced science students in the study of chemistry. The course will include all of the aspects of regular chemistry and will also introduce a few chapters beyond the scope of regular chemistry. Instruction is geared to engage students at a higher level of complexity, depth, and intellectual capacity. In most cases, students will be evaluated according to a higher standard compared to regular chemistry, and they will be expected to perform extra laboratory experiments and other activities throughout the year. Lab fee: $\$ 60$

## 145-Biology (Required for all 9th grade students)

This course explores the fundamental reactions and relationships that sustain life. Students will study subatomic particles, molecules, organelles, cells, tissues, organs, organ systems, community structure, and ecosystems. From the molecular level to the ecological community level, we will examine general biological structure, function, and evolution. Students will set up lab equipment, collect and analyze data, and write lab reports throughout the year based on their experiences in laboratory activities that reinforce topics covered in lecture and promote student-centered, inquiry-based learning. Lab fee: $\$ 60$

## 559 - Honors Biology

In Honors Biology, students engage in real-world data analysis and problem solving that sparks critical thinking about our living world in preparation for the AP Biology course. As students engage in grade-level content, they utilize the kind of scientific reasoning skills needed to analyze the natural world-and to succeed in future science and social science courses in high school and college.
The Honors Biology areas of focus are vertically aligned to the science practices embedded in high school and college courses, including Advanced Placement. This gives students multiple opportunities to think and work
like scientists as they develop and strengthen these disciplinary reasoning skills throughout their education in the sciences:

- Emphasis on analytical reading and writing: Students engage in analytical reading and writing to gain, retain, and apply scientific knowledge and to carry out scientific argumentation.
- Strategic use of mathematics: Students use mathematics strategically in order to understand and express quantitative aspects of biology, to record and interpret experimental data, and to solve problems.
- Attention to modeling: Students go beyond labeling diagrams to creating, revising, and using models to explain key patterns, interactions, and relationships in biological systems.
Lab fee: \$60


## Science Electives:

## 133 - AP Physics 1 (Prerequisite: Conceptual Physics;

 Prerequisite: Algebra 2 AND permission of department) (ST)AP Physics 1 is a college level, algebra-based physics course focusing on the following major topics: Newtonian Mechanics; work, energy, and power; mechanical waves and sounds; and electrical circuits. AP Physics consists of lectures, laboratories, laboratory reports, demonstrations, homework assignments, and in-class problem solving. Two major goals of the course are to develop student analytical problem solving skills and for students to learn important data collection and analysis techniques. All AP Physics students are required to take the AP Physics Exam in May (additional cost of approximately $\mathbf{\$ 9 5 . 0 0}$ ). Lab fee: $\$ 120$

## 125-AP Chemistry (Prerequisites: A in Honors <br> Chemistry; Co-requisite: Precalculus AND permission of department)(ST)

AP Chemistry is a college level chemistry course focusing on the following topics: thermodynamics, thermochemistry, physical behavior of gasses, states and structure of matter, chemical equilibrium and kinetics, and various chemical reactions. Laboratory activities will be
based on the recommendations of the College Board. Emphasis will be given to develop increased competency in solving chemical calculations and problems. Students will be required to take the AP Chemistry Exam in May. This is a double period class. Course scheduling depends on enrollment. All AP Chemistry students are required to take the AP exam in May (additional cost of approximately $\$ \mathbf{9 5 . 0 0}$ ). Lab fee: $\$ 120$

## 122 - AP Biology (Prerequisites: A in Biology or Honors Biology, Co-requisite: Honors Chemistry AND permission of department) (ST)

AP Biology is an introductory college-level biology course equivalent to two semesters of college biology. AP Biology differs significantly from a traditional high school biology course due to text content, depth of material covered, lab work, and time and effort required to achieve mastery in the subject area. The course focuses on the following "big ideas:" Students cultivate their understanding of biology through inquiry-based investigations as they explore the following topics: evolution, cellular processes-energy and communication, genetics, information transfer, ecology, and interactions. This is a double period class. All AP Biology students are required to take the AP exam in May (additional cost of approximately $\$ 95.00$ ). Lab fee: $\$ 120$

## 438 - Astronomy (Prerequisites: Geometry, Algebra 2, Physics) (ST)

The subject of astronomy overlaps with the fields of cosmology and astrophysics and stems from the application of physical principles to the study of the cosmos. Topics covered include planetary motion, the structure of our sun, the life cycle of stars, the formation of galaxies, and the origin and fate of the universe. Students will apply what was covered in Conceptual Physics to the study of the Universe, with a focus on conceptual understanding. A laboratory component is included, in which students will apply their knowledge and increase their understanding of the subject. By the end of this course, the successful student will have obtained a deeper understanding and appreciation of the Universe, in addition to a greater familiarity with basic physical principles.

## 678 - Introduction to Engineering (ST)

In this course, students will develop an understanding of the term "technology," and how the technologies we take for granted were created through the engineering design process. Students will develop their abilities to use the engineering design process by taking on the role of engineers themselves and applying the engineering design process to define and solve problems. Finally, we will examine the complementary relationships among science, mathematics, technology, and engineering. Lab fee $\$ 100$

## 742 - Introduction to Forensic Science (Prerequisite: Physics) (ST)

This year-long science elective will explore the techniques used by forensic scientists. Topics will include: crime scene investigation, drugs, toxicology, serology, DNA, fingerprints, fiber analysis, forensic entomology, and more. Students will conduct labs in which they will collect evidence from simulated crime scenes, apply their knowledge to process the evidence, and ultimately solve the simulated crimes. Lab fee: $\$ 100$
$(G S)=$ Course qualifies for Global Studies credit $(S T)=$ Course qualifies for STEM credit

## History Course Descriptions

## 178 - Introduction to Global Studies (GS)

This class is designed to familiarize students with contemporary global issues including: population, wealth and poverty, food, energy, human rights, and the environment. The course will rely heavily on learning and understanding the interdisciplinary nature of these topics in an increasingly interconnected world. Historical examples will be used as evidence as well as data and trends over the last 100-200 years. Critical reading, writing, and thinking skills will be developed in this class. An appreciation for global citizenship and stewardship will be a feature as well.

## 554 - Modern World History (GS)

This class will cover major developments in world history from the 15 th century to the present. Students will trace the origins of historical concepts like modernization, globalization, and urbanization to their highwater marks in the 21st century. This broad sweep of geographical and chronological topics will allow students to discover how the interconnections between societies, cultures, and economies have influenced the scope and direction of our shared history. The first semester will focus on the impacts of colonization and imperialism as European states sought to overtake the power of the Asian and Islamic empires. The second semester will pick up in the 19th century and explore the roles of industrialization, militarization, ideology, and colonialism in setting up the world-spanning conflicts of the 20th century. Armed with this content, students will gain and apply critical thinking and writing skills in order to effectively analyze primary sources and communicate arguments about history.

## 139 - AP World History (GS)

The AP World History course content is structured around the investigation of five course themes and nineteen key concepts in different chronological periods, from approximately 1200 C.E. to the present. The five major themes encompass the following: 1) interaction between humans and the environment; 2) development and interaction of cultures; 3 ) state-building, expansion, and conflict; 4) creation, expansion, and interaction of economic systems; and 5) development and transformation of social structures. While the content of world history is very important in this class, the following skills are essential for success in this class:

- well-developed reading comprehension
- good work habits (keeping up with the reading assignments, thorough note-taking, consistent reviewing of material)
- well-developed writing skills, especially in essay composition and in crafting clear and sophisticated thesis statements
Prerequisite: recommendations from current English and history teachers; final approval made by the Director of the Upper School. All AP World History students are required to take the AP exam in May (additional cost of approximately $\mathbf{\$ 9 5 . 0 0}$ ).


## 233 - United States History

This is a general survey of the United States from discovery to the present. The course will emphasize skill development in order to ensure that students prepare for the reading, research, and writing abilities required in college. The course will feature projects and essays.

## 138 - AP United States History

This is a general survey of the United States from discovery to the present. The course is designed to prepare students to take the AP Exam in May and to inform the students of our historical heritage so they can make informed decisions about present day events. The course also prepares students for college history courses by making demands upon them equivalent to those made by full-year introductory college survey courses. The course requires weekly preparation for quizzes and tests plus outside reading and research. Prerequisite: recommendations from English and history teachers; final approval made by the Director of the Upper School. All AP U.S. History students are required to take the AP exam in May (additional cost of approximately \$95.00)

## 232 - United States Government

This class seeks to provide students with a better understanding of the history and operation of the federal government, a greater awareness of the current events happening around them, and a deeper appreciation of their duties as citizens of a democratic republic. Students will become active participants in the government through simulations that place them in the positions of Supreme Court justices, legislators, election campaign managers as well as the president as they learn to apply information and skills required to perform the aforementioned roles.

## 130 - AP Comparative Government (GS)

The AP course in Comparative Government and Politics introduces students to fundamental concepts used by political scientists to study the processes and outcomes of politics in a variety of country settings. The course aims to illustrate the rich diversity of political life, to show available institutional alternatives, to explain differences in processes and policy outcomes, and to communicate to students the importance of global political and economic
changes. Six countries will be featured: China, the United Kingdom, Iran, Mexico, Nigeria, and Russia. This course will be fast-paced, rigorous, writing-intensive, and rewarding. (Prerequisites: A- or higher in AP US History). All AP Comparative Government students are required to take the AP exam in May (additional cost of approximately \$95.00)

## History Electives:

## 569- AP European History (GS)

This is a general survey of European History from c. 1450 to the present. This course is designed, first, to prepare students for the AP Exam in May. Second, this course will teach students how to analyze both textual and visual primary sources, and to write critical arguments based on those sources. AP European will provide students with an understanding of modern European History comparable to an introductory college survey course. This course will require weekly preparation for quizzes and tests in addition to outside reading and research. All AP European History students are required to take the AP exam in May. (additional cost of approximately $\mathbf{\$ 9 5 . 0 0}$ ).

## 131 - AP Human Geography (GS)

This course will focus on the "systematic study of patterns and processes that have shaped human understanding, use, and alteration of the Earth's surface." The course is guided by the five National Geography Standards established in 1994 and the core content of the class that includes: geographic concepts and application; population; cultural patterns and processes; political organization and space; agricultural and rural land use; cities and urban land use; and industrialization and economic development. "A significant outcome of the course is students' awareness of the relevance of academic geography to everyday life and decision making." Prerequisite: recommendations from current English and history teachers; final approval made by the Director of the Upper School. All AP Human Geography students are required to take the AP exam in May (additional cost of approximately $\$ 95.00$ )
$(G S)=$ Course qualifies for Global Studies credit

## World Language Course Descriptions

All World Language students participating in the National Latin Exam and for the ACTFL Spanish and French assessments will be billed separately.

## Chinese:

## 694 - Chinese 1

This course is designed to give students an introduction to Chinese language and culture and will cover the equivalent of one semester of first-year Chinese at the college level. Students will begin by focusing on Pinyin before moving on to radicals, phonetic components, stroke order, and character writing. Students will learn classroom expressions, how to introduce themselves, engage in basic conversation, and will also explore other topics related to their individual interests. The cultural component of this course will give an overview of Chinese customs, traditions, and social phenomena. Chinese art, music, and literature will be incorporated into the curriculum. Students will also be asked to choose a topic related to Chinese culture on which they will conduct research in English and then introduce their project in simple Chinese.

## French:

## 169 - French 1

French 1 is a beginning course in conversation, grammar, oral comprehension, reading, and writing. Language is presented as a means of communication with French-speaking people and as a way to understand more fully the literature, history, and habits of their culture.

## 166 - French 2

French 2 is an intermediate course which focuses on vocabulary, grammar, history, and culture of French-speaking people. Students learn to read and speak on an intermediate level and are expected to write
complete sentences and thematic paragraphs and to converse using the appropriate verb tense.

## 170 - French 3 (GS)

In French 3, students are expected to master advanced grammatical forms, speak and write grammatically and coherently on a variety of topics, write paragraphs and essays about given themes, compose short stories, and learn the basic elements of literary analysis for both prose and poetry.

## 171 - French 4 (GS)

French 4 is an intermediate course covering all areas of language learning. Students deepen their understanding of advanced grammar in relation to texts of increasing difficulty. The class will engage regularly with the culture, history, and literature of the Francophone world through written and auditory practice. There is renewed emphasis on vocabulary acquisition, spontaneous thematic speaking, and written expression in preparation for advanced course work.

## 172 - French 5 (GS)

This is an intermediate-advanced course in French language covering all areas of language learning. This course focuses on advanced interpretive communication skills (reading and listening), interpersonal communication (speaking and writing), and presentational communication (speaking and writing). Students will encounter a variety of authentic texts including history, literature, news articles, songs, and advertisements. The class will encourage global thinking while examining and engaging cultural perspectives of the French-speaking world in comparison to students' own cultures. Language structures will be reviewed periodically as needed. This class is conducted in French, and students are expected to communicate their thoughts in French during class. Topics and selections studied differ each year.

## 555 - French 6 (GS)

This is an advanced course in French language covering all areas of language learning. This course focuses on advanced interpretive communication skills (reading and listening), interpersonal communication (speaking and
writing), and presentational communication (speaking and writing). Students will encounter a variety of authentic texts including history, literature, news articles, songs, and advertisements. The class will encourage global thinking while examining and engaging cultural perspectives of the French-speaking world in comparison to students' own cultures. Language structures will be reviewed periodically as needed. This class is conducted in French, and students are expected to communicate their thoughts in French during class. Topics and selections studied differ each year. Taught concurrently with AP French in 2022-2023.

## 129-AP French (GS)

This is an advanced course intended for highly motivated students. AP French Language is comparable in content and in difficulty to a course in French Composition and Conversation at the 3rd year college level. Students enrolled in this course should already have a good command of French grammar and vocabulary with competence in listening, reading, speaking and writing. The course is taught entirely in French and students are expected to use only French in the classroom. All AP French students are required to take the AP exam in May (additional cost of approximately $\$ \mathbf{9 5 . 0 0}$ )

## Latin:

## 189- Latin 1

This course is an introduction to the Latin language; no prior knowledge of Latin is assumed. The focus will be on developing competence in basic grammar, vocabulary, pronunciation, and comprehension and translation of simple Latin prose. Students will be introduced to techniques for effectively translating Latin and for reading it aloud. Roman mythology, history, and geography are also studied.

## 191-Latin 2

This course continues Latin 1; both courses together aim to provide students with the grammar necessary to understand and translate authentic Latin. More complex structures are studied, including uses of the subjunctive, indirect statement, and participles. The focus will be on
continuing to develop competence in vocabulary, grammar, syntax, pronunciation, and translation of more complex prose. Students will continue to practice effective techniques for translating Latin and for reading it aloud. Students will continue to study Roman history, customs, and mythology.

## 192-Latin 3 (GS)

In this course students will complete their study of Latin grammar by learning about deponent verbs, gerunds, gerundives and more advanced uses of the subjunctive. Students will periodically review Latin grammar and syntax and will increase their Latin vocabulary. The course will also introduce students to authentic Latin through continuous reading and translation of selections of prose and poetry. Authors studied can include Eutropius, Caesar, Vergil, and Ovid. Students will translate both prepared passages and sight passages from Latin prose writers and poets. Emphasis is placed on the history of the Republic and early Empire.

## 193 - Latin 4 (GS)

This course is designed to strengthen further the student's ability to understand, translate, and analyze Latin by concentrating on classical Latin prose. Students will translate and practice reading comprehension of passages from the prose of Caesar and the poetry of Vergil and Ovid. Students will also practice reading comprehension skills with sight passages from authors of the Republic and Empire that are comparable in difficulty to prepared passages. The history of the late Republic and early Empire will serve as a backdrop to the literature of this class.

## 194-Latin 5 (GS)

Latin 5 will, in large part, mirror the prose content of the AP class. Using selected passages from Caesar's De Bello Gallico students will translate and read for comprehension. Discussions of literary themes and character development will also be a part of the class. Students will also practice with sight passages of Latin prose and Latin poetry. The history of the late Republic and early Empire will serve as a backdrop to the literature of this class.

## 132-AP Latin (GS)

This is an advanced course intended for highly motivated students. AP Latin is comparable in difficulty to a second-year college level course. The course is designed to improve the student's ability to read, translate, understand, analyze and interpret selections from Caesar's De Bello Gallico and from Vergil's Aeneid, with the goal of completing the required reading list as delineated in the AP Latin Course Description (approximately 800 lines of Caesar and 800 lines of Vergil). Students will discuss literary themes and character development. Students will also practice translating at sight from both Latin prose and poetry, scanning dactylic hexameter, and writing analytical essays (in English) about passages from the AP syllabus to prepare for the analytical essay on the AP exam. All AP Latin students are required to take the AP exam in May (additional cost of approximately $\mathbf{\$ 9 5 . 0 0}$ ).

## Spanish:

## 220 - Spanish 1

Spanish 1 is a beginner course in conversation, grammar, oral comprehension, reading, and writing. Language is presented as a means of communication with Spanish-speaking people and as a way to understand more fully the literature, history and culture of Spanish-speaking peoples all over the world. The Five "C's" of world language learning (Competencies, Communication, Cultures, Connections, Comparisons and Communities) will be integrated into the course.

## 692 - Spanish 2

This course continues to develop students' abilities to communicate in Spanish. Students focus on developing their fluency and accuracy through both oral and written communication, and increase their comprehension of spoken and written Spanish. The Five "C's"
(Competencies, Communication, Cultures, Connections, Comparisons and Communities) will be further explored. The majority of the course will be conducted in Spanish, and students will be expected to express themselves predominantly in Spanish during the course.

## 222 - Spanish 3 (GS)

This is the first course in the intermediate level of study and is designed to serve as a bridge between beginning level Spanish 1 and 2 and the upper levels. Students will complete their introduction to the tenses and moods of the Spanish Language and expand their idiomatic uses of language. The Four Skills, Reading, Listening, Writing and Speaking, will be further developed. The Five "C" Competencies, Communication, Cultures, Connections, Comparisons and Communities, will be further explored. The majority of the course is conducted in Spanish.

## 223 - Spanish 4 (GS)

Spanish 4 is an intermediate/advanced course that continues to develop and refine students' abilities to communicate in Spanish through listening, speaking, reading and writing. Students are expected to master advanced grammatical forms and to speak coherently on a variety of topics. Reading and writing skills are enhanced by the oral and written analysis of selected prose and poetry. The Five "C" Competencies, Communication, Cultures, Connections, Comparisons and Communities will be explored; these are fully integrated in all class activities. The course is conducted in Spanish, and students are expected to use only Spanish in the Classroom.

## 224 - Spanish 5 (GS)

This is an advanced course that refines students' abilities to communicate in Spanish through listening, speaking, reading and writing, in preparation for AP Spanish Language or college-level coursework. Students will study contemporary trends and topics relevant to the Spanish-speaking world. The Five "C" Competencies, Communication, Cultures,Connections, Comparisons and Communities, will be explored and discussed in depth; these are fully integrated in all class activities. Students are expected to master and use advanced grammatical forms and to speak coherently on a variety of topics. Reading and writing skills are enhanced by the oral and written analysis of selected literary works as well as news articles and opinion pieces. Students will also conduct independent research projects on a variety of cultural topics. The course is conducted entirely in Spanish, and
students are expected to use only Spanish in the classroom.

## 728 - Spanish 6 (GS)

(Prerequisite: Spanish 5 or instructor permission)
This is an advanced course that refines students' abilities to communicate in Spanish through listening, speaking, reading and writing, in preparation for college level coursework or AP Spanish Language. Students will study contemporary trends and topics relevant to the Spanish speaking world. The Five Competencies, Communication, Cultures, Connections, Comparisons and Communities, will be explored and discussed in depth; these are fully integrated in all class activities. Students are expected to master and use advanced grammatical forms and to speak coherently on a variety of topics. Reading and writing skills are enhanced by the oral and written analysis of selected literary works as well as news articles and opinion pieces. Students will also conduct independent research on a variety of cultural topics. The course is conducted entirely in Spanish, and students are expected to use only Spanish in the classroom.

## 134 - AP Spanish Language (GS)

This advanced course is intended to provide opportunities for students to expand their vocabulary, improve their reading and aural comprehension, improve their speaking and writing skills, learn more about the history and culture of Spanish speaking peoples, and in doing so, prepare for the AP Spanish Language Exam. The Five "Cs" Competencies, Communication, Cultures, Connections, Comparisons and Communities, will be explored and discussed in depth; these are fully integrated in all class activities. This is a rigorous course that will require active class participation and considerable out-of-class time. Students will continue to express themselves in Spanish in both written and oral forms, with the added emphasis on Interpersonal and Presentational modes of communications. Students should expect to participate in independent as well as group reading of various texts in Spanish. The class is conducted entirely in Spanish, and students are expected to use only Spanish in the classroom. All AP Spanish Language students are required
to take the AP exam in May (additional cost of approximately $\$ 95.00$ )

## 135 - AP Spanish Literature (GS)

This course is the final course in the advanced sequence and serves as a survey of literature from the Middle Ages to the 20th century. Students in AP Spanish Literature will be introduced to Peninsular and Latin American literature. The Five Competencies, Communication, Cultures, Connections, Comparisons and Communities, will be explored and discussed in depth; these are fully integrated in all class activities. Independent reading, class discussions and literary analysis will be key features of coursework. Students will continue to express themselves in Spanish in both written and oral forms, with the added emphasis on literary criticism and creative writing. Students should expect to participate in independent as well as group reading of various texts in Spanish. To build familiarity with literary criticism, students will be exposed to a wide array of genres (poetry, prose, short stories and theater) representative of the Spanish speaking world. Spanish is used exclusively. All AP Spanish Literature students are required to take the AP exam in May (additional cost of approximately \$95.00)
$(G S)=$ Course qualifies for Global Studies credit

## Fine and Performing Arts Course Descriptions

(All courses are open to 9th -12 th graders, unless otherwise specified)

## 445 - Introduction to Studio Art (No prerequisites) (FAD)

This course encompasses the fundamentals of basic design, in both two-dimensional and three-dimensional formats. Materials include but are not limited to painting, drawing, mixed media, digital media, and clay. Students experience various styles and ideas, with the goal of developing technical skills and expanding creativity.

Emphasis is placed on student choice while practicing each step of the artistic process, from preliminary sketch to display. Introduction to Studio Art is a class for anyone interested in art, whether or not they feel like a "good" artist! Lab fee - $\$ 60$

## 226 - Intermediate Studio Art (Prerequisite:

Introduction to Art or permission of the teacher) (FAD)
This course builds upon the basic skills that were developed in Introduction to Studio Art and further emphasizes how to communicate a message visually. In order to encourage creative approaches with a wide array of finished projects, projects are thematic and centered around student choice. Students experiment with techniques and materials in addition to those used in Introduction to Studio Art, such figure
drawing and the potter's wheel. Lab fee - $\$ 60$

## 225 - Advanced Studio Art (Prerequisite: Introduction to Art and Intermediate Art or permission of the teacher) (FAD)

Projects in this course continue thematically, with individual choices for materials and ideas. Students begin to work in series, creating a group of pieces that reflect advanced technical skills, as well as creative and original insight. The teacher supports the students in expanding technical skill and encouraging creativity, introducing new media and formats, such as public, environmental, or installation art and curating. Lab fee - \$60

## 209 - Portfolio (Full year course, Prerequisites:

## Introduction to Studio Art, Intermediate

Studio Art, Advanced Studio Art, or permission of the teacher) (FAD)
This course is designed for students who wish to further explore the fine arts in a serious manner. They submit a proposal for each series of projects, work independently to execute the pieces (with the teacher as consultant rather than director), participate in critiques of their work, and prepare artwork for display. This course culminates in a part of the annual student art show devoted to Portfolio and AP students. Lab fee - $\$ 60$

## 137 - AP Studio Art (Prerequisites: Introduction to Studio Art, Intermediate Art, and Advanced Studio Art, and permission of the teacher; students who have taken both Graphic Design I and Graphic Design II are eligible with permission of the teacher; summer work/preparation is required) (FAD)

This course allows highly motivated students to do college-level work in the visual arts while still in the Upper School. Students follow the AP guidelines for 2-D Design, Drawing, or 3-D to pursue self-selected concentrations and demonstrate a broad range of ability with a variety of media and techniques. In order to be successful, students must independently exhibit critical judgment, self-discipline, exceptional interest, personal insight, and technical skill. This course culminates in a part of the annual art show devoted to Portfolio and AP students. Students are required to submit an AP Studio Art portfolio. (additional cost of approximately $\$ 95.00$ ). Lab fee - \$60

## 691 - Introduction to Graphic Design (No prerequisites) (ST) (FAD)

This course serves as a fusion between technical skill and artistic mastery. Students will focus on the components of effective illustration and design while creating projects ranging from pop culture graphics, typography portraits, and Lego illustrations to logos, advertisements, and brochures. Students will establish a strong foundation both in conceptual design and in design software. The year will be spent using the Adobe Creative Suite, including InDesign, Illustrator and Photoshop. Lab fee - \$60

## 690 - Intermediate Graphic Design (Prerequisite:

 Introduction to Graphic Design or permission of the teacher) (ST) (FAD)This course builds upon the basic skills that were developed in Introduction to Graphic Design and further develops both technical and artistic skills. Students will be expected to expand their proficiency in all aspects of the design process, including the use of formal design principles, type as image, creative brainstorming, conceptualizing, critical thinking, collaboration, and presentation. The first part of this course will delve into advanced print design, and students will create projects
such as menus, posters, and infographics. Students will also examine graphic design as a component of society, culture and general history, as well as studying various influential designers. The second part of the course will present an overview of basic UX, UI, and web design with the final goal of creating their own website using a web-based website builder and hosting service with a focus on translating their design skills into this new medium. Projects will combine the use of InDesign, Illustrator and Photoshop, and other applications. Lab fee $\$ 60$

## 180 - Advanced Graphic Design (Prerequisite: Introduction to Graphic Design and Intermediate Graphic Design or permission of the teacher) (ST) (FAD)

Projects in this course continue thematically, with individual choices for programs and ideas. Students begin to work in series, creating a group of pieces that reflect advanced technical skills, as well as creative and original insight. The course integrates design principles and software, typography, digital illustration, digital imaging, page layout, and prepress techniques with emphasis on the design process from visualization to production. Students will be responsible for the design and production of a fully integrated campaign consisting of major projects including several components across multiple media forms, as well as some real-life commissions. Individual and collaborative work is expected including branding and packaging as well as prototyping for interactive media. The teacher supports the students in expanding technical skill and encouraging creativity, introducing new media and formats, such as environmental and exhibit design and video editing and production. Students can follow this course with AP Studio Art. Lab fee - $\$ 60$

## 152 - Chorale (Prerequisite: instructor permission)

 (FAD)In Chorale, students learn more advanced music theory, sight-singing skills, ear training, and vocal techniques, building off of the skills and knowledge gained in Concert Choir. This class will focus heavily on the traditional aspect of choral music, adding in more advanced part singing, while incorporating some basic performance
based skills as well. Through the exploration of song, students will also learn about music history and the cultures and styles that have influenced the music we enjoy today. The students participate in two evening performances at school during the academic year, and may be given other performance opportunities throughout the year as well.

## 228 - Symphonic Band (Prerequisite: audition and instructor permission each year) (FAD)

This course develops techniques of instrumental playing, music sight-reading, fundamentals of music theory, discussion of composers, and development of instrumental skills. The music performance level is VBODA Grade IV. Students are exposed to musicality to prepare them for VBODA Grade V music. Students perform in two, possibly three, concerts during the school year. Instrumentation for Symphonic Band: piccolo, flute, oboe, clarinet, bass clarinet, contra-bass clarinet, bassoon, alto saxophone, tenor saxophone, baritone saxophone, trumpet, french horn, trombone, baritone, tuba, string bass, percussion, mallet. (Grades 9-12)

Piano lessons may be offered independently at the school and arranged between the student and the instructors. There is an additional cost for piano lessons.
$(S T)=$ Course qualifies for STEM credit
$(F A D)=$ Course qualifies for Fine Arts Distinction credit

## General Electives Course Descriptions

## 187 - Journalism (GS)

Designed to reveal the fascinating stories of people on campus, Journalism helps students develop information gathering and interviewing skills in the service of composing vibrant human-interest profiles. Students learn to report the news of the school, influence campus affairs, and gain unique leadership opportunities. Journalism is a year-long elective devoted to producing the school magazine -- in print as The Willis Hall Herald and its
digital relatives. Staff members also help produce GeoPrism, a magazine devoted to the Global Studies Program, which makes the course eligible for global studies points. Along the way, students will grapple with the role of the media in our small school community, but also in the context of society at large. We apply what we learn in a real-world application of journalism, including the dilemma of how to fund our printing. All upper school students can join and repeat the course each year. Because the class teaches the art of writing, page design, photography, and graphic design, students earn half a credit toward the fine arts graduation requirement each year. Producing four or more issues each year requires a substantial commitment, but the rewards will be worthwhile, since Herald journalists shape the main forum for student voices on campus. Lab fee - $\$ 60$

## 236 - Yearbook (FAD*)

This year-long course is centered around learning the fundamentals of creating a yearbook and then implementing those skills to publish the annual edition of The Compass. Students are taught the basics of journalism, photography, and graphic design and are evaluated on their ability to engage these skills to write and revise articles, shoot manually on a DSLR camera and caption photos, and design spreads for the yearbook using Adobe Creative Cloud software. Students are required to designate at least one study hall a week to cover school events, and occasional work after school is mandatory. Students must be able to work collaboratively and meet deadlines. Students who take Yearbook and complete designated portfolio assignments on photography and design will earn a half credit toward the fine arts graduation requirement. Yearbook is highly recommended as an elective for students who have completed one or more Graphic Design classes. Lab fee - $\$ 60$

## 572 - Economics and Personal Finance ( $10^{\text {th }}-12^{\text {th }}$ Grades only)

This course will investigate basic economic principles and the foundation for both micro and macro economics. It will include some economic history and theory, consumer behavior, the role of businesses and government in shaping an economy, globalization, and the array of economic indicators that are a part of our daily media. It
will prepare students to be part of a more educated citizenry and will make them better prepared for future courses in economics.

## 230 - Sports Business/Entrepreneurship

This class seeks to provide students with a better understanding of the world of sports business, administration and entrepreneurship. The class is designed to go back to the beginning of the 20th Century and take a look at what was the sports business world back then and to what it has turned into today. This class will also familiarize the student with practical aspects of sports administration. Students will learn about leadership and supervision in sport management, human relations and personnel decisions in sport management, and financial management in physical education and sports. The final goal of the class seeks to provide students with a hands-on experience in what it takes to be an entrepreneur. The students will learn to understand and create the underlying principles of a business plan, to demonstrate the applicability of general business principles, and to build a network of business contacts.
$(F A D)=$ Course qualifies for Fine Arts Distinction credit $\left(F A D^{*}\right)=$ Course qualifies for $1 / 2$ credit for Fine Arts Distinction credit
$(G S)=$ Course qualifies for Global Studies credit

## Term Electives Course Descriptions

## Open to all Upper School students.

## 734 - Theatre Arts - Acting (FAD)

In Theatre Arts - Acting, students will learn acting skills and techniques, focusing primarily on contemporary, 20th century, styles of acting. This class will explore the techniques from the most well known contemporary acting coaches, such as Konstantin Stanislavski, Uta Hagen, Stella Adler, and Sanford Meisner. Students will also be given the opportunity to learn about classical styles of acting, diving into the works of Shakespeare and the like.

Throughout the term, students will practice these techniques through in class exercises, monologue work, and small scene performances.

## 733 - Theatre Arts - Production and Tech (FAD)

In Theatre Arts - Production and Tech, students will explore the world of theatre through the lens of the director, designers, and technicians. This class will focus on the behind the scenes aspects of theatre arts through the reading of scripts, developing directorial concepts and interpretations, creating design concepts, and learning the basics of bringing a show to life from start to finish. Students will also be given the opportunity to learn basic set building skills, prop construction, and lighting and sound design.

## 736 - Gallery Studies (FAD)

This course uses the North Cross School Logan Gallery and Slack Gallery as the primary classroom for hands-on curating of student artwork and includes visits to the Taubman Museum of Art, local galleries, and other museums virtually. Students learn technical logistics like how to mat and frame pieces, make labels, and hang artwork, but more importantly, they consider what happens after art is made - how to further or highlight messages in art through creative arrangements. They also design gallery experiences, from posters and maps of exhibits to interactive activities that encourage guests to engage with the art and exhibits. In addition to exploring art, this course is for students interested in museum work, interior design, and graphic design.

## 735 - Art of the 21st Century (FAD)

This course focuses on the work of artists who are currently living and how contemporary art reflects the world we live in, such as our everyday and personal experiences, social/political culture, and current events and global issues. Students will explore how contemporary art has been influenced by the art of previous eras but also how it is often distinctly different, especially in format and materials. The class largely involves investigation of current artists and their work. Other core components include field trips such as to the Taubman Museum of Art and virtual visits to other
museums to provide firsthand experience, and students will mirror their study of art and artists with some visual responses of their own. There are no prerequisites for this course, but a willingness to see things from different perspectives is required as your definition of art and how you see the world might be challenged!

## 695 - Philosophy, Evolutionary Psychology, and Other Stuff

Take a trip with Mr. Lamas as we discuss the grand ideas of the meaning and purpose of life, what is the 'good life' and the many reasons we act the way we do. We will read excerpts from the great (and not-so-great) philosophers, evolutionary psychologists, scientists and other thinkers and discuss their arguments in a free-wheeling and stress-free class. The goal of the course is to examine how people live and act and apply that clear eye to yourself.

## 696 - Creative Writing (FAD)

The written word has immense possibilities for creative expression. In this course, we will explore various genres of writing, including narratives, poetry, short fiction writing, memoir, and more. Students will work on craftsmanship, developing their voice, and stretching their creative pursuits. The class will run as a workshop environment, so students should be prepared to share their writing with classmates and participate in discussions with the goal of improving skills. Students will be encouraged to submit work to Calliope.

## 731 - History and Film (FAD)

The United States's history has been repeatedly depicted across multiple media as a way of commemorating and celebrating key events and achievements: This public memory, however, has evolved over time. This course seeks to understand key moments in American history through a combination of film, music, and readings with a particular focus on how and why the way we remember them has changed across time.

## 561 - Film Studies (FAD)

What makes some movies good, other movies great, and even fewer movies unforgettable? Why are we still talking about Star Wars 40 years later but we forgot about Last

Action Hero five minutes after its release? How did Jaws forever change the way movies are made? This course will examine the range of tools available to film-makers, developing critical appreciation for the choices they make, their successes, and their failures. We will view movies through multiple lenses; chief among them: the technical and aesthetic aspects that make films watchable. From lighting to sound, filming to editing, story to reception, we will view the history of cinema and history at the cinema. Films to study include major interventions in cinema as well as student interest.

## 702 - Introduction to Theatre (FAD)

Rather than a "sit down and read it from the textbook" approach, this course is highly participatory, and most assignments are completed during the class period. It is suitable for all students, whether they have previous theatre experience or not. The course includes brief introductions to various drama formats. From the sweeping movements of the Greek chorus, to the highly entertaining medieval cycle plays, to brief scenes from Renaissance and contemporary plays, students will become familiar with the history of Western Theatre. We will also broaden our view to work with some Japanese Kabuki and Noh plays. There are theatre games to enhance self-confidence, vocal production, and stage movement.

## 568 - Leadership Development

A course to develop and enhance leadership skills, promote positive thinking, help students find leadership potential in themselves, and expand a sense of community in our school environment.

## 563 - Localism/ Political Leadership

How can we understand the world without first understanding the place we call home? Well, here's your opportunity to explore how global issues crop up locally. We will explore surrounding local governments, local production (food, energy, etc), and the extent to which they have power to affect positive change. In addition, we will explore Leadership for America's "convergent leadership" as a means to understand how students might contribute to solutions of local problems once they are voting age adults.

## 732 - Who are the Russians?

That question has eluded many outside and inside Russia, and the answer hides behind the thick white veil of an Arctic blizzard. This vast land, stretching from Europe to Asia and from the Baltics to the Pacific, continues to captivate many scholars. In this class, we will discover Russia's identity through our focus on the country's intellectuals-that is, its poets, novelists, artists, composers, leaders, clerics, and revolutionaries. We will find elements of Russian identity in the mystical chants of the Russian Orthodox Church to the jewel-studded palatial halls in St. Petersburg. From the folklore and fairy tales of Russian peasants to the romanticism of Pushkin and the realism of Tolstoy. We will awe at the paintings of Ilya Repin, and get into the Russian mind through the comedic plays of Anton Chekhov, struggle with prisoners through grueling memoirs from the Soviet gulags, and witness the daily rituals of the Russian village. We seek to answer the same question asked by Russians throughout history: What does it mean to be Russian? We will find that the answer is as ever-changing as Russia itself.

## 564 - Public Speaking

There are means and methods by which an individual might most effectively present their ideas to people verbally and that is the art we will study. Rooting our study in the understanding of effective rhetoric, progressing to studies of effective orators from our world, and finishing with practical application of the tools and tricks necessary for effective public speaking.

## 730 - Intro to Italian Language and Culture

In this class, students will explore the basics of the Italian language while also engaging with Italian culture in various forms. The course will develop basic speaking, listening, writing, and reading skills and explore the five competencies-Communication, Cultures, Connections, Comparisons and Communities-and culture will be fully integrated into language learning. No prior language study is required. This is a term elective and does not serve to fulfill graduation language requirements.

## 565-Shakespeare

We will tour Shakespeare's poetry and tragedies in this trimester long course by reading the tragedies, "staging" crucial scenes in class, consuming productions of the

Bard's tragedies, and comparing and contrasting his most famous tragic heroes.

## 741 - Introduction to Psychology

This elective course will introduce students to the history of psychology and its major schools of thought. Students will study human development, social psychology, emotions, and abnormal behavior. They will also engage in activities and discussions that explore how psychology relates to their own life with topics such as perception, memory, and motivation.

## 737 - Introduction to Aviation (Fall Term) (ST)

This course, based on the resources and guidance provided by the Aircraft Owners and Pilots Association (AOPA) is a comprehensive overview of the principles of flight instruments, flight planning, and aviation regulations. The course will cover the history of aviation, including the development of the airplane and the evolution of aviation technology. Students will learn about the different types of aircraft, their components, and how they are operated. They will also learn about different types of airspace and how to navigate through them. Students will learn the basics of flight planning, including weather considerations, aircraft performance, and navigation techniques. The course will also cover aviation regulations and procedures, including pre-flight inspections, airspace restrictions, and radio communication protocols. Students will gain an understanding of the importance of safety in aviation and learn the proper techniques for emergency situations. By the end of the course, students will have a basic understanding of aviation and be prepared to take their first steps towards becoming a pilot or pursuing a career in aviation (partially generated by ChatGPT).

## 738 - Aerospace History (Winter Term) (ST)

This course, based on the resources and guidance provided by the Aircraft Owners and Pilots Association (AOPA), is designed to introduce students to the rich history of aerospace. It is a comprehensive overview of the evolution of aviation and space exploration, from the early pioneers to modern-day achievements. The course will cover the early days of aviation, including the Wright brothers'; first flight and the development of military aviation during World War I and II. Students will learn about the rise of commercial aviation and the advancements that allowed air travel to become a global phenomenon. Students will learn about the first human spaceflight, the moon landing, and the development of the International Space Station.

Throughout the course, students will have the opportunity to explore the historical context of aerospace development and the cultural, economic, and political factors that influenced it. They will learn about the contributions of key figures in aerospace history and the breakthroughs that have shaped the industry. By the end of the course, students will have a thorough understanding of the history of aerospace and its impact on society, culture, and technology. They will have a new appreciation for the innovators and pioneers who have propelled aerospace forward and inspired generations to explore the unknown (partially generated by ChatGPT).

## 739 - Aerospace Engineering (Spring Term) (ST)

This course, based on the resources and guidance provided by the Aircraft Owners and Pilots Association (AOPA), is designed to introduce students to the principles of Aviation Engineering Design. It is a comprehensive overview of the engineering design process as it relates to aviation, from conceptualization to prototyping to production. The course will cover the fundamental principles of aviation engineering, including aerodynamics, structures, propulsion, and avionics. Students will learn how these principles are applied in the design of aircraft and spacecraft, and how they have evolved over time. The course will also cover the engineering design process, including problem definition, concept generation, analysis and simulation, and testing and validation. Students will learn how to apply these principles in the design of aircraft systems, components, and subassemblies. By the end of the course, students will have a thorough understanding of the principles of aviation engineering design and the design process. They will be able to apply these principles in the design of aircraft systems and components and be prepared to pursue further education and training in the field (partially generated by ChatGPT).
$(F A D)=$ Course qualifies for Fine Arts Distinction credit $(S T)=$ Course qualifies for STEM credit

## Non-Credit

## Course Descriptions

## 571 - Life Skills (Required course for all 9th grade students)

Life Skills is a required course for all ninth graders that expands on social-emotional learning. Topics include
stress management, self care, substance abuse, maintaining healthy relationships, sexuality, effective communication and technology use. The course utilizes a variety of discussion tools to examine adolescent health and wellness topics. Students are challenged to examine their own decisions and behaviors. Students are expected to participate in class and complete in-class assignments.

