# 2024-2025 CUBRICULLUM GIIDE 

## TEACHING AND LEARNING

 AT THE FREDERICK GUNN SCHOOL
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## DIPLOMA REQUIREMENTS

FOR ALL STUDENTS ENROLLED AT THE FREDERICK GUNN SCHOOL, 18 CREDITS ARE REQUIRED FOR A DIPLOMA.

## THE DIPLOMA REQUIREMENTS INCLUDE:

4 ENGLISH (required every year)
3 HISTORY (including U.S. History)
3 LAB SCIENCE
3 WORLD LANGUAGES (through Level III)
3 MATHEMATICS (through Algebra II)
1 CREDIT VISUAL AND/OR PERFORMING ART
(This can be accomplished through three single-term courses or one full-year course.)
IN ADDITION, SUCCESSFUL COMPLETION OR ADHERENCE TO:
1 TERM OF PATHWAYS (as a freshman)
1 TERM OF CITIZEN GUNN (as a sophomore)
1 TERM OF THE DECLARATION (as a junior)
THE CIVIC CHANGEMAKERS PROJECT (CCP) (30-hour service commitment as a senior) GOOD CITIZENSHIP (civility and law-abiding behavior)

Seniors must earn a final average of 70 or above and pass all cumulative final exams in diploma requirement courses to meet diploma requirements. Seniors on Academic Warning at year's end do not receive an official diploma. The school reserves the right to withhold a diploma from students with poor citizenship. In such cases, a student receives a Certificate of Attendance and may petition the Head of School in writing for a diploma upon successful, documented completion of one year of college.

## DIPLOMA REQUIREMENTS: <br> 4 ENGLISH (required every year)

Each course is labeled with a number (1-4), indicating its level of rigor or challenge (with 4 being the most challenging). Any Honors students in their junior or senior year who are interested in taking the AP Language and Composition exam should speak to their teacher.

## REQUIRED COURSES

ENGLISH LANGUAGE AND COMPOSITION English Language and Composition is an intensive course for new international students needing a thorough preparation in English listening, reading writing, and conversation for successful academic work in a U.S. college preparatory program. Students review verbs, verbals, and syntax for both formal and informal English to reinforce an already strong command of English grammar. They also study academic and idiomatic vocabulary. The course is open only to new international students.

## ENGLISH I

English I seeks to establish a solid foundation for subsequent study in both literature and composition. Understanding the role of the hero and the imagination as the impetus for storytelling are two themes followed throughou the year. Through an examination of a range of iterature, students are encouraged to consider other perspectives, reflect on their own perspective, and begin to recognize patterns in literature. Class discussions and group work help to facilitate these explorations. Writing assignments are creative expository, and critical in nature. In addition, instruction in advanced reading skills and the study f rhetoric and grammar give students a sense f the structure and the patterns found in various literary forms, including short stories, novels, poetry, and drama.

## NGLISH II

English II sets forth to explore the enduring and evolving power of literature. In this journey, students read epic poetry, novels, drama, and short fiction, pairing older and more contemporary texts to examine the human condition through subjects such as heroism, villainy, otherness, loyalty, honor, and power. Through class discussions and written reflections, students learn to engage with the assigned readings from an increasingly analytical perspective. In addition, students review grammatical concepts in order to improve their own writing skills, study vocabulary in context, and continue to develop as critical thinkers.

## ENGLISH II HONORS

Students in this class move into analytical work earlier than those in the regular course and may be asked to examine additional and alternative readings. Admission is based on past performance eacher recommendations, and approval of the Academic Office and English Department Chair

## LOOKING FOR AMERICA (2)

This course explores an American landscape literally and imaginatively, and considers how the idea of America shapes and is shaped by the stories we tell about it. Students will read a selection of fiction and non-fiction with a particular focus on the perspectives of immigrants, dreamers, outcasts, and wanderers, keeping in mind the literary and historical contexts in which they are grounded. As in ower-level English courses, students will continue o develop their skills as close readers, critical and creative thinkers, and analytical writers.

HONORS ENGLISH: THE SOCIOCRITICAL ESSAY(3)
This yearlong Honors English course, open to juniors and seniors, is designed to explore and practice the personal essay within the context of a larger society.. It explores concepts of self and society through a variety of specific topics, including literacy, education identity, and ethics. Students will engage, n class discussion led by their own critical thinking nd critical questioning while also centering their wn lived experience. Through that process, they will larn to examine their own ideas as they work oward developing a more fully formed witten voice. This course contains a robust writing component his course as mus on mor witen product. as moch as the fall and spring whe At he end of to e expected to develop portfolios showcasing thei written work.

## HONORS ENGLISH: LITERARY CRITICISM AND CRAFT (3)

This yearlong Honors English course, open to juniors and seniors, is an intensive examination of literature from the writer's perspective. Students will assume the roles of writers, learning from other writers, analyzing critically the formal elements of poetry, drama, and literary short fiction to understand how those elements combine to form a fully-realized work of literature. While establishing this theoretical foundation, students will take up the pen and create original works of poetry, drama, and short fiction in their own right. Assignments will include daily reading assignments, critical essays, and opportunities to craft and workshop original works of poetry, drama, and short fiction.

CRITICAL READING AND COMPOSITION (1)
The purpose of this course is to give students the opportunity to take a deep dive into basic approaches to critical reading, discussion, and composition. Over the course of the school year, they will explore a variety of literary forms - including short fiction, the novel, drama, and poetry - with a strong emphasis placed on close reading skills. Writing assignments will include frequent journal responses as well as longer, more formal pieces, and each term will focus on at least one particula type of expository essay. Time and attention will be devoted to each stage of the writing process: from pre-writing through drafting and revision. As well, we will invest significant time in examining grammar and usage topics specifically related to the construction and revision of sentences

## LITERARY GENRES (2)

Literary Genres focuses on the close reading of a variety of forms of literature and the ways in which their structures help to create meaning. The class will examine scripts for stage and screen, novels, short stories, and poetry/music, spanning the 16th through 21st centuries, with each term focusing on a particular form. Students will be expected to read and engage with texts through formal and informal discussion journal writing and essay writing They will also give presentations on course-appropriate wopics. As in lower-level English courses, students topics. As inue to devel their skill as stose readers, willitical and ore

## ADVANCED PLACEMENT ENGLISH

 LITERATURE AND COMPOSITION (4)The AP English Literature course focuses on the careful reading, critical analysis, and enjoyment of imaginative literature. It includes the close reading of selected works of fiction, drama, and poetry from the 16th to the 21st century; the development of critical thinking skills; formal essay and informal journal writing; and AP practice exercises. Because a high score on the AP exam may earn college credit, the course may be considered equivalent to college freshman English. A supplementary reading assignment will be required over the summer for review in the fall. Admission is based on past performance, teacher recommendations, and approval of the Academic Office and English Department Chair.

## NATURE WRITERS (2)

This is a writing-intensive field course for students who are interested in nature and nature writing. New England is and has been home to some of the most well-respected nature writing and writers, and you can join in that tradition! We will read and write both poetry and nature essays while also spending time outside looking listening, and touching the natura and built worlds that surround us. Expect to see this world in new ways, and learn how to communicat your new perspective through a variety of written genres, including personal essay, local history, and advocacy papers.

## HONORS ENGLISH: READING AND

## RHETORIC (3)

This yearlong Honors English course, open to juniors and seniors, is designed to help students make the shift from reading and writing as skills to reading and writing as art forms. Students will explore and practice rhetorical analysis both in its classic contex of speech/essay critique as well as using it as a lens for reading literature. By expanding their notion of "text" to include more than just essays, poems, and stories, students will think critically about the world around them as they observe advertisements, social media posts, posters, songs, and more The overall media posts, pourse is to provide students with the gkills and tools necessary to beareful wonsidered and persuasive readers, writers, and thinkers.

THE DEATH OF THE AUTHOR: HUMAN EXPRESSION IN THE AGE OF ARTIFICIAL INTELLIGENCE (2)
This course seeks to track down and unmask the complicated, shadowy figure of the author by interrogating the notion of authorship itself. What, for instance, does it mean to be original? What does it mean to be creative? Where does inspiration come from, and what is the relationship between an idea and the expression that follows from it? What, ultimately, can it mean to claim ownership of an essay, a poem, a song, a story? Students will complete a number of short- and long-term creative projects and read a broad range of texts, including essays, fiction, poetry, articles, and legal opinions, to explore the above questions and the implications they have for huma expression today.


## DIPLOMA REQUIREMENTS:

3 WORLD LANGUAGES (through Level III)

## REQUIRED COURSES FRENCH LANGUAGE

FRENCH I
This course provides students with an introduction to the four basic skills of language learning: listening, speaking, reading, and writing. Students are introduced to basic French syntax and structures, verb forms, and extensive vocabulary via thematic units. They develop an awareness of Francophone culture through exposure to a variety of authentic sources. Students must earn a passing grade in the course and a minimum score of $50 \%$ on the cumulative final exam in order to receive credit and advance to the next level.

FRENCH II AND FRENCH II HONORS In these courses, students will continue to hone their listening, speaking, reading, and writing skills. Thematic units serve as the vehicle for expanding the students' vocabulary and exposing them to a wider variety of grammar structures Cultural context will continue to be a key facto in increasing the students' knowledge and understanding of the Francophone world. Students understanding of the Francophone world. Stude minimum score of $50 \%$ on the cumulative final exam in order to receive credit and advance to the ext level. The materials for these courses are from 'acord 2 (Vista), original materials generated by and 2 (Vistal cultura authentic gources that are adapted

FRENCH III AND FRENCH III HONORS In these courses, students will build upon the skills they have developed over the past two years. They will continue to acquire a wider variety of verb tenses and more advanced grammar structures, expand their range of vocabulary and idiomatic expressions, and further their knowledge and understanding of the Francophone world. Students will also enhance their reading skills by reading onger passages from the text as well as a shor reader. Students must earn a passing grade in the course in order to receive credit and fulfill their graduation requirement.

## ELECTIVE COURSES FRENCH LANGUAGE

FRENCH IV: UNDERSTANDING OF CONTEMPORARY FRENCH CULTURE
"Liberté, égalité, fraternité" define the French spirit and the core values and fundamental principles of French society. These three words also apply to French culture, free, diverse, but always unified This course will provide students with an introduction to French contemporary culture through the study of modern French literature, fine arts, architecture, cinema, music, sport, fashion, and gastronomy. Students will practice in listening eading, and writing short paragraphs, and review basic grammar concepts. The main focus of this course will be on the development of speaking skills through group and individual projects Admission is based on past performance, teache ecommendation, and approval of the Department Chair.

ADVANCED PLACEMENT FRENCH LANGUAGE
This course is conducted entirely in French and his course is conds to and and Culture Exam in the Spring Term Students deverm. Sudents and writing through a study of six cultural themes: os défis mondiaux la science ot la technologie e Vie co lé, l'esthétique. Video clips, sons, line soure, end ne sourcs, and woper suply equired exts and are used weekly to explore he Francophone world. Expectations of studen participation are high. The Advanced Placemen exam is required of all students. Admission is based on past performance in French IV, teacher recommendation and approval of the Department Chair.

## REQUIRED COURSES maNDARIN LANGUAGE

MANDARIN I
This course in Mandarin (Pǔtōnghuà) is designed for students with minimal to no prior exposure to the Chinese language. The emphasis of this course is to develop listening, speaking, reading, and writing skills using simplified Chinese characters. These will be taught using course materials, including the Integrated Chinese 4th Edition Level 1 Textbook, which students will progress halfway through by the end of the year, learning approximately 150 words and 175 characters. Students will develop the ability to make introductions, discuss family, schedule make introductions, discuss family, schedule dislikes. Cultural lessons will also complement dislikes. Cultural lessons will also compleme anguage instruction to help students gain a broader understanding of the Chinese-speaking world. Students have the option to certify thei interpersonal language abilities by taking the AAPPL exam in the spring. A passing grade in the course and a minimum score of $50 \%$ on the and advance to the next level.

## MANDARIN II

This course in Mandarin (Pǔtōnghuà) is designed for students who have had one full year of study or equivalent in Chinese. Students will study more complex grammar and specialized vocabulary to further develop their listening, speaking, reading, and writing skills. Greater emphasis is placed on speaking and writing at length, with the goal of practicing paragraph-length discourse. Course materials include the Integrated Chinese 4th Edition Level 1 Textbook, which students will study during the second half of the academic year, learning over 200 new words and characters. Cultural lessons will complement language instruction to help students gain a broader understanding of the Chinese-speaking world. Students have the option to certify their interpersonal language abilities by taking the AAPPL exam in the spring. A passing grade in the course and a minimum score of $50 \%$ on the cumulative final exam is required to receiv credit and advance to the next level.

## MANDARIN III

This course in Mandarin (Pǔtōnghuà) is designed for students who have had two full years of study or equivalent in Chinese. Students will continue to study more complex grammar and specialized vocabulary to further develop their listening, speaking, reading, and writing skills. Greater emphasis is placed on listening to and reading longer-form materials as well as speaking and writing at length, with the goal of achieving comfort producing and engaging with
paragraph-length discourse. Course materials include the Integrated Chinese 4th Edition Leve 2 Textbook as well as supplementary, authentic reading and listening materials. Students will learn hundreds of new words and characters and be expected to communicate almost entirely in Mandarin in the classroom. Cultural lessons will lso complement language instruction to help students gain a broader understanding of the Chinese speaking world Students have the option Chinese-speaking world. Students have the option to certing the taking the AAPPL exam in the spring. A passing grade in the course is required to receive credit and fulfill graduation requirements

## ELECTIVE COURSE MANDARIN LANGUAGE

## MANDARIN IV

This elective course in Mandarin (Pǔtōnghuà) is for students who have had three full years of study or equivalent, or greater, in Chinese. Students will attend class in an immersive language environment in order to best improve their listening, speaking, reading, and writing skills. This course has no designated textbook, but will instead pull authentic language materials from a variety of sources to language materials from a variety of sources to the Chinese language. Students will continue to study more complex grammar structures and o study more cory yincluding idions, and specill routinely be expected to produce long and will routinely be expected to produce longer form and writing. Custural expens and discussions and wring. Culural lessons and discussions will also complement language instruction to help studens gain greanderstanding of the Chinese speaking word. Studar a couraged to certify their ing terpersonaling abilities by taking the AAPPL exam in the spring. Admission to the course is based on past performance, teacher recommendation, and approval of the World Languages Department Chair.

## REQUIRED COURSES SPANISH LANGUAGE

## SPANISH I

This course provides students with a foundation in the four essential skills of language learning: listening, speaking, reading, and writing. Thematic units serve as the vehicle for introducing students to basic Spanish syntax and structures, verb forms, and extensive vocabulary. Students also develop an awareness of Hispanic culture through exposure to a variety of authentic sources. Students must earn a passing grade in the course and a minimum score of $50 \%$ on the cumulative final exam in order to receive credit and advance to the next level. The materials for this course are from Senderos 1 and original culturally authentic materials generated by有. the teacher.

SPANISH II AND SPANISH II HONORS In these courses, students will continue to hon their listening, speaking, reading, and writing skills. Thematic units serve as the vehicle fo expanding the students' vocabulary and exposing them to a wider variety of grammar structures. Cultural context will continue to be a key facto in increasing the students' knowledge and understanding of the Hispanic world. Students must earn a passing grade in the course and a minimum score of $50 \%$ on the cumulative final exam in order to receive credit and advance to the next level. The materials for these courses are original materials generated by the teacher and culturally authentic sources that are adapted by the teacher.

SPANISH III AND SPANISH III HONORS In these courses, students will build upon the skills hey have developed over the past two years. They will continue to acquire a wider variety of verb tenses and more advanced grammar structures, expand their range of vocabulary and idiomatic expressions, and further their knowledge and understanding of the Hispanic world. Students will continue to enhance their reading and listening skills through a wide variety of activities and projects. Students must earn a passing grade in the course in order to receive credit and fulfill their the course in orvirement The materials for this graduation from Sedes 3 and original, cultur authentic materials generated by the teacher.

## ELECTIVE COURSES SPANISH LANGUAGE

## SPANISH IV

POPULAR CULTURE IN LATIN AMERICA
This course will embark on historical moments vital to understanding the shaping of Latin America today. It will explore social and cultural identities crucial to understanding Latin American cultures Taught primarily in Spanish, it will seek to refine and expand the basic skills of listening, reading writing, and speaking. Students will research, read, and discuss various works, including music, poems, online resources, excerpts from interviews, short stories, and novels grouped into thematic units. In addition, students will screen and discuss films relevant to the themes. The course will provide students with a review and expansion of essentia grammar concepts, intending to develop the student's ease of expression in conversation and writing.

## ADVANCE

## LANGUAGE

This course is condu and propares studerts angua and Culture Exam in Sprish Students develop proficiency in listening, speaking, reading, writing, and culture through the study of six themes: Global Challenges, Science and Technology, Contemporary Life, Personal and Public Identities, Families and Communities, and Beauty and Aesthetics. Video clips, songs, online sources, and newspapers supplement the required exts and are used to explore the Hispanic world. Expectations for student participation are high, and he Advanced Placement exam is required of all students. Admission is based on past performance in Spanish IV, teacher recommendation, and approval of the World Languages Department Chair.

## WORLD LANGUAGE <br> DEPARTMENT ELECTIVE COURSE

WORLD LANGUAGE CULTURES In this course, students will explore a comprehensive understanding of diverse cultural elements from French, Mandarin, and Spanish backgrounds. They will delve into the historical and geographical contexts of countries where these languages are spoken, engage with classic iterature, including novels, and analyze related films and video clips. Additionally, students will learn about and commemorate common holidays, develop fundamental grammar and vocabulary skills, and examine various forms of art. Those with skills, and examine various forms of art. Those with prior language experience will take on leader designed to cultivate and enrich students' cultura designed to cultvate and enrich students' cultur awareness within the languages offered by the World Language Department. Prerequisites include eacher recommendation and approval from the World Languages Department Chair. Texts includ The House on Mango Street by Sandra Cisneros, Colors of the Mountain by Da Chen, and Waiting for Godot by Samuel Beckett.

## NOTE: THE DEPARTMENT RESERVES THE

 RIGHT TO OFFER ONLY THOSE ELECTIVE OR ACCELERATED COURSES THAT MEET MINIMUM ENROLLMENT REQUIREMENTS.
## INDEPENDENT STUDY PROJECT

The Frederick Gunn School supports the study of languages not offered by our faculty through our Independent Study Project (ISP) option. Students who have a foundation of study or speaking in a non-offered language can be supported through an online learning platform and supervised by the World Languages Department Chair. Please follow the ISP process at the end of this guide and note that an exemption can be made to the prerequisite of ISPs only being open to returning students.


## DIPLOMA REQUIREMENTS:

## 3 MATHEMATICS (through Algebra II)

## REQUIRED COURSES

## MATHEMATICS 10

## ALGEBRAI

This is an introductory course in algebra. Topics include the field axioms, operations on real numbers, solving linear equations and systems of linear equations, graphing linear equations and inequalities, exponents, radicals, polynomials and actoring, and quadratic functions. There is a heavy emphasis on problem-solving strategies. A TI-84 Pus graphing calculator is required. Students must pass both the course and the cumulative final exam in order to receive credit in this diploma requirement course.

## MATHEMATICS 20 GEOMETRY

This course emphasizes problem-solving in real-life situations using geometric concepts. Formal proofs are introduced but greater attention is devoted to practical applications, such as perpendicular lines and area, as well as the language of geometry. A TI-84 Plus graphing calculator is required. Students must pass both the course and the cumulative final exam held at the end of the Winter Term in order to receive credit in this diploma-requirement course. Students will study algebra during the Spring Term.

## MATHEMATICS 21 GEOMETRY

This course stresses the language of geometry, he development of proof, and the appropriate applications from algebra. The use of definitions, postulates, and theorems to justify conclusions will be emphasized. A TI-84 Plus graphing calculator is required. Admission is based on past performance, teacher recommendation and department chair approval. Students must pass both the course and the cumulative final exam in order to receive credit in this diploma-requirement course.

MATHEMATICS 29 TOPICS IN ALGEBRA II This is a second course in algebra. Topics include an in-depth look at linear, quadratic, and rational unctions. Other topics may include: statistics, probability, and trigonometry. Students will be asked to analyze problems analytically, numerically, and graphically. A Tl-84 Plus graphing calculator is required. Students will be placed in this course based on placement test results, current teacher recommendation, and department chair approval. Students must pass both the course and the cumulative final exam in order to receive credit in this diploma-requirement course.

## MATHEMATICS 30 ALGEBRA

This is a second course in algebra. Topics include the natural numbers and integers, rational numbers, linear equations, polynomials and factoring, coordinate geometry, complex numbers, relations and functions, exponents and logarithms, quadratic relations, and word problems. A TI-84 Plus graphing calculator is required. Students must pass both the course and the cumulative final exam in order to receive credit in this diploma-requirement course

## MATHEMATICS 32 ALGEBRA II HONORS

 AND TRIGONOMETRYThis is a more demanding and enriched Algebra II curriculum with additional topics that include ransformations of functions, exponential and ogarithmic functions, trigonometry, the law of sines and cosines, and complex numbers. This class brings together talented students who enjoy math and whose scholarship indicates a strong sense of responsibility. Admission is based upon past performance, teacher recommendation, and department chair approval. A TI-84 Plus graphing calculator is required. Students must pass both the course and the cumulative final exam in order to receive credit in this diploma-requirement course.

## ELECTIVE <br> COURSES

## MATHEMATICS 40

## OPICS IN MATHEMATIC

This course is open to any student who ha completed Algebra II. Throughout the year, students will tackle various concepts related to inancial literacy. Some of the main topics include inancial responsibility, credit and privacy concerns, exploring insurance, taxes, saving for retirement, and investing. Various projects will be given so hat students can explore these topics relevant to heir own experiences and interests. This course allows students to see practical applications of mathematics in their future.

## MATHEMATICS 41 STATISTICS

This course is for students who have completed Algebra II. The course is intended to expose students to a selection of fundamental concepts in statistics while making the underlying, implicit assumptions of the field about the relationship between math and the world explicit. The fall will focus on the nature of measurement. The winter will concentrate on what "data" means and statistic's methodological framework therein. Lastly, the spring will look at statistics in action, from student projects to how large language models (Al) work. The course will explore these topics and themes through a mixture of primarily class discussions and in-class activities.

## MATHEMATICS 45 PRECALCULUS

This course is intended for students who have completed Algebra II and want to continue their study towards Calculus. Topics include: analysis of polynomial functions, exponential and logarithmic functions, trigonometric functions, sequences and series, complex numbers, translating graphs, and applications. Heavy emphasis is placed on trigonometry. Admission is based on pas performance, teacher recommendation, and department chair approval. A TI-84 Plus graphing calculator is required.

## MATHEMATICS 50 TRIGONOMETRY/

 CALCULUS AThis course is open to students who have completed Algebra Il and who have received a recommendation from their previous teacher and the department chair. During the Fall Term, students will do a review of functions in preparation for dealing with trigonometric functions as the main topic of study. Topics will include the unit circle, solving trigonometric equations, producing trigonometric graphs, the law of sines and cosines, and trig proofs. During the Winter Term, students will dive into parametric and polar functions, series and vectors During the Spring Term, students will begin thei study of calculus, using the AP Curriculum AB, and will look to complete as much of the AP curriculum surrounding limits and derivatives as possible. If ime allows, students will get an introduction to integrals.

## MATHEMATICS 51 CALCULUS AND

 ANALYTIC GEOMETRYThis course is intended for students who hav ompleted Precalculus and have a knowledg of college preparatory mathematics, including algebra, axiomatic geometry, trigonometry, and analytic geometry. It does not assume that they have acquired a sound understanding of the theory felementary functions. The development of this understanding is the first priority of the course. Differentiation and integration techniques and applications will be studied. Admission is based on past performance, teacher recommendation, and department chair approval. A T1-84 Plus graphing calculator is required.

## MATHEMATICS 52 ADVANCED PLACEMENT

CALCULUS AB
This course follows the AP syllabus for Calculus $A B$. The course is intended for students who have completed Precalculus or Algebra II Honors and Trigonometry and have a thorough knowledge of college preparatory mathematics, including algebra, axiomatic geometry, trigonometry, and analytic geometry. Heavy emphasis is placed on the levelopment of differential and integral calculus. dmission is based on past performance teach rommation and departm recommendation, and department chair approva The Advanced Placement exam is required of e. A TI-84 Plus graphing calculator is required


## ONE-TERM <br> COURSES

INTRODUCTION TO ENGINEERING
This course is designed to provide students with an introduction to the engineering design process, and provide hands-on experience using Onshape, a cloud-based computer-aided design (CAD) software. The main focus of the course will be on a trimester-long project, where students will work in teams to design and build a remote-controlled hovercraft. Throughout this project, students will learn the principles of engineering design, including conceptualization, prototyping, testing, and iteration. By the end of the course, students will have a deep understanding of the engineering design process and the skills needed to use computer-aided design software to begin designing and building their own projects. No prior experience necessary.

## FULL-YEAR COURSES

ENGINEERING I
In this full-year engineering course, students wil dive deeper into the engineering design process as they work through a number of individual and group projects, utilizing technologies such as Onshape, Arduino, Raspberry Pi, and Python cod ing. Building on prior knowledge, students wi II experiment with more advanced CAD techniques o create, edit, analyze 3D models, and prepare their designs for fabrication. Additionally, students will work through projects that utilize both an Arduino microcontroller and a Raspberry Pi, a small, low-cost computer, to build projects that interact with the physical world. They will learn how to control these devices using Python, a widely used programming language, and use it to read sensor data, control devices, and communicate with other systems. Throughout the cate with other systems. Throughout the course, students will work to integr culminating in a final project where students will apply their skills and knowledge to design, build apply their skills and knowedge their own project. Prerequisite: Introduction to Engineering or similar.

## ADVANCED ENGINEERING

Advanced Engineering is a challenging course that combines hands-on engineering projects with entrepreneurship skills. The course focuses on the design, development, and
commercialization of innovative engineering solutions. Students will work in teams to complete a capstone project that integrates engineering principles with business strategies. The project will require students to identify an engineering problem, conduct market research, and create a product that addresses the problem. This course is designed for students with a strong background in engineering who are interested in applying their skills in a real-world setting. Students will develop a deep understanding of how to create and launch a successful engineering-based startup, and will gain valuable experience in product development, market analysis, and business planning. The course is an excellent opportunity for students who are interested in entrepreneurship, innovation, and the commercialization of technology. Prerequisite: Engineering I or similar.

## NTRODUCTION TO ROBOTICS

This full-year course will use the Vex Robotic platform as a way for students to learn the undamental concepts of robotics and programming. Students will work in teams to design, build, and program robots using Vex Robotics kits and software. Through hands-on projects and challenges, students will learn about mechanical design, electronics, sensor integration, and programming concepts such as control structures, loops, and functions. Additionally, this course will cover the use of VEXcode, a text-based programming language that allows students to write programs to contro their robots. A strong emphasis will be placed on problem-solving, critical thinking, and collaboration, as students work together to design and program their robots to complete various challenges and competitions. By the end of the course, students will have gained a solid foundation in robotics and programming, and will be able to apply what they have learned to design and build robots for various applications. No prior experience necessary


## DIPLOMA REQUIREMENTS 3 LAB SCIENCE

## LABORATORY counses

EARTH AND PHYSICAL SCIENCE This course provides students with an introduction experiential learning in the areas of physics and chemistry. Students will explore how science relates to their lives and will acquire some of the skills required to continue their study of science. They will learn to work with formulas, tak measurements, follow and generate laboratory procedures, collect and analyze data, read articles bout science, debate scientific ideas, study scientists and inventors, and prepare presentations. Major topics include: Newton's laws, work, energy, and electricity (physics); and the atom, gas laws, hemical reactions, and bonding (chemistry). Students will develop skills in observation, analysis, and reasoning in addition to pertinent content that will support future scientific studies and promote a deeper awareness of the world around them.

## biology

This course introduces basic concepts in biological science, including cell structure and functions, cell physiology, and cellular reproduction. Also covered are basic living systems (digestion, circulation, eproduction, etc.), genetics, evolution, and ecology. Weekly laboratory exercises are an integral part of the course. Prerequisite: permission of Science Department Chair.

## BIOLOGY HONORS

This course introduces basic concepts in biological science, including evolution, plant biology, animal biology, cellular physiology and organization and forest and stream ecology. There will be regular labs in and outside of the classroom that are integral to the course. There will be regular discussions and presentations on topics related to our course material. Prerequisites: Earth and Physical Science and recommendation of the department.

ADVANCED PLACEMENT BIOLOGY This course follows the Advanced Placement curriculum and is a rigorous, full-year, college-leve biology course. The curriculum focuses on the four "Big Ideas" of biology: Evolution, Energy and Molecular Building Blocks, Information Storage and Retrieval, and System Interactions. Sub topics include: genetics, ecology, cell structure and function, and biological diversity. Twenty-five percent of class time is dedicated to inquiry-based lab activities. The Advanced Placement Biology examination is required of all students enrolled in this course. Prerequisites: Chemistry (85\% or higher) and recommendation of the Scienc or higher) and recommendation of the Science approved by the Science Department Chair

## HUMAN ANATOMY AND PHYSIOLOG

 This course provides the student with an understanding and appreciation of the major body systems, their structures, and their functions Clinical consideration and its impact are covered This course is intended for students who are interested in careers in health-related fields or who simply possess a curiosity to learn more about the human body. Labs and class activities are used for reinforcement of core concepts. Prerequisite Biology.
## ENVIRONMENTAL STUDIES

This course will consider the environment from the perspective of local ecology. It will be a laboratory-based course focused on learning the principles of ecology (the study of the interaction between organisms and their environment) and applying them to our local area. In this course, we will cover topics such as animal behavior taxonomy, population biology, life histories, landscape ecology, and more. We will use the scientific method to understand and discover information about the space we live in. This course shows us that the fascinating phenomena of nature do not only happen in documentaries in far away places - they happen in our own backyard!

## ADVANCED PLACEMENT ENVIRONMENTAL

 SCIENCEThis full-year laboratory course in environmental science will provide students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natura world; to identify and analyze environmental problems, both natural and human-made; to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving or preventing them. Environmental science is interdisciplinary; it embraces a wid variety of topics from different areas of study. Yet there are several major unifying constructs, or themes, that cut across the many topics included in the study of environmental science. Thes the surce energy conversions underlying oll recolonected system (biogeoch mis interconnected system (biogeochemical systems) uman ing and population iments; the roling echnology and population impacts; the role of cultural, social, and economic factors in developing solutions; achieving sustainable systems and management of common resources. Prerequisites two years of lab science, including Biology and/ or Chemistry, Algebra II (completed or concurrent), and recommendation of the Science Department. Any waiver of a prerequisite must be approved by the Science Department Chair.

## PRE-MED

The objective of this one-year course is to expose highly motivated high school students, who are interested in pursuing a career in medicine, to an introduction to clinical methods with hands-on experience in medical techniques (such as taking vitals) and a brief exploration of topics such as anatomy, histology, embryology, physiology, cardiology, neuroscience, pathology, immunity, and endocrinology, among others. Prerequisite: English Il or higher and at least one of the following: Chemistry, Biology, Physics, Human Anatomy and Physiology, or Environmental Studies. This course has a lab/practical component and thus qualifies as a lab science.

## CHEMISTRY

The objective of this first-level chemistry course is to provide students with an understanding of basic organic and inorganic chemistry. Through lectures, problem-solving, and experimentation, students will learn the fundamentals involved in changes to matter and energy. Topics include: measurement and calculation techniques, what is matter, the elements, atoms and ions and how they interact, nomenclature, chemical composition and reactions, solutions, states of matter, bonding, acids-base behavior, and how these relate to energy. Student will read articles about applied chemistry and prepare a research paper on a contemporary topic in chemistry. Experiments are used to familiarize students with the scientific method and good lab practices, and to relate theory to practice.

## CHEMISTRY HONORS

The objective of this first-level honors chemistry course is to provide students with an understanding f basic organic and inorganic chemistry. Through ectures, problem-solving, and experimentation sudents will learn about the changes that occur in matter and energy. Topics include: measurement and calculation techniques, what is matter, the lements, atoms and ions and how they interact nomenclature, chemical composition, reactions, and quantities, solutions, states of matter, bonding, acids-base behavior, thermo- and electrochemistry, and how these relate to energy. Students will read articles about applied chemistry and prepare a research paper on a contemporary topic in chemistry. Experiments are used to familiarize students with the scientific method and good lab practices, and to relate theory to practice. Students will work towards proficiency in all aspects of quantitative analysis along with enhanced problemsolving skills. Students should be enrolled in Algebra II or a higher math course

## ADVANCED PLACEMENT CHEMISTR

 Advanced Placement Chemistry is a rigorous, full year, college-level course. Students in this course will attain a depth of understanding of fundamentals and a reasonable competence in dealing with chemical problems. Topics include: chemical bonding, molecular models (geometry), atomic structure and theory, states of matter (gas, liquid and solid), chemical reaction types, solutions and equations, equilibrium, chemical kinetic theory, and stoichiometry. The topics covered emphasize chemical calculations and mathematical formulation of basic chemical principles. The increased quantitative emphasis beyond that conducted within the basic chemistry class appears both in each of the topics and in the time spent by students in laboratory analysis and calculations. Prerequisites: Chemistry Honors (with average grades of $85 \%$ or higher), completed Algebra II, and recommendation by the Science Department. Any waiver of a prerequisite must be approved by the Science Department Chair.
## PHYSICS

This course surveys major topics in physics: laws of motion, universal gravitation, heat transfer and thermodynamics, electricity and magnetism, vibrations and waves, sound, light, color, optics, and atomic and nuclear physics. While the course emphasis is on conceptual knowledge of physics, there is a high level of routine manipulation of algebraic equations and weekly analysis of aboratory data. An online instructional tool will be utilized throughout the course. Prerequisites: Algebra II (completed or concurrent), one year of a lab science completed, and Science Departmen recommendation.

## ADVANCED PLACEMENT PHYSICS 1

This full-year laboratory course is equivalen to a first- semester college course in algebra based physics. The course covers Newtonian mechanics (including rotational dynamics and angular momentum); work, energy, and power; and mechanical waves, simple harmonic motion and sound. Students should be enrolled in Algebra II or a higher-level math class (with average grades of $85 \%$ or higher), and be recommended by the Science Department. No prior physics course is equired for this class. Waivers to prerequisites must be approved by the Science Department Chair. The AdvancedPlacement Physics 1 final examination is required of all students enrolled in this course. An online instructional tool will be utilized throughout the course.

## ADVANCED PLACEMENT PHYSICS 2

This full-year laboratory course is equivalent to a second-semester college course in algebra-based physics. This course covers fluid mechanics hermodynamics; electricity and magnetism; optics; and atomic and nuclear physics. Students should have completed Algebra II and be enrolled in Precalculus or a higher-level math class (with average grades of $85 \%$ or higher); completed AP Physics 1 or an equivalent (with average grades of $85 \%$ or higher), and be recommended by the Science Department. Waivers to prerequisites must be approved by the Science Department Chair. The Advanced Placement Physics 2 final examination is Advuired of all students enrolled in this course An required of all students enrolled in tis course. An the course.


## DIPLOMA REQUIREMENTS

3 HISTORY (including U.S. History)

## UNDERCLASSMEN REQUIRED COURSES

WORLD HISTORY, MODERN GLOBAL HISTORY, AND U.S. HISTORY (TAKEN HISTORY, AND U.S. HISTORY (TAKE JUNIOR YEAR) ARE REQUIRED FOR
GRADUATION. STUDENTS MUST EARN GRADUATION. STUDENTS MUST EARN GRADUATION REQUIREMENT.

## WORLD HISTORY

Freshman history is a big picture, thematic, and systematic examination of the past, from the early humans to modernity. As a class, we will seek out common themes and patterns that can help us better understand people, civilizations, and the world we live in. Our focus will include our human connection to all that is around us, both environmental and cultural, and as such the class will draw on many disciplines to inform our historical analysis. Students will encounter challenging ideas and difficult questions, and through these they will learn to make multidisciplinary connections. In engaging new deas and information from a variety of sources, students will learn how to hypothesize, ask useful questions, seek out appropriate resources, analyze documents and content, make and support specific points, and write a clear and cogent argument.

MODERN WORLD HISTORY
Sophomore history builds on the topics studied in World History by exploring important themes and historical turning points, and assessing their impact on the modern world. Students wil explore the Renaissance, the Age of Exploration the Enlightenment, the Industrial Revolution, the World Wars, and the Cold War. The course will also cover the rise of nationalism, imperialism, and decolonization as well as globalization. Students will analyze the complex and ongoing conflicts in the world with particular focus on selected tensions in the Middle East, Asia, and Africa. Emphasis is given to the continued instruction and the practice of essential skills such as research, evaluating the credibility of sources, analyzing primary sources, developing historical arguments, and respectful debate and discussion.

MODERN WORLD HISTORY HONORS Sophomore history builds on the topics studied in World History by exploring important theme and historical turning points, and assessing their impact on the modern world. Students will explore the Renaissance, the Age of Exploration, the Enlightenment, the Industrial Revolution, the World Wars, and the Cold War. The course will also cover the rise of nationalism, imperialism, and decolonization as well as globalization. Students will analyze the complex and ongoing conflicts in the world with particular focus on selected tensions in the Middle East, Asia, and Africa. Emphasis is given to the continued instruction and the practic given to the continued instruction and the practice of essential skills such as research, evaluating the credibility of sources, analyzing primary sources, debate and discussion This particular course differs slightly from Modern World History in its pacing and in its conceptual rigor. Expectation saciog in skills will bex sif in various tha ncreased from mis

## UNITED STATES HISTORY

This course covers specific themes in U.S. History In the Fall Term, the course focuses on the American Revolution, looking at its causes and impact, and explores the Constitution and the Bil of Rights, historically, and in the contemporary context. The Winter Term covers the antebellum era, the Civil War, Reconstruction, and explores how this divisive time in American history affected our national and social identity. In the Spring Term, the 1960s as a defining moment in American history is the focus. Topics include the Cold War, the Civil Rights movement, and the Vietnam War. The interdisciplinary Junior Research Paper and formal (and informal) debates provide students with opportunities to sharpen research, writing, and communication skills. Other projects call upon students to work in groups and to become more creative historians. In addition, students will develop active reading and analytical skills to aid in constructing incisive research questions about United States history.

## ADVANCED PLACEMENT UNITED STATES

 HISTORYThe goal of this course is to provide preparation for the successful completion of the AP examination in American History. Selected documents pertaining to key economic, political, and social developments are discussed and analyzed. The Junior Research Paper, independent research projects, class discussion, and the use of primary material are included. The AP examination is administered to all students enrolled in this course. Students must be approved by the Academic Office, in consultation with the department and using criteria that take into account grades, comments, and intellectua maturity

## UPPERCLASSMEN ELECTIVE COURSES FULL YEAR

THE FOLLOWING ELECTIVE COURSES ARE OPEN TO JUNIORS AND SENIORS UNLESS OTHERWISE NOTED IN THE COURSE DESCRIPTION. THE DEPARTMENT RESERVES THE RIGHT TO OFFER ONLY THOSE COURSES THAT MEET MINIMUM ENROLLMENT REQUIREMENTS.

## ECONOMICS

This course in economic theory uses curren events and historical context to train students oo think like economists, understand business decisions, develop investment strategies, and assess government policy. The foundations for the course are the core concepts of economics. The general overview includes an analysis of markets incentives, government and the economy, and interest groups. We then apply these tools to a range of economic issues, which may include promoting economic growth, economic crises and recovery, reducing poverty, the value of international trade agreements, unemployment, and inflation. During the course, students learn he basic vocabulary and concepts to understand he economic news of the day. They also learn the basics of investing. Students research companies, present their findings to the class, and then establish and track their own mock stock portfolios. Throughout the course, students are challenged to form arguments and justify conclusions by using economic concepts to make decisions in important issue areas.

## ADVANCED PLACEMENT ECONOMICS

 In Microeconomics, we explore individual decision makers within the economic system, focusing on the actions of consumers and producers, and how the government can sometimes promote efficient and equitable outcomes between the two groups. We will attempt to answer the questions: How do people make decisions? And how do people interact as individual households and firms and in market structures? In Macroeconomics, we study how the principles of economics apply to the economic system as a whole, including topics such as inflation, unemployment, and economic growth. We will attempt to answer the question How does the economy as a whole work in both the short run and the long run? All students are the short run and the long run? All students are quiresomics axams in May. Students must Macroeconomics exams in May. Students must be approved by the Academic Office, in consultation with the depar Ana and into accy Sur wor is required.
## AMERICAN GOVERNMENT

This course provides students with a setting to critically examine and evaluate the multiple expressions of citizenship in the United States of America. The course includes both the study of general concepts used to interpret U.S. government and politics, and the analysis of specific examples. Students will learn the various institutions, groups, beliefs, and ideas that constitute U.S. government and politics. The course content will enable students to internalize and demonstrate the values of social responsibility, responsible citizenship, and a commitment to the advancement of the common good, justice, freedom, human rights, and the rule of law.

HONORS PHILOSOPHY SEMINAR
This course introduces key philosophical, moral, economic, and political concepts from the Ancient Greeks to the 21st century. The class follows a seminar format, where students will be expected to undertake weekly reading of primary sources and engage in informed classroom discussion Assessment will be based on participation, weekly short writing assignments, and term research papers.

## GUNN SCHOLAR

The Gunn Scholar program is an endowed program that offers selected students opportunities to pursue research topics of their own choosing in the Paula and George Krimsky Archives and Special Collections. Students may apply to the program a the end of the junior year and complete a yearlon research project in senior year. Gunn Scholars finalize the scope of their thesis, develop a written record of their research, and present their findings at a conference in the spring. Students conduct primary-source research and place-based learning within the school's archives. In previous years, Gunn Scholars have had opportunities to expand their research to other archives and collections, cluding those at the National Baseball Hall of mame and Museum in Cooperstown New York the National Archives Museum in Washington, D. C and the Beinecke Rare Book \& Manuscrip ibrary at Yal University Library A generous gift from the Class of 1957 has assured the annual publication of Gunn Scholar research and each fill student's illustrated paper is added to the archives, hereby eniching schook history and creating opportunites for furter stuay. Since 2018, Gunn Scholars have presented their papers at the anu Rooted Research Conference, hosted by The rederick Gunn School

## AP EUROPEAN HISTORY

As described by 2023 College Board course documents, in AP European History, student nvestigate significant events, individuals, developments, and processes from approximately 1450 to the present. Students develop and use the same skills, practices, and methods employed by historians. analyzing primary and secondary sources, developing historical arguments, making historical connections, and utilizing reasoning about comparison, causation, and continuity and change over time. The AP examination is administered to all students enrolled in this course. Students must have completed a full year course in U.S. History, and be approved by the Academic Office, in consultation with the department and using criteria that take into account grades, comments, and intellectual maturity. Summer work s required.

## UPPERCLASSMEN ELECTIVE COURSES ONE TERM

THE FOLLOWING ELECTIVE COURSES ARE OPEN TO JUNIORS AND SENIORS UNLESS OTHERWISE NOTED. THE DEPARTMEN RESERVES THE RIGHT TO OFFER ONL THOSE COURSES THAT MEET MINIMUM ENROLLMENT REQUIREMENTS.

BRINGING THE PAST TO THE PRESENT: AN INTRODUCTION TO ARCHIVES AND PUBLIC HISTORY
This one-term course will provide students with an understanding of how archives, museums, and other historical institutions preserve, interpret, and provide access to our history. Students will learn how to research using primary sources, as well as the different ways curators use those primary sources o create exhibits. Topics to be explored will includ preservation of historic materials, how artifacts are collected, and an analysis of how to share the stories of the people and places who have come before us. As a final project, students will conduct esearch in the Gunn Archives and other local institutions to create an exhibit based on primary sources.

HONORS RACE IN AMERICA: A HISTORICAL TIMELINE
This term-long class explores the history of race and racialization through a socio-historical ens. Students will track the creation and use of racialization as it developed in the old world and came to settle in the American psyche. Over the course of the term, students will build their own historical timeline, and highlight aspects of racial history that they find significant. Student interest will determine the specific focus of the timelines that they create, and will lead to a culminating fina presentation. Fall term

HONORS RACE IN AMERICA:
WHITEBOUNDARIES AND SOCIAL POLICY This term-long class builds upon Honors Race in America: A Historical Timeline, shifting from historical contexts to more specific legal doctrine and social politics. Students will explore American legal cases and concepts that helped shape the national discourse on race. The course will cover Whiteness as a prerequisite to U.S. citizenship, and how those policies disenfranchised specific groups the legal foundations and social norms that have affected reproductive rights to disparate degrees for different racial groups; and the creation of Critical Race Theory and its use in the legal system and beyond. This course contains a significant writing component based in student essays responding to the topics at hand. Winter Term; prerequisite: Honors Race in America: A Historical Timeline.

HONORS RACE IN AMERICA: IDENTITY FORMATION
This term-long class builds upon the Honors Race in America: A Historical Timeline, shifting from historical contexts to racial identity formation. Students will explore how identity is created in the mind and society, and how race becomes salient in hat process over time. As they come to understand the process, students will also self-reflect on their own racial identity formations to better understand how they see themselves and others in a racialized society. This course contains a significant writing component based in student essays responding to the topics at hand. Spring Term; prerequisite: Honors Race in America: A Historical Timeline.

## PSYCHOLOGY <br> ONE-TERM ELECTIVES

SOCIAL INFLUENCES IN PSYCHOLOGY: BEHAVIOR, ATTITUDES, AND BELIEFS This one-term course in social psychology will focus on how individual behavior, attitudes, and beliefs are shaped by social influences. Major topics will include a deep dive into the factors that influence individual behavior including social norms, stereotypes, and prejudice. This course will also examine the ways in which individuals interact with others and form relationships. There are no prerequisites for this course. This course can be taken independently of or in addition to Social Psychology: The Psychology of Group Dynamics. GROUP DYNAMICS
This one-term course in social psychology will focus on the fundamental principles of group dynamics with an emphasis on how people interact in group settings. Students will explore the factors that influence group behavior, including social influence, conformity, and leadership. This course will also examine the ways in which group dynamics can impact behavior, attitudes, and beliefs. There are no prerequisites for this course. This course can be taken independently of or in addition to Social Influences in Psychology: Behavior, Attitudes, and Beliefs.
COGNITIVE PSYCHOLOGY: LEARNING HOW WE LEARN
This one-term course in cognitive psychology will provide an overview of the cognitive processes that underlie human learning and memory. Students will explore the fundamental principles of cognitive psychology with a focus on how people acquire, process, store, and retrieve information in their daily lives. This course will also examine the factors that influence learning and memory, such as attention, motivation, and context. There are no prerequisites for this course. This course can be taken independently of or in addition to Thinking and Cognition: Understanding Decision-Making Through Cognitive Psychology.

THINKING AND COGNITION: UNDERSTANDING DECISION-MAKING THROUGH COGNITIVE PSYCHOLOGY This one-term course in cognitive psychology will provide an overview of the cognitive processes involved in human thinking, motivation, and decisionmaking. Students will explore the fundamental principles of cognitive psychology with a focus on how people perceive, process, and use information in their daily lives. This course will also examine the factors that influence motivation and decision-making, such as emotions, biases, and social pressures. There are no formal prerequisites for this course. This course can be taken independently of or in addition to Cognitive Psychology: Learning How We Learn.

DEVELOPMENTAL PSYCHOLOGY: NAVIGATING THE COMPLEXITIES OF HUMAN DEVELOPMENT
This one-term foundational course in psychology will provide an overview of human development from infancy through adolescence. Students will explore the physical, cognitive, and emotional changes that occur physical, cognitive, and emotional changes that occur during each stage of development. The course will also explore the roles of genetics and environment in shaping development as well as the impact of culture parenting, and other social factors. Topics will includ prenatal development and birth, infancy and early childhood development, middle childhood development, adolescence and emerging adulthood, cognitive development, socioemotional development including attachment, self-concept, and socialization, and cultural and social influences on development. There are no prerequisites for this course.

## CENTER FOR <br> ENTREPRENEURSHIP ONE AND TWO-TERM ELECTIVES

## SPORTS BUSINESS SEMINAR

This one-term class will look at how the sports business industry works and how to plan for a career in the industry. The class will follow a workshop format as the various business topics that are studied will be applied to understanding the structure and revenue flows of the U.S. and global sports business markets. We will have speakers with relevant industry experience come to class and share heir real-life experiences with the students. At the end of the erm, students will develop a business case covering one of the major sports leagues of their choosing and analyze one of the major franchises of that league, understanding the profit and loss statements, the human resource requirements, talent management, growth plans, marketing efforts and competitive positioning Students will be required to write to use spreadsheets, and to use graphical displays in presenting their business plan. Students will also be required present their arguments orally. Both verbal and written pmunication is a must! This class will look at successul orues and franchises and ask what made them successful eague in their chosen path. Students in this class will focus on being independent problem solvers. This class will also focus on exposing students to some of what they will see in the real word of spors business and equip hem with an understanding of recruiting practices and how to maximize their chances of getting a job in the industry. Speakers, videos, discussions, and project work will make up a majority of this class, and class participation is expected. Students who sign up for this class must be ready to be proactive and try new things. No other knowledge is required! (S)

## ENTREPRENEURSHIP AND ETHICAL BUSINESS

 SEMINAREntrepreneurship is much more than simply starting a business. It requires innovation and risk, teamwork, and organizational skills. Entrepreneurship is impactful, political, and passionate. Entrepreneurship is one of the most effective ways to address social, environmental, and economic issues in our modern economy. In the Fall Term, we will start the class by learning the foundations of entrepreneurship. This will include finances, investing, marketing, legal matters, and professional development. The majority of the work will be student-driven; students will partake in handson projects that teach the importance of raising capital and engaging with the community. In the winter, we will transition to the study of corporate social responsibility and how to evep a business that is a force for good. We will explore different industries in order to identify ides that equily alace profits with social impact and sustainability. Thi las will reylaly feature speakers, giving students the pportunity to learn from experienced entrepreneurs. The pill be a ocus who rsign the Stive the for ready to be proact knew rings, and leall for wis ailures. No other knowledge is required! Fall and Winter

## DIPLOMA REQUIREMENTS: 1 CREDIT VISUAL AND/OR PERFORMING ART <br> (This can be accomplished through three single-term courses or one full-year course.)

## PERFORMING ARTS

MUSIC - JAZZ BAND (JB)
This ensemble will rehearse and perform an eclectic variety of band music, including jazz, funk, blues, rock, popular, symphonic, holiday film, and more. All band instruments are welcome! rass and woodwind instruments must have at Brass and woodwind instruments must have a percussionists/drummers, bassists, and pianists, must audition or have previous experience. must audito or ha prence skill Students should have a basic skill level of reading after school (if applicable) and attendance at all performances (on campus, local, regional, national performances (on campus, local, regional, national etc.). Students will learn how to work together to perform professional-evel usic as an ensemble, while developing individual fundamentals towards mastery of skills. For audition information, please contact Ron Castonguay, Director of the Arts and Music Director, at castonguayr@frederickgunn.org. Prerequisites: Previous instrumental experience and/or audition. Full year, one credit; entry into the second semester is possible with permission of the instructor (2/3 year, $2 / 3$ credit).

MUSIC - JAZZ BAND ADVANCED (JBA) Requirements for students continue to increase dramatically from this level through the
Conservatory level, including a more advanced skill level requirement, enhanced performance achievement tests, mandatory personal repertoire higher individual expectations, and increased extracurricular and leadership responsibilities. Prerequisites: JB or teacher recommendation; must fulfill requirements specified by the instructor. A contract must be signed for this level; full year, one credit.

MUSIC - JAZZ BAND CONSERVATORY JBC)
This is the highest level for this course and is geared toward preparing students for a college music experience. A high level of musicianship is expected, including a more advanced skill level, mandatory personal repertoire, higher musical performance, and individual expectations for assessments, increased extracurricular and eadership responsibilities, mandatory weekly private lessons, and possible individual conducting performances. Prerequisites: JBA Honors or teacher recommendation; must fulfill requirements specified by the instructor. A contract must be signed for this level; full year, one credit.

MUSIC - CHAMBER ORCHESTRA (CO) The instrumentation for this small symphonic ensemble consists of: violins, violas, cellos, double basses, flutes, oboes, clarinets, bass clarinets, basses, flutes, oboes, clarinets, bass clarinets, bassoons, French horns, mallet percussionists, year of playing experience and is efficient in reading music is welcome in Chamber Orchestra. However, - 1 is whe must audition pianists and harpists must audrion to be accept into this ensemble. The repertoire of the course will primarily be classical by nature, but exploration of film and popular music may be part of the curriculum. Obligations include rehearsals, both during the day and after school (if applicable), and attendance at all competitions and performances (on campus, local, regional, national, etc.). Students will learn how to work together to perform professional-level music as an ensemble while developing individual fundamental musicianship towards a mastery of skills. Prerequisites: Previous instrumental experience and/or audition and recommendation from instructor. Full year, one credit; entry into second term is possible with permission of the instructor ( $2 / 3$ year, $2 / 3$ credit)

## MUSIC - CHAMBER ORCHESTRA

ADVANCED (COA)
Requirements for students continue to increas dramatically from this level through the Conservatory level, including a more advanced kill level requirement, enhanced performance achievement tests, mandatory personal repertoire, higher individual expectations, and increased extracurricular and leadership responsibilities. Prerequisites: CO or teacher recommendation; must fulfill requirements specified by the instructor. A contract must be signed for this level; full year, one credit.

MUSIC - CHAMBER ORCHESTRA CONSERVATORY (COC)
This is the highest level for this course and is geared toward preparing students for a college music experience. A high level of musicianship is expected, including a more advanced skill level, mandatory personal repertoire, higher musical performance, and individual expectations for assessments, increased extracurricular and leadership responsibilities, mandatory weekly private lessons, and possible individual conducting performances. Prerequisites: COA Honors or teacher recommendation; must fulfill requirements specified by the instructor. A contract must be signed for this level; full year, one credit.

## MUSIC - VOCAL ENSEMBLE (VE)

Anyone who loves to sing can enter this ensemble! No audition required! Performing will be the primary objective of this ensemble, known at most schools as Chorus. Music will consist of classic choir repertoire, including sacred, secular and spiritual as well as popular and jazz music sung in ranges from unison to six-part harmony Obligations include rehearsals, both during the day and after school (if applicable), and attendance at all competitions and performances (on campus, local, regional, national, etc.). Proper vocal technique, choral balance in combination with healthy singing and sight-reading will be important facets of the curriculum. Students will learn how o work together to perform professional-level music as an ensemble while developing individual undamental musicianship towards a mastery of skills, including a basic understanding of reading music. For information, please contact Ron Castonguay, Director of the Arts and Music Director, at castonguayr@frederickgunn.org. Prerequisites: None - just love to sing in a group! Full year, one credit; entry into second term is possible with permission of the instructor ( $2 / 3$ year, $2 / 3$ credit)

MUSIC - VOCAL ENSEMBLE ADVANCED (VEA)
Requirements for students continue to increas dramatically from this level through the Conservatory level, including a more advanced skill level requirement, enhanced performance achievement tests, mandatory personal repertoire, higher individual expectations, and increased extracurricular and leadership responsibilities. Prerequisites: VE or teacher recommendation; must fulfill requirements specified by the instructor. A contract must be signed for this level; full year, one redit.

## MUSIC - VOCAL ENSEMBLE

## CONSERVATORY (VEC)

This is the highest level for this course and is geared toward preparing students for a college music experience. A high level of musicianship is expected, including a more advanced skill level, mandatory personal repertoire, higher musical performance and individual expectations for assessments, increased extracurricular and leadership responsibilities, mandatory weekly private lessons, and possible individual conducting performances. Prerequisites: VEA Honors or teacher recommendation; must fulfill requirement specified by the instructor. A contract must be signed for this level; full year, one credit.

## ADV ANCED PLACEMENT MUSIC THEORY

 This full-year Music Theory Advanced Placement course is intended for advanced music students who plan to continue their musical endeavors in college and is designed to prepare them for the AP Music Theory Exam administered in the spring Students must have prior musical experience, ncluding participation for a minimum of two years in a performing ensemble and/or have taken a private or classroom music theory course within the past two years. The instructor may grant special permission for entry. All topics covered a first-year college music theory course will be included as well as the following: notational skills, cales and keys, chords and chord progressions, metric organization, rhythmic patterns, realization of Roman numeral chord progressions, repertoire identification and analysis, small musical forms, istening and dictation, sight-singing, and basic compositional techniques. Prerequisites: Must have two years of previous experience in a performing ensemble and/or in a private or classroom music theory course within the last two years, or permission from instructor. An entrance exam may be required. AP Credit will only be granted once the course is successfully completed and the AP Exam is administered.
## THEATRE

ACTING I: INTRODUCTION TO ACTING This active and exploratory one-term acting course introduces students to the essential tasks of he actor's imagination and technique through individual and ensemble work. They apply this exploratory work to improvisations, monologues, cenes, text analysis, and reading of plays. Students develop vocal, physical, and emotional echniques and engage in exercises that enhance creativity, characterization skills, and empathy. No previous acting experience is necessary.

## ACTING 2: INTERMEDIATE ACTING

This active one-term course continues the training of the student-actor with a deeper focus on scen work, script analysis, voice, and movement. It allows students to develop an approach to character, text, and story beyond their own culture and experience. Exercises build on Acting and encourage in-depth interpretation and character choices. Students gain a well-rounded understanding of acting, theatre, plays, and heatre-making. No previous acting experience is necessary.

## ADVANCED/HONORS ACTING

This one-term course continues the training of the dedicated student-actor with a deeper focu on scene work, devised material, storytelling, voice, and movement. Exercises build on Acting and Acting 2, and students are introduced to heightened language and style. Vocal and physica training focuses on developing techniques to explore heightened language and theatre material students develop and workshop various pieces of work to be presented to The Frederick Gunn School community. Prerequisite: An earlier departmen acting course, involvement in a Frederick Gunn School Theatre Program production, or permission of the Director of Theatre Arts

## COMBAT FOR STAGE AND SCREEN

Stage combat is the illusion of violence for the stage or screen. Classwork is active, engaging and movement-based. Students will learn and develop safe and dramatically effective techniques of choreographed violence, along with pieces rooted in movement and storytelling. Students will be introduced to safe and compelling portrayals of violence for the stage and camera. The class focuses on training and practicing unarmed and sword and dagger stage combat skills.

IMPROVISATION AND THEATRE GAMES This introductory course will explore the elements of improvisation with a focus on spontaneity, lexibility, and fun. Improvisation is for everyone Life is made up as it happens, and improv is no different. This course aims for students heighten their observation and listening skills, and ensemble-building through various theatre games and exercises. Explore foundational improv tools to understand the principles of how improv works. Experience how improvisation is a way to discove more freedom, confidence, and positivity.

## PLAYWRITING

This course is a laboratory for students to develop and explore their unique voice and vision and a chance to explore a variety of approaches o manifesting that vision theatrically. It is a foundational course designed to introduce young writers to the distinctive demands of this genre, with emphasis on character and plot development through conflict and dialogue. Students will write extensively, workshop their original stories, and earn rewriting techniques. The term will culminat in a staged reading or production of the short plays presented to The Frederick Gunn School community

## ADJUNCT <br> COURSES

PRIVATE DANCE INSTRUCTION This course provides students with the opportunity o work one-on-one with a professional dance instructor. Private instruction in dance is excellent for beginning students, students who have previous dance experience and are looking to improve their technique and artistry, but also for actors, skaters, and athletes who are looking to improve their technique - or who need specific coaching on technique, choreography, or audition preparation In private dance instruction, students can expect to work on basic skills, stretching, positions, technique, precise foot placement, and stage character as well as musicality, strengthening of the legs and feet, and balance. Private lessons are scheduled once or twice per week for one hour A yearlong commitment is required. The cost o private dance instruction is billed home. Full year one day per week, $1 / 3$ credit; credit earned for this course may not be used to fulfill the Art diploma requirement.

## PRIVATE MUSIC INSTRUCTION

Students are encouraged to pursue private study of an instrument at The Frederick Gunn School. These lessons offer students an individualized learning experience with a private instructor. Lessons are given in all orchestral and keyboard instruments. Students may also study voice, composition, jazz, popular, and folk instruments. Students receive one 40-minute lesson per week, and are expected to practice a minimum of two hours per week. Students interested in private instruction should contact the Academic Office well in advance of the beginning of the academic year, so that appropriate scheduling arrangements can be made. A yearlong commitment is required. The cost of private music instruction is billed home. Full year, one day per week, $1 / 3$ credit credit earned for this course may not be used to fulfill the Art diploma requirement

## VISUAL ARTS FULL-YEAR COURSES

## AP STUDIO AR

This yearlong course is for highly motivated junior and senior art students. The scope of work is equivalent to that of an introductory college course in studio art, providing a special opportunity to prepare a portfolio for admission to art school and to acquire knowledge of the professional art world and careers in the visual arts. Students work in both traditional and experimental media. AP Studio Art students are required to document thei work photographically, and to present a portfolio that demonstrates their proficiency. Students have the opportunity to submit materials to the College Board AP Studio Art Exam as well as National Open Portfolio Review Day and the Scholastic Art Awards Portfolio Review Day and the Scholastic Art Awards ompetition. Prerequisites: Drawing and a portfolio

## YEARBOOK EDITOR

This course is a full-year, visual arts course dedicated to the production of the school's yearbook, the main chronicle of student life at The Frederick Gunn School. Students work as a team to organize pages, design layouts, and gather photos that represent their year at The Frederick Gunn School. Three to four yearbook editors will be selected each year and fulfill a leadership role in the yearbook class. Prerequisite: approval by the instructor.

## VISUAL ARTS ONE-TERM COURSES

BLACK AND WHITE PHOTOGRAPHY Are you ready to step back in time and embrace the timeless elegance of black-and-white photography, where every frame tells a story in shades of gray? In this class, we'll unravel the mysteries behind the lens as we explore the fundamentals of traditional analog photography. From the click of the shutter to the development of film, you'll learn the art of capturing moments in stunning contrast. During our darkroom sessions, you will transform your negatives into beautiful prints, watching as the images magically emerge from the empty paper.

## CERAMICS I

This course includes basic techniques and understanding of clay as an art medium. Coil, slab, and other hand-building techniques are introduced, followed by the opportunity to work a potter's wheel. A historical and cultural perspective is explored through slides, video, and discussion. Surface decoration is explored through glazing and firing techniques. No previous experience is required.

## CERAMICS II

This course is designed for students who are proficient on the potter's wheel, and who are interested in continuing to improve their techniques. Lid and handle-making techniques are introduced. Altered forms on the wheel area also are investigated and incorporated into final pieces. High fire glazes are used for surface decoration, and students learn kiln stacking and firing procedures. Prerequisite: Ceramics I.

CIVIC JOURNALISM AND MEDIA MAKING In this course, students learn and practice the skills of civic journalism over a variety of media platforms. Civic Journalism refers to the integration of journalism and democracy. Students learn how to use news and media outlets to facilitate healthy public engagement, conversation, and debate. They work together to write and publish The Highlander, the school's newspaper, record and produce "The Highlander Podcast," and finally, film, edit, and broadcast "The Highlander News Network." This course is open to all students and may be taken for one or more terms for $1 / 3$ art credit per term.

## DIGITAL PHOTOGRAPHY

For novice students, this course is an introduction to the camera, the photographic process, and digital software. The emphasis is on the artistic qualities of composition and image conten The course includes camera handling, exposure, darkroom techniques, and exploring the potential of digital photography. Students will master skills that will apply to all forms of image-making, and will gain an understanding of basic camera operations.

## DRAWING

This introductory drawing class is based on the Betty Edwards workbook, Drawing on the Righ Side of the Brain. During this class, student explore line, shading/tonal values, positive/ negative space, and the principles and elements of design. Students work with a variety of media, including graphite pencil, charcoal, pastels, colored pencil and mixed media. A historical and cultura perspective is explored through slides, visual aids, and discussion. No previous experience in art is required.

## FILM STUDIES

Welcome to the mesmerizing world of film through the ages! During our exciting cinematic journey from the silent masterpieces of the early 20th century to the dynamic blockbusters of today, we will explore the captivating history of the silver screen and discover how cinema has shaped and reflected the world around us. From the groundbreaking techniques of pioneering directors to the evolution of storytelling through the decades we will uncover the secrets behind film's greates moments. Whether you're a die-hard movie buff or a casual viewer, prepare to be inspired, challenged, and utterly captivated by the power of the silver screen.

INTRODUCTION TO PRINTMAKING This course is for students who like to draw or make photographs or are just looking for a new medium to try. During the class, there will be many forms of printmaking to explore: monotype, linoleum, woodcut, engraving, etching, and gravure, to name a few. Prints can be made simply by making marks with ink on a piece of Plexiglas and transferring the ink onto a piece of paper (monotype), or lines can be scratched (engraved) into a metal or Plexiglas $®$ plate. The plate is then inked, and the surface is wiped clean and printed using paper and a printing press. Students in printmaking will have the opportunity to explor multiple printmaking processes during the trimester and have plenty of work to take home when done

## PAINTING

In this class, students learn color theory and explore color relationships in their paintings. Students explore various techniques in watercolors, oils, and acrylics. Landscape, portrait, selfportrait, and abstract expressionism are covered from a historical as well as a technical point of view. Methods of painting are introduced through examining the work of master painters. Prerequisite: Drawing

## ADOBE LIGHTROOM AND PHOTOSHOP FOR CREATIVE THINKERS

Embark on a journey into the realm of digital artistry. This class introduces you to Adobe Photoshop, exploring its creative potential for image manipulation, design, and visual storytelling. Designed for beginning and intermediate Photoshop users, this class will explore the foundational features, from navigating the interface and basic tools, to essential techniques equipping you with the skills needed to edit photos, create graphics, and unleash your artistic potential.

## CREATIVE PHOTOGRAPHIC PRINTING

Thanks to digital technology, printing in the darkroom is not limited to photographs but many other types of two-dimensional art. If you can imagine it, we can probably print it. This class will dive into the artistry of darkroom printing with a focus on cyanotype, kallitype, and gum printing. These processes allow us to print on fabric, paper, and other types of materials. Elevate your artistic expression as you explore alternative processes that bring a touch of mystery and uniqueness to your artwork.

## MOBILE MASTERCLASS: PRO TIPS FOR PHONE PHOTOGRAPHY

Go beyond point-and-shoot picture making and learn pro-level strategies for smartphone photography. From advanced camera settings to mastering complex editing tools, you will learn composition techniques, lighting tricks, and editing tips that will turn your everyday moments into stunning works of art. This masterclass will equip you with the skills to take your mobile photography to new heights.

## GRAPHIC DESIGN

This studio art course introduces students to the basics of graphic design using publication and digital-imaging software. With text and scanned graphics, students solve design problems to create publications such as business cards, stationery, brochures, newsletters, and school posters. Students explore the artistic possibilities of Adobe Photoshop. Class critiques and discussions are held at the conclusion of each project. No previous experience in art is required.

## YEARBOOK

This course is a one-term, visual arts course offered in the fall and winter terms, dedicated to the production of the school's yearbook, the main chronicle of student life at The Frederick Gunn School. Students work as a team to organize pages, design layouts, and gather photos that represent their year at The Frederick Gunn School. Students of all years may take this course.


## DIPLOMA REQUIREMENTS

1 TERM OF PATHWAYS
1 TERM OF CITIZEN GUNN 1 TERM OF THE DECLARATION THE CIVIC CHANGEMAKERS PROJECT

PATHWAYS - (FRESHMEN)
Pathways is a mandatory, one-term diploma requirement for all freshmen. All sections of Pathways meet in the fall. The focus during the first year of our citizenship curriculum is self-awareness - emotional, physical, and intellectual - so that freshmen may adjust seamlessly to The Frederick Gunn School. Students have conversations about making healthy choices and behaving responsibly, and they learn executive functioning skills to become more intentional in their approach to learning. We also orient students to various quiding documents such as our Academic Merit system, the Character Statement our discipline system, and the han Cod The final project is a "Letter to Self" which is completed the ond of the trimester Students will read the letter during their senior dinner. Essentially, students have the opportunity to take stock of themselves and find their footing on take stock of themselves and find their footing on campus. Grading

CITIZEN GUNN - (SOPHOMORES)
Citizen Gunn is a one-term (winter or spring) course that is required of all sophomores. This course will focus on helping students to become active citizens at The Frederick Gunn School through an in-depth study of Frederick Gunn's life coupled with relational and community-building initiatives to help students accumulate superior interpersonal skills Students will grow to understand the morality of our founder to help them explore their own personal moral code and reflect upon the deeper meaning of their individual life as a member of our learning community. Service to others and promotion of he common good inform many of the course activities and discussions. Civic Online Reasoning lessons will help students navigate their digital world in order to become engaged, well-informed citizens who desire to build trust within their future communities and champion diversity, equity, and inclusion. During the conclusion of the course, each student will develop a personal statement of moral principles, which they will deliver to their class at he end the term Grading in this course will be on a Credit/No Credit basis.

THE DECLARATION - (JUNIORS) The Declaration is a one-term course that is required of all juniors. Through an in-depth study of our country's seminal documents and speeches, students will explore the ideas of liberty and equality as they pertain to citizenship. Students will study the art of rhetoric and the vital role anguage plays in building political friendships in our democracy. Weekly debates will help students construct and frame their perspective concerning democratic citizenship. Students will meet with local leaders to learn how they build community and political friendships in town. Over the course of the trimester, students will prepare and give a speech to the entire school community.

CIVIC CHANGEMAKERS PROJECT (SENIORS)
The Civic Changemakers Project (CCP) is a diploma requirement for all seniors that must be completed by the end of the senior winter trimester. The CCP emphasizes civic action and acting on onvictions. The project may involve a range of activities, including civic media-making, allianc building, participation strategy development (e.g. contacting political officials or interest groups), or a meaningful and intentional service project.

CIVIC JOURNALISM AND MEDIA MAKING In this course, students learn and practice the skills of civic journalism over a variety of media platforms. Civic Journalism refers to the integration of journalism and democracy. Students learn how to use news and media outlets to facilitate healthy public engagement, conversation, and debate. They work together to write and publish The Highlander, the school's newspaper, record and produce "The Highlander Podcast," and finally film, edit, and broadcast "The Highlander News Network." This course is open to all students and may be taken for one or more terms for $1 / 3$ art credit per term


## THE PROCESS FOR <br> ESTABLISHING AN ISP IS AS FOLLOWS:

1 Interested students should approach the Academic Office with their ideas for the coming year by the midpoint of the Spring Term by requesting a meeting with the Director of Studies (email academics@frederickgunn.org)

2 If the project seems possible, the interested student will be asked to complete an ISP form and submit a proposal. This will include meeting with the appropriate department chair and working with both the department chair and the Academi Office to describe the learning outcomes and educational material that will be used for the ISP to be detailed in the proposal.

3 The Department Chair and Academic Office will then approach a suitable faculty advisor Assuming the right match can be found between student interest and faculty availability, the ISP will then be approved and added to the student's course load for the following year

Prerequisites: ISPs are only open to returning students. Students in their first year should follow standard course load at The Frederick Gunn School

