Introduction

This section is intended to provide an overview of Upper School courses and graduation requirements for the 2019–2020 academic year. For students who enroll, the requirements for graduation in the box on page 2 should serve as a guide in making course selections. These requirements ensure appropriate distribution of courses and areas of study while allowing students a measure of individual freedom of choice to pursue their own interests.

Faculty members serve as academic advisors and play an important role in the shaping of a student’s course of study and extracurricular participation. Advisors and college counselors work together to assist students in the course selection process to help students plan a curriculum that not only provides appropriate background for further study but also takes into account the student’s abilities and interests. In addition to the assigned advisor and college counselor, students and parents may also consult teachers, department chairs, or other administrators when planning a course of study.

Since Greenhill is a college preparatory school, the basic curriculum is accelerated and intensive. To meet the needs of students who have demonstrated both special abilities and interests, honors and Advanced Placement (AP) courses are offered in many subjects. Students are recommended for AP or honors courses based on that student’s demonstrated ability, personal motivation, intellectual desire, and other departmental information. Students who enroll in honors or AP level courses should expect a more in-depth exploration and a heavier workload in those courses. Each student’s strengths, goals, and extracurricular commitments are different, and thus the course planning and selection process is a very individual one. We encourage students to challenge themselves in areas of strength and interest, but we also remind all students that a balanced life and curriculum is critically important. A student is considered fully enrolled every trimester if that student is in a minimum of four academic courses and at least one fine arts course. However, from a college admissions perspective, most students are best served, and best prepared, by studying each academic discipline each year and preferably each trimester.

ADVANCED PLACEMENT COURSE PROCEDURES AND POLICIES

A maximum of three AP courses is permitted per student, per year, though special permission for additional courses can be granted through the Head of Upper School. Advanced Placement courses follow a recommended yearlong, college-level curriculum and culminate with an examination given in mid-May. These examinations are given on campus at Greenhill, and students must pay a fee for each examination (though this fee is covered for students who qualify for supplemental financial aid). Students taking a Greenhill Advanced Placement course are required to take the examination in that course. Most Advanced Placement examinations are three hours long and combine multiple-choice and free-response questions. It is important to note that not all colleges give credit hours or advanced standing for AP test scores regardless of score or discipline. Therefore, individual college curriculum guides must be consulted for precise policies. Greenhill’s Advanced Placement courses are listed with an accompanying “AP” to distinguish them from the other advanced courses offered in the curriculum. Prerequisites for enrollment in an Advanced Placement course are specified within each AP course description.

GRADUATION REQUIREMENTS

The academic year features a program emphasizing breadth and skill development. The basic unit of measure is the credit, representing the equivalent of a six-week course. Thus, a trimester course is a 2-credit course and a full year course is a 6-credit course. Credits are earned by passing a
graded course with a grade of D– or better or by passing a course designated as Pass/Fail. The graduation requirements consist of departmental requirements and total credit requirements.

COLLEGE PREPARATION

The graduation requirements provide students with a great deal of flexibility in course choices for grades 11 and 12. Students, parents, and advisors are urged to keep in mind that colleges evaluate students in good part by the course choices reflected on the transcript. It is vital to select a balance of academic courses and to think carefully about choosing appropriately challenging classes in all academic areas. Colleges do not look favorably on transcripts overly skewed in any direction or light on academic challenge. By all means pursue your academic and co-curricular passions, but remember that the colleges are looking for evidence of a balanced course of study.

NCAA ELIGIBILITY

Students who wish to play Division I or II sports in college must meet the eligibility requirements of the National Collegiate Athletic Association (NCAA). Eligibility is determined, in part, by completing a specified number of NCAA-approved classes in the subject areas of English, History/Social Sciences, Science, Mathematics, and Foreign Language. Almost all Greenhill courses in these areas meet eligibility requirements. However, a small number of our courses are NOT NCAA-approved, typically because they are too interdisciplinary in subject matter to meet the NCAA’s narrowly defined requirements. Academic advisors and college counselors work with students considering Division I or II sports to select courses in a curriculum that will ensure NCAA eligibility. Students can also contact the appropriate department head for guidance.

Courses that are not NCAA-approved include: Computer Science classes, Advanced Tutorials in English, Writing Tutorial, Reading Tutorial, Art History: Impressionism to Contemporary, Inner Light: Traditions and Paths of Meditation, Tutorials in History/Social Studies, Advanced Tutorials in History/Social Studies, Financial Analysis, Personal

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<th>Requirements for Graduation</th>
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<td>Community Service . . . . .0 . . . . .</td>
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<td>Computer Science . . . . .2 . . . . .</td>
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<td>English . . . . . . . . . . . . . . .24 . . . . .</td>
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<td>Modern and Classical Languages . . . .12 . . . . .</td>
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<td>Physical Education/Athletics . . . . .16 . . . . .</td>
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| Science . . . . . . . . . . . . . . .20 . . . . . | Classes of 2020, 2021, 2022:
| . . . . . | 6 credits from Chemistry or Advanced Chemistry (9th) |
| . . . . . | 6 credits from Biology or Advanced Biology (10th) |
| . . . . . | 2 credits Physics I (11th), 2 credits from Physics II (11th or 12th) plus 4 additional credits of elective science |
| . . . . . | or 6 credits from AP Physics I plus 2 additional credits of elective science |
| . . . . . | 18 . . . . . | Class of 2023:
| . . . . . | 6 credits from Physics (9th) |
| . . . . . | 6 credits from Chemistry (10th) |
| . . . . . | 6 credits from Biology (11th & 12th) |
| Wellness . . . . . . . . . . . . . . .2 . . . . . | 2 credits of Classroom Wellness (9th or 10th) |
| Total Credit Requirements . . . . .120 . . . . . | A minimum of 120 credits, which includes the credits from above plus additional elective credits, must be earned during 9th through 12th grade years. |

Many Global Online Academy Courses are approved by the NCAA. Please confirm approval status with GOA.

The Capstone Project

The Capstone Project (10000)
Full year
The senior capstone project provides outstanding seniors with in depth exploration and study in a self-selected area of interest. This student driven project requires advanced, independent, and interdisciplinary study that culminates in an exhibition of a final product. This yearlong experience also requires students to develop an idea, explore further understanding, and create an innovative product based on their analysis, synthesis, and unique presentation of learning outcomes.

A senior capstone experience culminates in a wide variety of projects such as traditional academic research papers, creative writing projects, fine arts performances, or other unique presentations. Students must work closely with both a Greenhill faculty mentor and a professional mentor who will guide the student’s project closely throughout the year. By combining their current interests with relevant learning, students gain valuable experiences throughout their capstone project that will apply to future endeavors.

A student’s Capstone Project proposal must include the following:
• A clear statement of focus which includes the motivation behind the topic;
• A proposed bibliography/contact list (where applicable), including a list of outside expert(s);
• A list of credits/courses sought (maximum of twelve) and the rationale;
• The name of the mentor.

To receive more details and to obtain a proposal form, a student should see the Director of Academics.

Cross-listed Courses

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Credit(s)</th>
<th>Type</th>
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<tbody>
<tr>
<td>Literature/History of Human Rights in the U.S.</td>
<td>3</td>
<td>Core</td>
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<tr>
<td>. . . English (1465) . . . . History (4195)</td>
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<tr>
<td>Chemistry of Photography.</td>
<td>4</td>
<td>Core</td>
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<td>. . . Fine Arts (6120) . . . . Science (5340)</td>
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<tr>
<td>Beginning and Intermediate Dance Class.</td>
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<td>Core</td>
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<td>. . . Fine Arts (6910) . . . . PE (8015)</td>
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<tr>
<td>Advanced Dance.</td>
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<td>Core</td>
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<td>. . . Fine Arts (6915) . . . . PE (8860)</td>
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<tr>
<td>Winter Musical Production.</td>
<td>3</td>
<td>Core</td>
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<tr>
<td>. . . Fine Arts (6960) . . . . PE (8865)</td>
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<tr>
<td>Greenhill Dance Company.</td>
<td>3</td>
<td>Core</td>
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<tr>
<td>. . . Fine Arts (6925) . . . . PE (8850)</td>
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<tr>
<td>Big History/Science of DeepTime.</td>
<td>3</td>
<td>Core</td>
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<tr>
<td>. . . History (4350) . . . . Science (5950)</td>
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Upper School Community Service

Upper School graduation requirement: 48 hours
Upper School students are expected to complete a minimum of 48 hours of community service during their four years in Upper School. All students are encouraged to exceed the minimum requirement.

A minimum of 24 hours during 9th and 10th grades.
• Students may begin accumulating hours the summer before their 9th grade year. Hours are required to be completed by the last day of classes of their 10th grade year.
• Of the 24-hour requirement, 10 hours may come from in-school service to Greenhill School.
• New students entering 10th grade are required to complete at least 12 hours by the end of their 10th grade year.

A minimum of 24 hours during 11th and 12th grades.
• Students may begin accumulating hours the summer before their junior year. It is expected that all hours be completed prior to the 3rd trimester of their senior year.
• Of the 24-hour minimum requirement, 10 hours may come from in-school service to Greenhill School.
• New students entering senior year are required to complete at least 12 hours prior to the 3rd trimester of their senior year.

Summer hours begin June 1, 2019.
All summer hours must be submitted by September 30, 2019.
Greenhill School defines community service as unpaid time given to, or benefiting, any nonprofit agency 501 (c)(3). This includes service trips through travel and service organizations, religious organizations, hospitals, nursing homes, schools, scouts, political campaigns, teen courts, museums, public libraries and marathons/races, which benefit charitable organizations.

There are many volunteer opportunities that DO NOT meet the Community Service Guidelines and do not count towards the minimum requirement. Students should request pre-approval from the Director of Service Learning and Community Service prior to performing community service outside the above stated guidelines.

Greenhill School defines in-school service as time given on campus for a faculty member, staff member, group, division or department in need of assistance within regular job parameters. For example: tutoring, tours, admission events, the Annual Greenhill Debate Tournament, etc. Students providing assistance to adults/faculty who are running summer or other programs for pay on campus outside of his/her regular contract IS NOT in-school service, and, furthermore, in this capacity, students should be paid for their time.

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Community Service

In keeping with the school’s core principles of honor, respect, and compassion, Upper School students are expected to experience and learn about different community needs as a requirement for graduation. The goal of the community service program is for students to build an awareness and understanding of genuine community needs and how their actions, large and small, can make a difference.

As students identify and select their community projects, they begin to see themselves as leaders and resources in the community. By serving their community, students are using critical thinking and problem-solving skills in new and challenging ways and ultimately changing their views of themselves and the world they live in.

Note: Please see Upper School Community Service box on page 3.

Computer Science

The Upper School Computer Science program is designed to allow students with no prior experience as well as those with prior experience and interest in computer science a place to explore and develop their skills in this exciting field. Each course is designed around the core principles of computational thinking with the objective of helping students develop the habits of mind of a computer scientist. The classes are organized into three tiers, with Tier I being entry-level classes and the other two tiers being progressively more advanced.

Students who are coming into the program with limited or no prior experience are encouraged to take Computer Science I: Engineering or Computer Science I: Introduction to Game Design. Students with more experience or an intrinsic interest in programming may want to consider starting with Computer Science I: Beginning JAVA Programming. Those who have completed a Computer Science I course or meet the prerequisites for a more advanced course should meet with the department chair and explore options in Tier II and Tier III.

With each course structured around the process of computational thinking, the Upper School Computer Science Objectives are as follows.

Students will:
1. Analyze large problems and systematically break them into smaller sub-problems where they can develop original sequential and iterative procedures describing a solution progression.
2. Work in collaborative teams to develop and present solutions to complex problems where solutions to sub-problems can be assembled with solutions by other teams to solve the larger problem.
3. Understand the basics of translating solutions to novel problems into languages that can be understood and executed by computers.

4. Understand how computers work and how they as users are expected to interact with computers and their programs in specific predicted ways. This is the adage: “Program or be programmed.”

5. Develop advanced application skills to create new works using existing computer applications.

Computer Science Course Selection Guide

This collection of courses represents introductory Computer Science courses designed to expose students to the widest range of possibilities in computer science. Students who are interested in robotics and students who want to explore different ways that programming is used in computer science are encouraged to start here.

Computer Science I: Engineering I (9110)
1st, 2nd, or 3rd trimester or Summer on the Hill; 2 credits

This Tier I course serves as a foundation for entry to more advanced options and focuses on several big ideas related to computer science. This course draws from the core elements of computer science and teaches them in context with engineering processes, design, modeling, and 3D printing. Students work with the Arduino prototyping environment as an introduction to electrical and electronic engineering using C programming language. The class offers students a chance to explore and find their interests in the world of computer science.

Computer Science I: Beginning JAVA Programming (9040)
1st, 2nd, or 3rd trimester; 2 credits

This course is designed for those who want to explore the world of computer programming using a high level object oriented language. While this is an introductory course, it is designed for students who have an intrinsic interest in computer science. Students are introduced to the programming environment, basic
Computer Science I: Introduction to Game Design (9205)
1st, 2nd, or 3rd trimester; 2 credits
This course introduces the basics of game design using an object oriented language. The basics of playability are discussed as students explore what makes a game successful. Students work with the Python programming language to develop their own interactive games. The course introduces foundational concepts of computer science including computational thinking as a way to solve problems. Students have an opportunity to develop their own games as well as work collaboratively as programming teams as they modify existing games. This course is well suited for students who have an interest in computer science and/or gaming. Students taking this course are well positioned to take any other Tier I class and any Tier II class that does not have prerequisites.

Computer Science II: Engineering II (9230)
2nd or 3rd trimester; 2 credits
Prerequisites: Computer Science I: Engineering I
This Tier II course builds on Engineering I, introducing more advanced programming techniques, electronics, and other fields of engineering as students work on creative solutions to real world problems. Students continue to develop engineering, design, and modeling skills as they are introduced to physical computing with Raspberry Pi, and explore other languages and platforms such as Python and Leap Motion. The class prepares students for more advanced and independent work available through Advanced Topics and individual computer science tutorials.

Computer Science II: Intermediate JAVA Programming (9050)
2nd or 3rd trimester; 2 credits
Prerequisite: Beginning JAVA Programming
This course picks up where Beginning JAVA ended, and allows students to further develop foundational skills in recursion and iteration as well as develop new skills using arrays and exploring data structures. This class also introduces control structures and different forms of input. Students expand on their use of specialized techniques for debugging programs. Students who take this course have the option of continuing with Advanced Topics as a way of preparing for the AP Computer Science Test.

Advanced Placement Computer Science Principles (9030)
Full year; 6 credits
Prerequisites: at least one Tier I course in Computer Science and Department approval
AP Computer Science Principles is an introduction to the intellectual enterprises of computer science and the art of programming for students with a diversity of technological background and experience. This course explores seven “Big Ideas” central to the field of computer science: Creativity, Abstraction, Data and Information, Algorithms, Programming, the Internet, and Global Impacts. This course is designed to be the equivalent to a first semester introductory college computing course. Students develop computational thinking skills vital for success across all disciplines, such as using computational tools to analyze and study data and working with large data sets to analyze, visualize, and draw conclusions from trends. Students are encouraged to apply creative processes when developing computational artifacts and to think creatively while using computer software and other technology to explore questions that interest them. All students are expected to sit for the AP Computer Science Principles exam at the end of the course.

Computer Science III: Advanced Topics in Computer Science Tutorial (9070)
2nd or 3rd trimester; 2 credits
Prerequisite: Any Tier III class or Department approval
This class allows students to explore a variety of advanced topics related to computer science. Students interested in taking the AP Computer Science test can explore the Grid World Case Study and prepare for the exam. Students can also explore independent designs and programs for developing apps, designing and programming with Raspberry Pi and Arduinos, robotics, and software design and engineering. Students work individually and in small groups as they work within their selected focus. This class can be taken multiple times as each iteration can have a unique focus for the student.

English

For five thousand years, humans have employed reading and writing to make sense of themselves and their surroundings. The Greenhill Upper School English department explores how literature has been a necessary form of expression to develop the mind, body, and character in humans throughout history.

English 9 and 10 are required yearlong courses: English 9 traces the development of literature and human thought through the classical, medieval, and early-modern periods. English 10 continues to examine literature as a necessary form of expression through Romanticism, Realism, and Modernism. Juniors and seniors take trimester electives. While students are encouraged to write in new forms and read works representing diverse voices and experiences, they are also urged to sharpen their critical writing skills and deepen their study of favorite authors. Juniors and seniors must take and pass an English elective every trimester. The only required course is Narrative Nonfiction, which is offered only third trimester during junior year. The minimum requirement for a student to pass each English course is to submit all assignments for the class.

Greenhill’s US English department teaches students to craft writing for a variety of audiences and purposes. All writing reflects critical thinking and creativity, which can take the form of traditional argumentative essays, personal narratives, creative nonfiction, and creative writing (both poetry and prose). Students in the Upper School read critically across a rich array of voices and genres for greater understanding of diverse perspectives. When students complete their four years of study in the Greenhill English department, they are prepared for critical, imaginative, and empathetic engagement in the world.
### NINTH GRADE

**Ninth Grade English: Tales That Tell Us Who We Are: The Evolution of Human Consciousness in Western Literature, Part I (1010)**

Full year; 6 credits

In addition to the main theme of humanity’s continuing search for answers through writing, English 9 explores enduring concerns such as the relationship with the divine, concepts of virtue and the heroic ideal, the individual versus community, the search for the promised land/utopia, the search for identity, human possibilities versus human limitations, and conceptions of truth. Students study texts from both Western and non-Western traditions as they read for patterns and develop their critical-thinking skills.

Since writing is essential to the student’s success in all academic areas, instruction in composition emphasizes not only imaginative patterns of thinking but also clear and persuasive expression of ideas. Classes include a focus on writing skills such as generating a thesis, organizing clear patterns of thought, phrasing sentences effectively, developing analytical paragraphs, revising, and editing.

### TENTH GRADE

**Tenth Grade English: Tales that Tell Us Who We Are: The Evolution of Human Consciousness in Western Literature, Part II (1020)**

Full year; 6 credits

This course traces the development of literature and human thought through the eras of Romanticism, Realism, and Modernism. The exploration gives students a richer understanding of how literature responds to and shapes social, cultural, and ideological contexts.

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#### Distribution of graded trimester-long English courses by trimester

**11th Grade required**

3rd trimester . . . . . Narrative Nonfiction: Finding Your Voice (1200)

**11th/12th Grade electives: Juniors and seniors must take and pass an English elective every trimester.**

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<tbody>
<tr>
<td>Multicultural Literature: Survey of Modern Poetry (1300)</td>
<td>Literature and Detective Fiction (1310)</td>
<td>Coming of Age in America (1370)</td>
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<tr>
<td>Literature and Detective Fiction (1310)</td>
<td>Frontier Literature and American Identity (1455)</td>
<td>The Bible and Literature (1480)</td>
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<tr>
<td>Tragedy through the Ages (1340)</td>
<td>Literature of Human Rights in the U.S. (1465)</td>
<td>Literature of the American Wild (1290)</td>
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<tr>
<td>Coming of Age in America (1370)</td>
<td>Global Literature (1390)</td>
<td>Tragedy through the Ages (1340)</td>
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<tr>
<td>Literature of Latin America (1400)</td>
<td>Literature and Philosophy (1480)</td>
<td>Literature of Cosmic Horror and Supernatural (1350)</td>
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<tr>
<td>Frontier Literature and American Identity (1455)</td>
<td>Women’s Literature (1525)</td>
<td>Poetry of Social Justice: A Pilgrimage (1420)</td>
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<tr>
<td>Women’s Literature (1525)</td>
<td>Social Class in Literature: Class on Class (1555)</td>
<td>Social Class in Literature: Class on Class (1555)</td>
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<tr>
<td>Literature of World Religions (1540)</td>
<td>Modern Fiction (1590)</td>
<td>Sublime Darkness: Gothic Literature and High Romanticism (1565)</td>
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<tr>
<td>Sublime Darkness: Gothic Literature and High Romanticism (1565)</td>
<td>Creative Writing (1750)</td>
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Tenth grade students write critically and creatively in response to their readings, enabling them to experience the artistic endeavor from both perspectives. In addition to critical essays, students may write stories, poems, plays, explanations, personal narratives, and response journals. Classes include a focus on writing skills such as generating a thesis, organizing clear patterns of thought, phrasing sentences effectively, developing analytical paragraphs, revising, and editing. Throughout the year, all sophomores work on vocabulary development through the Word Smart program.

ELEVENTH GRADE

Juniors must take Narrative Nonfiction third trimester of junior year.

Narrative Nonfiction: Finding Your Voice (1200)
Required for juniors
3rd trimester; 2 credits
We tell stories to reveal and share how we think and feel about the world and ourselves. This course focuses on rhetoric as a means to self-knowledge. Students use rhetorical modes such as description, narration, exposition, and persuasion as tools to identify, develop, and craft their voice. In addition, students learn how to pair audience and purpose. The course also includes opportunities for public expression of these skills coupled with personal reflection.

ELEVENTH AND TWELFTH GRADE ELECTIVES

Juniors and seniors must take and pass an English elective every trimester. The department offers a wide array of courses, so students can tailor their course of study according to their passions and interests. All electives are AP preparatory and, for those students interested, the Language and Composition exam is offered at the end of junior and senior year.

Nature and Uses of Language (1100)
1st, 2nd, or 3rd trimesters; 2 credits
This course engages students in close reading, class discussion, and written analysis of American linguistics and semantics. The course examines the interaction of language and cultural change; students read critically to decode the larger meaning of language within its cultural and social context. Students study the logical aspects of language, such as sense, reference, implication, and logical form; semantics, such as word meanings and word relations; and the cognitive structure of meaning. Students read selected works, both fiction and narrative nonfiction, to arrive at a deeper understanding of the American linguistics and semantics, and how language is used to create meaning and identity.

Literature of the American Wild (1290)
3rd trimester; 2 credits
This course focuses on American literature within the context of the pastoral and Romantic poetic traditions. Students analyze our relationship to nature in a complex, modern world and focus on such themes as isolation and citizenship, the power of otium and reflection, the unreliability of narrators and second-hand descriptions, idealism and individualism, order and chaos, and personal responsibility. The focus of the course is literary analysis. Readings, discussions, and writing assignments require students to focus on analysis of such literary techniques as narration, dialogue, and point of view, and analysis of such figurative devices as imagery, symbolism, allusion, and metaphor. In addition to reading seminal works by writers like Thoreau, Dickinson, Anne Dillard, and Edward Abbey, students conduct a self-directed analytical study of a work of literature focused on a specific region of the United States.

Multicultural Literature: Survey of Modern Poetry (1300)
1st trimester; 2 credits
This course is designed as a survey of poetry from the 1980s to present day. Students learn how to think critically about complex social issues by examining the lyrical style of contemporary poets. Students focus on meter, rhyme scheme—end rhyme, slant rhyme, and internal rhyme—and the effect of line breaks and exaggerated stress patterns. By concurrently analyzing traditional poetic canon, students are able to make connections between the two styles of writing by familiarizing themselves with myriad poetic devices. Students write original poems as well as complete an independent project that focuses on an individual poet’s writing style, and analyze the effect of their poetry on contemporary society.

Literature and Detective Fiction (1310)
1st or 2nd trimester; 2 credits
Detective fiction has become one of the most popular types of genre fiction today. It originated in America in the early nineteenth century as a fairly literary genre, with Edgar Allan Poe as its founding father. Emphasizing the hard-boiled and noir fiction that flourished between the Jazz Age and the Cold War as well as the police procedural and the true crime novel, this course examines a number of detective narratives in an attempt to answer the following questions: What is the appeal of detective fiction? How has it developed as a genre over the past 150-plus years? What are the limitations and potentials of the detective genre? What can a study of detective fiction reveal about socio-cultural anxieties, gender relations, interactions of fiction, and reality and epistemology? We read detective novels and short stories as complex, pleasurable narratives that seem to bespeak America’s anxiety over personal safety and security in a free society.

Tragedy through the Ages (1340)
1st or 3rd trimester; 2 credits
Through the study of plays by such dramatists as Sophocles, Euripides, Aeschylus, Shakespeare, Soyinka, and Miller, and reading critical essays by classical and modern writers, students gain an understanding of tragedy as an image of the individual in the world. This course lends itself to consideration of individual responsibility and to discussion of such issues as nobility, courage, morality, ethics, and faith. Students may have the opportunity for creative as well as academic writing. Sophocles’ Oedipus the King and Shakespeare’s Hamlet are the core readings in all Tragedy classes.

Literature of Cosmic Horror and the Supernatural (1350)
3rd trimester; 2 credits
In tales such as “The Call of Cthulhu” and “At the Mountains of Madness,” H.P. Lovecraft pioneered a new kind of fiction. Lovecraft refined this style of storytelling into his own mythos that involved a set of supernatural, pre-human, and extraterrestrial elements. This class focuses on texts with
an emphasis on the cosmic horror of the unknown and explores the meaning behind such stories, the shared universe of his mythos, and the lasting impact of his cosmic vision on the contemporary landscapes of literature and popular culture.

Coming of Age in America (1370)
1st or 2nd trimester; 2 credits
The literature of this course is thematic and organized by the “life of the nation.” Students read selected works, both fiction and narrative nonfiction, focusing on the dual themes of identity and growth. Students arrive at a deeper understanding of how societal forces and the combinations of multiple cultural identities contribute to a collective sense of identity (and what it means to feel isolated/estranged from that identity). Readings, discussions, and writing assignments require students to focus on analysis of such literary techniques as narration, dialogue, and point of view, and analysis of such figurative devices as imagery, symbolism, allusion, and metaphor.

Literature of the Black Atlantic (1380)
3rd trimester; 2 credits
This course examines black writing on both sides of the Atlantic Ocean including Africa, the Americas, Great Britain, and the Caribbean. Black narratives in English appeared as early as the 16th century along with the first slaves. How did a rich literary tradition emerge across the diaspora? Students survey the historical roots of this tradition as well as have an opportunity to read authors from Cuba, Martinique, Jamaica, the Dominican Republic, West Africa, and the United States. Students have the opportunity as well to read contemporary authors within this broad tradition. An essential question is how do people reinvent and improvise language to tell new stories? After reading slave narratives, immigrant narratives, and contemporary writing, students can then focus on an author of their choosing for more advanced study. Authors may include the following: Frederick Douglass, W.E.B. DuBois, Chinua Achebe, Chimanda Ngozi Adiche, Claude McKay, Toni Morrison, Zadie Smith, Simone Schwartz-Bart, Jamaica Kinkaid, Ishmael Reed, Junot Diaz, Darius James, and Leonardo Padura Fuentes.

Global Literature (1390)
1st trimester; 2 credits
This course explores contemporary global fiction writing in English and English translation. What literary conversations exist beyond Western tradition? We explore the imaginations of writers who are not only innovative but also push the boundaries between their home cultures and the global village. The literature asks students to explore the power of the literary imagination as we consider how people make sense of their world. The course supports the mission of creating cross-cultural dialogues. Students will have the opportunity to do independent reading projects.

Literature of Latin America (1400)
1st trimester; 2 credits
Literature of Latin America is a trimester course that fulfills one trimester of the English Department’s requirement for English 11 or 12. Its primary purpose is to engage students in close reading, class discussion, and written analysis of the varieties of cultures, histories, and movements within Latin American literature. This course builds upon their study of the ancient, Renaissance, and contemporary literature by engaging literature written by Latinx authors, both poetry and prose, both male and female, literature both in translation and in English.

Poetry of Social Justice: A Social Justice Pilgrimage through Poetry (1420)
1st or 3rd trimester; 2 credits
We explore the ingenious (often subversive) use of poems as instruments of war and peace, and poets as warriors, prophets, activists, and agitators. Who knew that poems could change the world?! For more than two centuries in the United States, poetry has been used to protest, to break down barriers, to shine light on injustice, to elevate the powerless and shame the powerful, to call the nation to action. We learn how to “dig into” a poem, share favorite poems that we discover, and write our own original poems. The trimester ends with a creative project through which each student will change the world! By the time the course is over, you will have a whole new appreciation for poetry!

Frontier Literature and American Identity (1455)
1st or 2nd trimester; 2 credits
This course examines the role of the American frontier in the formation of a distinct American mythology and identity. By looking at a variety of media, focusing especially on literature from the late 19th century through present day, we examine the way mythology, and specifically the mythology associated with the American Frontier, “symbolizes... society’s ideology and dramatizes its moral consciousness” (Slotkin, 1992). The class is a seminar course that uses daily discussion of the material covered to help students arrive at a more nuanced understanding of the collective narratives (with attendant symbols and linguistic commonsplaces) formed through American experience with shrinking frontiers.

The Bible and Literature (1460)
2nd trimester, 2 credits
Students in this course study the English Bible as a literary text, with readings from the Hebrew and Christian Scriptures. Along with historical and cultural backgrounds, emphasis is placed on literary genres present in the Bible, aspects of biblical language and poetics, and the intratextuality of biblical texts. The course also focuses on the influence literature from the Abrahamic traditions has had on Western and world literature and explores the Bible’s relationship with the text of the Qur’an.

Literature of Human Rights in the U.S. (1465)
2nd trimester; 2 credits
This course may be taken for either English 1465 or History 4195 credit.

“With Liberty and Justice for All,” eh? Not for everyone! Using primary source documents, plays, graphic novels, short stories, essays, poems, movies, and oral history interviews, we explore the legacy of human rights challenges in the history of the United States and the continuing struggles of Americans today to live up to the founding credos. We may be the “City on the Hill,” and our human rights heroes are many, but the American track record on social justice is not pristine.

The course is divided into three sections:
- U.S. Policy of Ethnic Cleansing/Genocide/ Culturicide against Native Americans
- The Civil Rights Movement of the 1950–’60s
- Contemporary LGBT Struggles

for more information please visit www.greenhill.org
Blended Nation: Voices of Contemporary America (1475)
2nd trimester; 2 credits
This course seeks to address the issues of privilege and cultural authority through the study of literature from a variety of American voices. Some of the essential questions include: What is privilege? Who has access to literary authority and how is it used? What is the interplay between privilege, identity, society, and power? Students examine their own cultural identity to generate sensitivity to privilege and power as it is expressed in their community, their country, and their world. Readings come from a variety of novelists, poets, and essayists. These may include Azar Nafisi, Allen G. Johnson, Lisa See, Jhumpa Lahiri, Sherman Alexie, Chang-Rae Lee, Ha Jin, Martha Southgate, Tim Wise, and essayists from current radio series such as “This I Believe,” “Latino USA,” and “TED Radio Hour.” Ten hours of service learning are required to complete the course.

Literature and Philosophy (1480)
2nd trimester; 2 credits
Even in a supposedly secular, scientific age, religions remain a dominant force in most human societies. Faith traditions obviously address some deep human needs. While they vary wildly in their theologies, rituals, and commandments, religions that endure address many of the same profoundly human questions: What is ultimate reality? How did the cosmos emerge from emptiness? What are the fundamentals of human nature? Does life have a purpose? Why is evil so prevalent and so powerful? How can humans achieve wholeness and wisdom? By comparing the answers that religions offer to these questions, we may find clues to understanding both our neighbors and ourselves.

Studies in Poetry (1510)
2nd trimester; 2 credits
This is a course of intensive reading of selected poems. The course may be structured around several focal points. For example, the instructor may choose the exploration of one or more longer poetic works to serve as the center for study and writing. Alternatively, the instructor may choose a time period or aesthetic movement (e.g. Romanticism as it played out internationally) to anchor the course.

Women’s Literature (1525)
1st or 2nd trimester; 2 credits
This course focuses on writings by women in a wide variety of literary genres: poetry, fiction, essays. Though most materials are contemporary American, students also sample a wide range of women’s writings from a variety of cultures and historical periods. Students have the opportunity to choose from a selection of reading materials by modern and contemporary writers such as Virginia Woolf, bell hooks, Roxane Gay, Lindy West, and Chimamanda Ngozi Adichie. Written work may include journals, creative writings, analytical essays, biographies, and interviews.

Literature of World Religions (1540)
1st trimester; 2 credits
This course engages students in close reading, class discussion, and written analysis of the literary element of texts selected from across the great civilizations and cultures of the world. Students examine the form of the literature to understand its function. Specifically, students study the use of genre forms (parable, allegory, lyric, mythology, epistle, etc.), language (literary devices—metaphor, chiasmus, synecdoche, allusion, apostrophe, metonymy, anthropomorphism, etc.), tone and register, and word choice to determine the relationship between text and meaning. Additionally, careful attention is given to the impact of translation on both connotation and denotation. Throughout the course, students complete nightly reading assignments, participate in daily seminar-based class discussions, and write, revise, and edit essays of literary analysis.

Social Class in Literature: Class on Class (1555)
2nd or 3rd trimester; 2 credits
This course explores the issue of socio-economic class in 20th and 21st century America. Although it lies at the heart of the American Dream and our reputation as the “Land of Opportunity,” class too often goes unexamined. Yet the questions it raises remain vital to the American identity and our unfolding story. The course delves into this expansive narrative. Through critical analysis and personal reflection, we strive to heighten our awareness of how class affects our individual and collective identities, and how those perceptions affect our interactions with one another. We also prepare and then serve lunch at Austin Street Center, an emergency shelter in Dallas that meets the basic needs of those experiencing homelessness.

In examining how these issues have been addressed over the years, students read various genres of literature from authors such as Lorraine Hansberry, Michael Patrick McDonald, Toni Bamba, and Alice Walker. Other artistic mediums complement the literature, including films, songs, and television shows, and students have the opportunity to teach topics of their choosing.

Sublime Darkness: Gothic Literature and High Romanticism (1565)
1st or 3rd trimester; 2 credits
This course explores the cultural context of the Romantic Movement and attempts to identify the core elements of Romanticism by examining the relationship between Gothic fiction and the poetry of its canonical poets, such as Coleridge, Shelley, Wordsworth, and Scott. The efforts of contemporary scholars have provided new insights into the ideological complexities and social function of this intriguing literary genre. Because the gothic explores what lies beyond Enlightenment attitudes toward reason, literacy, superstition, sensuality, crime, punishment, tyranny, marriage, social class, and nationhood, it provides writers of this period with a means of pushing the boundaries of what is known and what can be known. It asks whether we can separate pain from pleasure, sex from violence, justice from corruption, punishment from tyranny. Furthermore, we examine works of visual art from this period in connection to our reading.

Reading and Writing Short Fiction (1570)
1st trimester; 2 credits
In her essay on writing short fiction, Flannery O’Connor states that a short story is “a complete dramatic action” that “should be long in depth and should give us an experience of meaning.” Indeed, for all of its relative brevity, a good short story can pack a sizeable, memorable, and even transformative punch. The course explores how this artistic form creates such a powerful effect, and discussions center on both literary interpretation and the creative process. Assessments reflect both ends of this spectrum, ranging from an analytical essay.
to a fully realized short story. Students also have the opportunity to teach a story of their choosing. In gaining a fuller understanding of the craft of writing short fiction and developing their own creative voices, students experience a variety of perspectives, places, time periods, styles, techniques, and themes. Authors include Flannery O’Connor, James Joyce, Gabriel Garcia Marquez, Helena Maria Viramontes, Ralph Ellison, Edgar Allan Poe, Bernard Malamud, Amy Tan, Louise Erdrich, and Stephen King, among others.

**Modern Fiction (1590)**
1st or 2nd trimester; 2 credits

This course explores the development of prose fiction in the recent past and builds upon the foundation established in earlier courses. Particular attention is given to the changes literature has undergone in the post-modern period. Readings include selected works by such diverse authors as Saul Bellow, Jorge Luis Borges, Anthony Doerr, Elena Ferrante, Etgar Keret, Valeria Luiselli, Toni Morrison, Haruki Murakami, and Zadie Smith.

**Creative Writing (1750)**
2nd trimester; 2 credits

This course experiments with different techniques for writing poetry and short fiction. Students have two tools at their disposal: the workshop format for class meetings and sample texts. The workshop format challenges students to produce drafts on deadline while also providing constructive critiques of peer work. Students thereby improve their own writing by continuously playing the role of both author and editor. The class also reads a brief but focused list of sample texts. Attention shifts away from interpretation toward identifying writing techniques that we can incorporate into our own work. Depending on student interest, we may expand the course to include one of the following: screenwriting, playwriting, or personal essay (creative nonfiction).

**Advanced Tutorials in English (1700)**
1st, 2nd, or 3rd trimester; 2 credits

Permission from instructor and approval by the Head of the Upper School and the English Department are required.

One trimester–long graded tutorials are available to advanced Upper School students. Topics are to be jointly proposed in writing by the student and instructor.

**ADDITIONAL PASS-FAIL COURSES**

**Writing Tutorial (1950)**
1st, 2nd, or 3rd trimester; 2 credits (Pass/Fail)

Students interested in this studio course must submit a written proposal specifying the particular kind of writing in which they are interested and the length and number of works they attempt to complete during the trimester.

**Reading Tutorial (1960)**
1st, 2nd, or 3rd trimester; 2 credits (Pass/Fail)

Students interested in this studio course must submit a written proposal explaining the rationale of the tutorial and specifying the particular titles they are interested in reading during the trimester.

**Fine Arts**

*Arts education at Greenhill School is based upon the conviction that aesthetic curiosity, self-discipline, and internal motivation are fundamental to learning. We believe that the arts are multi-dimensional and teach important life skills through art skills.*

**Fine Arts at Greenhill** provide students an opportunity to celebrate their uniqueness and to strive for opportunities for collaboration. Some visual art classes incorporate science; plays written and produced by students often deal with important social issues; video projects likewise address social issues and concerns that confront young people. While many students at Greenhill seize the opportunity to focus on a specific artistic discipline, many continue to explore and enjoy the broad and diverse arts offerings available.

Upper School students are required to complete 10 credits (5 total trimesters) from any of the Fine Arts offerings, including music (orchestra, band, or choir), theater, dance, visual art (2D, 3D, photography, or video production/filmmaking), speech and debate, and publications. Students should earn 6 credits (3 trimesters) during both 9th and 10th grades, and 4 credits (2 trimesters) during 11th and 12th grades. *Some Fine Arts courses are offered for credit during Summer on the Hill. Most students at Greenhill graduate with more than the required 10 credits. Fine Arts courses are offered at both the beginning and advanced levels, and all classes are graded.*

**STUDIO ARTS**

**Fashion Design (6000)**
1st, 2nd, or 3rd trimester; 2 credits

No prerequisite

Fashion Design is for those students interested in the study of art and fashion. Students study proportion as it relates to the human figure, and along with the skills associated with various sketching and drawing techniques, different mediums are used while developing and creating individual style. Students devise original designs with the use of the principles of design (balance, contrast, emphasis, movement, pattern, rhythm, unity) and the principles of color (value, harmony).
Beginning Drawing (6010)  
1st or 2nd trimester; 2 credits  
This course focuses on drawing from life. Students investigate the concepts of line, shape, form, gesture, and color, as they relate to still life, figures, interiors, and landscapes. Drawing assignments are taught with an emphasis on the principles of design and composition, as well as increasing the students' observational and conceptual skills. Students have the opportunity to work in graphite, charcoal, pastels, prismacolor, conté, and ink.

Advanced Drawing (6015)  
1st or 3rd trimester; 2 credits  
Prerequisite: Beginning Drawing  
This course continues to focus on honing both technical and conceptual drawing skills. Students continue their investigation of space, image, and form as they relate to still life, figurative, and conceptual studies, and have the opportunity to explore various surfaces and media that will aid them in communicating content. In addition to in-class assignments, students create a deconstructed book with weekly illustration prompts as starting points for their books. A final work-series is the focus for the second half of the trimester. Students interested in building their portfolio in preparation for an AP course and/or students who really enjoy the drawing process may repeat this course.

Printmaking (6040)  
2nd trimester; 2 credits  
No prerequisite  
This course explores relief, intaglio, and experimental printing styles and offers students the chance to stretch their conceptual skills while working with inks, processes, and surfaces. Students have the opportunity to work with monoprint, plexi-etching, linocut, and chine collé. Printmaking gives students the freedom to explore the idea of “what if” and incorporates elements of painting, drawing, and collage.

Beginning Painting (6050)  
1st or 2nd trimester; 2 credits  
Oil paint, acrylics, gouache, and mixed media on paper and canvas surfaces are the foundation of this course. Students have the opportunity to work from observation and create conceptual compositions. Numerous styles, brush techniques, and color theory are discussed in order that students may feel confident in interpreting subjects through color and compositional problem solving.

Advanced Painting (6055)  
3rd trimester; 2 credits  
Prerequisite: Beginning Painting  
This course continues building on the technical and conceptual work completed in beginning painting. Students have the opportunity to experiment with various surfaces and paint media while working with assignment “prompts” given in class. A final series based on specific directions discussed in class is the focus for the second half of the trimester. In addition to in-class assignments, some outside research and idea work is required. Students interested in building their portfolios in preparation for an AP course and/or students who really enjoy the drawing process may repeat this course.

Ceramics (6060)  
1st or 2nd trimester; 2 credits  
Class size is limited to 10 students. This class teaches basic clay working skills and students learn basic hand-building skills including beginning wheel working, pinch, coil, and slab working. Students use high-temperature stoneware and classical glazing techniques. Students learn the technical components of working with clay including loading and unloading kilns and glaze mixing.

Advanced Ceramics (6065)  
1st or 2nd trimester; 2 credits  
Class size is limited to 8 students.  
Prerequisite: Ceramics 6060  
Students in this class continue to advance their wheel-working skills. Projects the students create include lidded containers, teapots, plates, large bowls, platters, and works combining thrown forms. Students work with stoneware clay and high fire their work using traditional glazing methods. Students also learn how to formulate and mix glazes and to load and unload kilns.

Glass Working (6025)  
3rd trimester; 2 credits  
Class size is limited to 12 students. This class explores the use of glass as a primary form of artistic expression. The course has primary emphasis on basic glass slumping and fusing techniques. Glass Working also explores slump mold making as well as combining fused and slumped glass elements with other media.

Furniture Design (6085)  
1st trimester; 2 credits  
Class size is limited to 12 students. Furniture Design is a one-trimester class exploring three-dimensional principles associated with design and creation of furniture pieces. Students learn the process of designing a conceptualized chair or table and use existing shop tools to effectively blend form and function. Students use traditional drafting methods as well as maquette to refine their designs. They also gain an understanding of the characteristics of different materials and the fundamental construction techniques and tools associated with those materials. Students may choose to form a chair from a solid tree stump, or weld an ornate steel-frame desk with a ceramic top, or an end table with a light-up laser-etched glass top. The possibilities are only limited to their imaginations.

Advanced Sculpture (6075)  
2nd or 3rd trimester; 2 credits  
Prerequisite: Sculpture 6070  
Advanced Sculpture is an intermediate art class that allows students who have completed Sculpture (6070) to continue to work on three-dimensional design problems. The assignments and materials provide a greater challenge and students are given more creative freedom within the assignment framework. Students learn design theory, art history relevant to their work, and think critically about their work during critiques. Work is in relief sculpture, subtractive and additive processes and includes wood, clay, paper, and wire.
Beginning Visual Design (6700)
3rd trimester; 2 credits
No prerequisite
This studio art course focuses on the basic principles of design and how they can be used to create strong works of art. Understanding how typography can be used as subject matter, understanding how basic color theory can be used to create bold compositions and understanding how texture, pattern, and form can be manipulated to great effect are all important elements of this course. Unlike more direct drawing or painting classes, design offers students a chance to work with mixed media materials including collage, ink, and markers to create their finished pieces, and the emphasis is equally balanced between process and the finished product.

Advanced Visual Design (6705)
3rd trimester; 2 credits
Prerequisite: Beginning Visual Design
This course takes the information, concepts, and experiences from the beginning course, and puts those elements into practical applications. Students focus on realistic design assignments that include areas of study such as branding, poster design, and book cover design. Students have the option to created three, very different works or concentrate their efforts in one area to create a focused series. Some outside research and idea work is required in addition to in-class assignments. Students interested in building their portfolio in preparation for an AP course and/or students who really enjoy design may repeat this course.

Digital Art (6090)
1st or 2nd trimester; 2 credits
Class size is limited to 18 students.
This art class uses the very powerful program Adobe Photoshop as a tool to form drawings. We learn the program together. No computer drawing experience is needed. The projects start with the class learning the basic elements of the programs to create images. Over the trimester the projects correlate to the students’ acquisition of new tools with the computer. Students use images from the internet, their own digital photography, scanned objects, and shapes made directly from the programs to form drawings. Assignments are given to challenge and sharpen the students’ picture-making skills.

At the completion of each assignment, there is a class critique, and images are printed and exhibited. Personal voice and its artistic expression are the cores of this class.

Beginning Black & White Photography (6100)
1st, 2nd, or 3rd trimester or Summer on the Hill; 2 credits
Class size is limited to 11 students.
Prerequisite: Students must provide their own 35mm camera.
There is a fee for class-related supplies.
This is a beginning level course for the novice photographer. A series of specific projects introduces students to an understanding of the basic photographic process, camera capabilities, and the darkroom techniques of the art of black & white photography. Students learn to improve their visual perception utilizing a variety of assignments. Assignments are critiqued in group critique sessions. Selected prints are matted for display, student exhibitions, and local contests.

Intermediate Photography (6105)
1st, 2nd, or 3rd trimester or Summer on the Hill; 2 credits
Class size in conjunction with Advanced Photography is limited to 16 students.
Prerequisite: Beginning Black & White Photography. Students must provide their own 35mm DSLR camera.
There is a fee for class-related supplies.
Digital is an exploration of techniques utilizing the programs Photoshop and Lightroom. Assignments given explore creative ways to solve problems in the digital darkroom and challenge the student both creatively and technically. An introduction to basic studio lighting and creative control of exposure enhances the technical prowess of the student-artist. Students solve a series of analytical and creative assignments to further their visual language. Students blog on their weekly assignments and conduct peer critique evaluations.

Advanced Photography (6110)
1st, 2nd, or 3rd trimester or Summer on the Hill; 2 credits
Class size in conjunction with Intermediate Photography is limited to 16 students.
Prerequisite: Beginning Black & White Photography and Intermediate Photography
Students must provide their own 35mm DSLR camera.
There is a fee for class-related supplies.
This course is a further investigation into digital photography as an artistic expression. Students experiment with a variety of shooting techniques and advanced digital manipulation, and propose/support an artist statement. Students blog on their weekly assignments and conduct peer critique evaluations. This course may be repeated for credit.

Honors Photography (6115)
Full year; 6 credits
Prerequisites: Beginning Black & White Photography, Intermediate Photography, and 2 sections of Advanced Photography or the following: 1 section of Advanced Photography and 1 section of Chemistry of Photography, or 1 section of Advanced Photography and 1 section of Light, Paper, Process. Instructor’s recommendation is necessary.
There is a fee for class-related supplies.
Honors Photography is a further exploration of the issues surrounding the pursuit of photography as a medium of personal expression. Students are responsible for writing a portfolio thesis and supporting the proposal with an exhibition-quality matted portfolio, a custom-printed book, and a blog detailing the process of artistic intent. Skills to be used: all aspects of 19th, 20th, and 21st century technologies. These include wetplate collodion photography, historical and alternative printmaking, 20th century silver gelatin, history of photography identification, and further exploration of new digital media (19th–21st century integration). Alternative aspects of book art and collaborative work are highly encouraged. Honors students conduct a middle-of-the-year Honors/AP exhibition. The AP Examination in Art is optional; however, it is not a core focus of the class.

Chemistry of Photography (6120)
1st trimester; 2 credits
Prerequisites: Completion of Basic Photography and Introductory Chemistry, Grades 11 & 12 or Instructor’s approval.
Students may enroll in this course for either Science 5340 or Fine Arts 6120 credit.
There is a fee for class-related supplies.
This course allows students to explore the interconnectedness of a Fine Arts discipline (photography) and Science discipline (chemistry). Students simultaneously explore several photographic techniques and the chemical explanations behind those techniques. Students who have completed this course are able to reflect and speak on the artistic meaning of their images and explain, on a chemical level, the processes and techniques used to achieve the final works of art. Experiments and imagery are
produced with black and white developer techniques, toning techniques, solarization and Sabattier effects, and 19th century printing/shooting techniques. A final portfolio is produced along with weekly tests/quizzes, critiques, and a final project assessed on artistic and chemical understanding.

**Video Production (6800)**
1st or 3rd trimester; 2 credits
This course can be many things. We work in small groups to produce several short films in a trimester. For the Middle School student who worked in a large group, this class allows you to be much more in charge of every aspect of the film. For the film fan, this class gets your feet wet in the process of preproduction, production, and postproduction, affording a greater appreciation of the art form. For the driven young filmmaker, this class starts to shape your skills and voice, and also fulfills the requirement for the Advanced Video Production (AVP) classes. No matter what your motivation, this class is a space to watch, dissect, evaluate, and produce films.

**Advanced Video Production (6810)**
1st and 2nd trimesters; 4 credits
Prerequisite: US Video Production or Video Production: Animation and teacher approval
Advanced Video Production (AVP) is a two-trimester class for the student who wants a more rigorous class of video production. AVP students work in small tight-knit groups to make high-quality short films. Class time is used for watching, discussing, and evaluating films, pitching stories in small and large groups, preproduction and postproduction of shorts, field trips, and visiting artists. AVP films have been shown all over the world and won numerous film festivals.

**Video Production: Animation (6820)**
2nd or 3rd trimester; 2 credits
Class size is limited to 12 students.
In animation we make magic. We defy gravity, time, and space. To do this we use different materials and software from the traditional video production classes. Like other video production classes, the objective is to produce short narrative films. A good way to think of this class is a marriage between visual art and filmmaking. Our animation films have been shown in film festivals all over the world. This class can also fulfill the requirement for the Advanced Video Production (AVP) classes.

**Tutorial in Advanced Studio Art (613G)**
1st, 2nd, or 3rd trimester; 2 credits
Prerequisite: Students must have taken a beginning visual art course for a tutorial.
One-trimester tutorials are available to advanced art students. Topics are to be jointly proposed in writing by the student and instructor, and must be approved by the Department Head and the Head of the Upper School.

**Advanced Placement Three Dimensional Design (6150)**
Full year; 6 credits
Prerequisite: A minimum of three previous trimesters of 3D art in any combination, including sculpture, ceramics, and jewelry
Note: The AP Examination in Art is required.
AP Three Dimensional Design focuses on the development of a portfolio addressing the principles of 3D design. This course is designed for students who intend to pursue art in college. Students complete a portfolio for submission to the AP Program Evaluation Committee, and as part of college applications. In order to qualify for AP Three Dimensional Design, students must have satisfied all prerequisites and submit a written request to be admitted to the program.

**Technical Theater Design & Production (6235)**
2nd or 3rd trimester; 2 credits
Prerequisite: Technical Theater
2nd Trimester: Advanced Technical Production. This course introduces the intermediate theater artist to the incredible variety of work that takes place “behind the scenes” of theatrical production. We examine the technical issues and solutions that are found in many productions with specific regard to welding, metal work, rigging, pneumatics, automation, special effects, and technical direction. At pertinent steps along the way, we pick up the tools of the trade and perform the tasks required of the technical director in realizing a design.

**3rd Trimester: Scene Design.** This course introduces the beginning theater artist to the basic skills necessary to complete a carefully planned, concise, cohesive scenic design. We examine the process by which the design takes shape. From concept to completion, we examine how a scenic design gets from the designer’s mind to a final product ready for presentation to the rest of the production.
staff. At pertinent steps along the way, we pick up the tools of the trade and perform the tasks required of the scene designer, including research, sketching, and model building. Exemplary students may be asked to design a main stage production.

**Acting I (6220)**
1st or 2nd trimester; 2 credits
This course is primarily for the beginning actor, or those with experience solely in Middle School Theater. Depending on class size, the course includes movement, pantomime, ensemble acting, theater history, and monologue work, audition technique, and partnered scene-work. The students spend eight weeks of the class learning the actor’s rehearsal process, with a final performance assessment of a one-act production for students and parents. This course is designed to broaden performance experience and develop an actor’s unique skill set in a small class setting in a low-risk, high-success environment.

**Acting II (6230)**
3rd trimester; 2 credits
Prerequisite: Permission of the Theater Director
This course is for the experienced actor. The course includes movement, pantomime, ensemble acting, improvisational acting, and theater history. Students spend eight weeks learning the actor’s rehearsal process, with a public performance of a full-length play for final assessment. First trimester focuses on improvisational theater in the Renaissance; second trimester focuses on contemporary American theater and method acting approaches; and third trimester focuses on multicultural and world theater.

**Introduction to Writing for Stage and Film (6840)**
1st trimester; 2 credits
This practical course leads new and developing playwrights and screenwriters through the structures of theatrical storytelling by experimenting with practical writing techniques. Students will understand the use of physical space, create believable dramatic characters and dialogue, and build a strong play structure through the principles of movement, action, conflict, and juxtaposition. In addition to various short playwriting and screenwriting assignments, students are expected to complete a 10-minute play, a one-act play (20–40 minutes in length), and a film treatment and/or an episode of a television comedy or drama. The course culminates in a staged reading of student work. The short plays are entered into various local and national playwriting contests and considered for a student-directed playwriting festival at the end of the year.

**Student Directing: Directing and Acting (6215)**
3rd trimester; 2 credits
Prerequisite: Permission of the Theater Director
This course teaches basic elements of directing and producing for theater. Students who are interested in directing need to formally apply in the fall. Student actors are admitted after an audition process with the selected student directors and playwrights. Each director produces a one-act play for public performance.

**Theater Company: Directing/Acting/Playwriting/Design (6860)**
Full year; 6 credits
Prerequisite: Permission of the Theater Director and Technical Director
This is an all-year course for students who are interested in a completely immersive theater production course that encompasses acting, directing, design, playwriting, and stage management. We create a completely self-sustaining, student-run Greenhill Theater company. Actors, be prepared to hang lights; technical theater students might find themselves acting in a student production. In the first trimester, we push the envelope by having students devise and design a community touring project, addressing the challenges of street and non-traditional theater. In the second trimester, we develop an original student-written play for production. In the third trimester, we produce a contemporary work in the new black box theater and explore new design challenges. Throughout the process, actors and technical theater students work side-by-side to learn what it takes to create and produce theatrical work in traditional and non-traditional settings.

**Movement for the Theater (6240)**
1st or 2nd trimester; 2 credits
This foundational course is an introductory class in physical theater and is designed to provide the beginning or advanced actor with a basic examination and exploration of the use of the body and movement as it pertains to the craft of stage acting. Topics examined in the course are deep observation, relaxation, and freedom of the body in preparation for the acting process. Students also learn expression of emotion and circumstances as they are connected to movement and the body. We study iconic methodologies and exercises from Anne Bogart to Rudolf Laban to Jacques Lecoq and we explore neutral/character mask, clowning, hand-to-hand combat, and period dance.

**Introduction to Improvisation (6275)**
1st, 2nd, or 3rd trimester; 2 credits
Students experiment with the basic elements of improvisational comedy in a fast-paced, student-structured classroom environment. Short- and Long-Form Improv provides the foundation for many of the skills presented in class. Participants discover how spontaneity and unpredictability foster creativity, improve the learning environment, and help to enhance both personal and group relationships. A variety of traditional and contemporary theatrical exercises and techniques are used to develop stage presence, establish a base for creating a well-structured storyline, construct unique and interesting characters, develop the skills for correct comedic timing and pacing, and help to improve listening and observation skills. We hope students develop an appreciation for the diversity of ideas and creativity of their peers as well as improve their brainstorming skills and self-confidence level. Emphasis is placed on how the art of improvisation is slowly becoming the new identifier for stand-up comedy, and how it can help to shape a culture and foster independence.

**Tutorials in Advanced Drama (6250)**
1st, 2nd, or 3rd trimester; 2 credits
One-trimester tutorials are available to advanced drama students. Topics are to be jointly proposed in writing by the student and instructor, and must be approved by the Department Head and the Head of the Upper School.
THEATER PRODUCTIONS

Fall Play Production (6200)
1st trimester; 2 credits
Prerequisite: By audition only
Students who participate in the Upper School Fall Play Production may elect to receive fine arts credit for their work in the production. Auditions for the Fall Play typically are held the first week of school, rehearsals take place at the end of the school day from 4:15 to 6:15 p.m., and participation in an acting class is strongly encouraged. Students are enrolled in this course after auditions.

Fall Play Production Technical Crew (6205)
1st trimester; 2 credits
Prerequisite: Permission of the Technical Director
The technical crew builds and works on technical elements for the Fall production in areas including scenery, lighting, costumes, and stage management. Once the show opens students act as crew in one of the following areas: stage manager, light board operator, sound board operator, stage crew, props crew, house management, spotlight operator, projection operator, or wardrobe. Labs meet every ACE day from 4:15 to 6:15 p.m. Most students have the opportunity to continue working on crew when the production visits the ISAS festival in April.

Winter Musical Production (6960)
2nd trimester; 2 credits (PE = Pass/Fail; FA = Graded)
Prerequisite: By audition only
Students may enroll in this course for either Fine Arts 6960 or PE 8865 credit (dancing ensemble).
This course is designed for the student whose interests lie in musical theater performance. Every student is expected to learn dances used in the Spring Musical. Emphasis is placed on performance quality and technical proficiency. Students perform movement sequences and learn character analysis, including how to create memorable performances both on the stage and on film. We work with texts written for the stage, film, and television, and even commercial copy. Scene work is often video recorded for review and critique. A final showcase of work is performed for an invited audience.

Spring Performance Lab (6255)
3rd trimester; 2 credits
This laboratory class explores various acting styles and techniques, introduction to script and character analysis, including how to create memorable performances both on the stage and on film. We work with texts written for the stage, film, and television, and even commercial copy. Scene work is often video recorded for review and critique. A final showcase of work is performed for an invited audience.

SPÉECH AND DEBATE

Persuasion and Debate (6260)
1st trimester; 2 credits
This is the entry-level course for all students interested in pursuing interscholastic debate. The course introduces students to basic argumentation and persuasion theory by participating in cross examination and Lincoln-Douglas debate.

Intermediate Debate (6265)
2nd trimester; 2 credits
Prerequisite: Permission of the instructor or successful completion of Persuasion and Debate
This course builds upon the principles of persuasion and debate by emphasizing the research component of argumentation. The course introduces students to research strategies, hands-on application of research techniques, and debate practice using personal research.

Advanced Debate (6280)
1st, 2nd, or 3rd trimester; 2 credits
Prerequisite: Permission of the instructor or successful completion of Intermediate Debate
This course, intended for students active in interscholastic competition, covers advanced concepts in cross-examination or Lincoln-Douglas Debate. Each year the course material changes to correspond to the National High School Debate Resolution. The minimum participation requirement for successful completion of this course is two tournaments per trimester.

LINCOLN-DOUGLAS DEBATE

Lincoln-Douglas Debate (6300)
1st, 2nd, or 3rd trimester; 2 credits
This course examines the practice of contemporary Lincoln-Douglas Debate by engaging in a study of the philosophical foundations of many of the major societal issues of the day. The course introduces students to argumentation, persuasion theory, research, and strategy necessary to participate in interscholastic debate. Each year the course material changes to correspond to the national debate resolution. The course may be repeated for credit. The minimum participation requirement for successful completion of this course is two tournaments per trimester.

Tutorial in Advanced Forensics (6305)
1st, 2nd, or 3rd trimester; 2 credits
One-trimester tutorials are available to advanced debate and forensic students in the Upper School. Topics are to be jointly proposed in writing by the student and instructor, and must be approved by the Department Head and the Head of the Upper School.

MUSIC

Greenhill Singers (6410)
Full year; 6 credits
The Greenhill Singers is a select chorus, performing music ranging from classical to popular. The emphasis for this group is on musicianship and ensemble performance. Singer members are eligible to audition for TPSMEA All-State Choir and performance opportunities include several concerts throughout the year in addition to the ISAS Fine Arts Festival, Commencement, and Baccalaureate ceremonies.

Greenhill Concert Band (6510)
Full year; 6 credits
The Greenhill Concert Band is a full instrumentation band, which performs a variety of music with a focus of the musicianship and ensemble playing. The band plays at various functions and interscholastic contests throughout the year. Students also have the opportunity to compete in individual, interscholastic contests (All-Region Band, All-State Band, Solo, and Ensemble, etc.). Members of the
Greenhill Jazz Band are selected from the Greenhill Concert Band.

Greenhill Chamber Orchestra (6610)
Full year; 6 credits
The Greenhill Chamber Orchestra performs a wide selection of music including standard repertoire for string orchestra. Students also participate in playing trios and quartets at various times throughout the year. The Chamber Orchestra enjoys collaborating with other Greenhill performing groups from time to time, performing with, among others, the Greenhill Dance Company in October, the Kindergarten Nutcracker in December, and for Jazz Night in May. Likewise, the Chamber Orchestra helps provide music for ceremonial events throughout the school year such as the Founders Day Assembly, Baccalaureate, and Commencement. Students have opportunities to participate in auditions for TMEA and TPSMEA Honor groups, Solo, and Ensemble, and various youth orchestras in the Dallas area. Private lessons are not required but are highly encouraged. Students are expected to progress in skill and musicianship throughout their participation in the Chamber Orchestra. Participation is by audition and is open to students of intermediate to advanced ability.

Tutorial in Advanced Music (6390)
1st, 2nd, or 3rd trimester; 2 credits
One-trimester tutorials are available to advanced music students. Topics are to be jointly proposed in writing by the student and instructor, and must be approved by the Department Head and the Head of Upper School.

DANCE

Beginning & Intermediate Dance Class (6910)
1st or 3rd trimester;
2 credits (PE = Pass/Fail; FA = Graded)
Students may enroll in this course for either Fine Arts 6910 or PE 8015 credit.
This course is designed as an introduction to the various aspects of dance technique. Emphasis is placed on dance technique, performance quality, building strength, increasing flexibility and stamina, and stylistic differences between concert style dance. Dance technique classes meet two to three times a week, one hour a day. Dance classes address ballet, modern, and jazz dance techniques.

Advanced Dance Class (6915)
1st or 3rd trimester;
2 credits (PE = Pass/Fail; FA = Graded)
Prerequisite: Beginning & Intermediate Dance Class. Students may enroll in this course for either Fine Arts 6915 or PE 8860 credit.
The Advanced Dance Class strives to increase coordination, flexibility, muscular development, and a greater understanding and appreciation for the art of dance. Emphasis is placed on further development of technical ability. Dance classes address ballet, modern, and jazz dance techniques.

Greenhill Dance Company (6925)
Full year; 6 credits (PE = Pass/Fail; FA = Graded)
Prerequisite: By audition only
Students may enroll in this course for either Fine Arts 6925 or PE 8860 credit.

Musical Dance Class (6960)
2nd trimester; 2 credits (PE = Pass/Fail; FA = Graded)
Prerequisite: By audition only
Students may enroll in this course for either Fine Arts 6960 or PE 8865 credit.
This course is designed for the student whose interests lie in dance technique (ballet, modern, jazz) and performance. Emphasis is placed on performance quality and technical proficiency. Students perform advanced movement sequences, participate in improvisation experiences, and engage in class discussions and class critique sessions. Students also engage in various aspects of production and promotion for dance performances, including ISAS Fine Arts Festival and the Greenhill Dance Company spring dance concert.

PUBLICATIONS

Montage Literary Magazine:
Publication Creation (6690)
3rd trimester; 2 credits
Prerequisite: Approval of instructor
This course takes you through the process by which a literary magazine gets made. Designed as a piggyback culmination to the first and second trimester club, this third trimester class compiles and transforms literary and artistic submissions into a publication that primarily examines and showcases the relationship between aesthetics and rhetoric. Students learn what it takes to create a compelling and powerful presence on a printed page that includes compositional consideration, color, typography, and how to create a dynamic composition. The course also includes design theory, basic layout, and technical InDesign, Photoshop, and Lightroom skills.

Cavalcade Yearbook (6590)
Full year; 6 credits
Students receive Fine Arts credit for completion of the full-year course.
This is a yearlong course that gives students the chance to be a part of the production of the Greenhill yearbook, Cavalcade, from inception through printed publication. Ideas and brainstorming for the class begin early first trimester and continue with designing, photographing, and proofing of the book throughout the year. Students work with InDesign, Photoshop, and Lightroom, and have the opportunity to work on many components of the book depending on their interests. While most of the book is produced in class, some weekend work may be required. Students in this course take on leadership roles which they may apply for after the end of their first year in yearbook. Part of the students’ responsibilities include training students new to yearbook, as well as overseeing the design and continuity of a particular section, or in the case of editor(s) in chief, overseeing the entire book.
The Greenhill Upper School history curriculum deepens students’ knowledge of history; sparks their curiosity about the world; promotes an understanding of global cultures; encourages students to become active citizens; and develops the research and communication skills which allow students to explore and convey information in sophisticated ways.

The Upper School program is divided into two sections: a core program in 9th and 10th grades in which students learn about global history and the history of the United States, and an 11th–12th grade program in which students are given a wide choice of trimester electives. In the 9th and 10th grade courses, students learn first about the history of the world from the 15th century to the present with a focus on non-western cultures before diving into the history of the United States and its role in the world. The 11th and 12th grade electives encourage students to broaden their understanding of world history, social sciences, global cultures, and pressing international issues. All Upper School students must take a government course and are given two options to satisfy this requirement: a one-trimester course on Government in Action or a two-trimester offering of AP Government. The department has also added a special course for seniors who display a passion and aptitude for history. This Senior Seminar course has a different topic and teacher each year, and rising seniors must apply for consideration and acceptance into the class.

Across the program, primary documents, current events, guest speakers, and field trips supplement course material and enhance student interest. Research skills are also embedded into the program at every stage. All 9th and 10th graders are required to complete a formal research paper, and these skills are refined and advanced in the various upper-divisional elective courses. After completing the Upper School history program, students are prepared for continued study of history at the university level, as well as a life of thoughtful and engaged citizenship, locally, nationally, and globally.
FRESHMAN

Global History (4010)
Full year; 6 credits
This course examines global history from roughly 1400 to the present day with an emphasis on understanding how the world got to be the way it is today. The course seeks to answer the questions: How are global systems of trade established? And what are the intended and unintended consequences of globalization? How does geography affect political, cultural, and economic development? How did the nation state arise and how long will it last? What explains the rise of national power? What accounts for the dominance of the West in the modern period? Where does the notion of the clash between East and West come from? In what ways have belief systems impacted global society? Why do we face environmental crisis? The course is heavily skills based. By the end of the year, students will know how to read and annotate a primary source, construct a thesis-driven essay, read maps, use the Chicago Manual of Style, and research historical events.

ELECTIVES

Juniors and seniors are encouraged to take electives that reflect their interests in history or social science. A total of eight credits must be earned from classes listed below in order to graduate from Greenhill School. At least two of these credits must be from a government course. Students satisfy their government credit by taking either Government in Action (4480, 2 credits) or AP Government (4490, 4 credits). Students may not take both government courses without departmental approval.

Art History: Conflicts and Controversy (4080)
3rd trimester; 2 credits
A student may take either or both Art History offerings for credit, and in any order. One is not a prerequisite for the other. Whether presenting one perspective on an issue or becoming the issue itself, works of art often are the center of heated disputes. This class explores controversies in art from the past and present, including topics such as graffiti, propaganda, social justice, and censorship. Students are immersed in some of the most controversial moments in the history of art and emerge with a broader perspective of history and of ourselves. Throughout the trimester, students have the opportunity to explore their own personal interests and identity in a research paper and presentation on a topic of their choice.

Struggles for Independence in the Non-Western World (4120)
2nd trimester; 2 credits
The revolution starts now. This course seeks to cover 20th century post-WWII independence struggles across the globe. Students examine case studies of India and Algeria. Each case also considers regional geography, economics, pre-colonial civilizations, the nature and structure of colonial power, and challenges that each country faces today. In addition to learning about an important chapter in the history of each of these countries, students leave the course with an enhanced understanding of the concepts of nationalism, autonomy, revolution, and liberation. They then apply these concepts as they conduct research projects on additional independence struggles.

History of Human Rights in the Modern World (4180)
1st or 2nd trimester; 2 credits
There is no such thing as a lesser person. This simple yet powerful idea serves as the basis for this course, as we explore the concept of human rights from a variety of perspectives. The course begins with an examination of the very concept of human rights, i.e. What is meant by this term? How did the concept of human rights develop? What are the challenges in applying such a universal term to different cultures and societies? Once this foundation has been established, students then study the major episodes of human rights violations (e.g., genocide, sexual violence against women) in the 20th century. Students assess the motivations behind such atrocities and the degree to which outside actors took steps to intervene. Our attention then shifts to contemporary examples and issues, including the American criminal justice system. As part of this effort, students are encouraged to assess the status of human rights in our own country/community and determine the extent to which the most vulnerable members of our society are being protected and supported. Throughout all of this work, students gain a greater understanding of the development of human rights initiatives and the challenges to realizing a more just society. In so doing, the hope is that students leave this class with the understandings, skills, and motivation to take some sort of action, either at the global, national, or local level.

SOPHOMORE

United States History (4020)
Full year; 6 credits
United States History surveys the political, economic, and social history of the United States from the Civil War to the present. The class is a chronological study of the modern U.S., focusing on themes of freedom, power, and the American Dream. How did the United States rise from a regional backwater to a global superpower? Who does “We the People” include? How have individuals and groups fought for full citizenship and rights? How have race and class impacted the pursuit of liberty, equality, and opportunity? Is America “exceptional”? How have Americans interacted with their landscape and environment? These are some of the questions this class seeks to explore. This class ties the study of the past to current events. For example, we trace the legacies of an unfinished Reconstruction to the Civil Rights Movement and then to protests in the news today. Students hone critical thinking, research and writing skills, and complete an independent research paper.

Struggles for Independence in the Non-Western World (4120)
2nd trimester; 2 credits
The revolution starts now. This course seeks to cover 20th century post-WWII independence struggles across the globe. Students examine case studies of India and Algeria. Each case also considers regional geography, economics, pre-colonial civilizations, the nature and structure of colonial power, and challenges that each country faces today. In addition to learning about an important chapter in the history of each of these countries, students leave the course with an enhanced understanding of the concepts of nationalism, autonomy, revolution, and liberation. They then apply these concepts as they conduct research projects on additional independence struggles.

The Cold War: Global History and Politics from 1945 to 1991 (4190)
1st trimester; 2 credits
This course examines the geopolitical, economic, and ideological struggle that emerged in the aftermath of WWII. Two superpowers emerged and although the largest threat of confrontation came from the Cuban Missile Crisis, the course looks at effects on a global scale as the world became polarized: the Greek Civil War, the Korean War, the Vietnam War, and the Soviet-Afghan War were all products of the larger battle between communism and the capitalist democracies. In addition, conflicts in Angola, El Salvador, and Nicaragua are examined. Throughout the course, we look at the modern relationship between Russia and the United States and how it continues to evolve.

for more information please visit www.greenhill.org
History of Human Rights in the U.S. (4195)
2nd trimester; 2 credits
This course may be taken for either English 1465 or History 4195 credit.

“With Liberty and Justice for All,” eh? Not for everyone! Using primary source documents, plays, graphic novels, shorts stories, essays, poems, movies, and oral history interviews, we explore the history of human rights challenges in the history of the United States and the continuing struggles of Americans today to live up to the founding credos. We may be the “City on the Hill,” and our human rights heroes are many, but the American track record on social justice is not pristine. The course is divided into three sections:
- U.S. Policy of Ethnic Cleansing/Genocide/ Culturicide against Native Americans
- The Civil Rights Movement of the 1950s–60s
- Contemporary LGBT Struggles

Radicals and Extremists in U.S. History (4215)
1st or 2nd trimester; 2 credits
Are we in a time of unprecedented extremism, radicalism, and disagreement? Will America move past these disagreements and find its center again? Will those on the political extremes ultimately succeed in fundamentally changing America? This course aims to approach these questions through an examination of the past. Using a historical lens, the class delves into significant radical and extremist movements from the 20th century—including White Nationalism, labor militancy, American communism, Black Power, and the New Right—to understand their legacy on American politics today. In class, students engage in textual analysis and discussions of a variety of primary and secondary sources. The course includes a research component to allow students to delve into greater detail on a radical movement of their interest.

Race and the American Political Tradition (4225)
3rd trimester; 2 credits
This course asks: What political purpose(s) has the concept of race served in the political philosophical tradition that informs politics in the United States? How does (or does) this concept continue to shape race relations in the United States? These questions also have theoretical, political, historical, sociological, and psychosocial dimensions that take for granted the idea/argument that race is a socially constructed category of identification, created and designed for some social purpose. We study historical and contemporary works of political theory that seek to defend, ignore, diffuse, or reject claims of racial superiority and inferiority that permeate our society. We investigate whether the political theory of the United States is rooted in racism and, if so, can the United States recover from its racist traditions or whether such a project of recovery is doomed to fail.

The 1960s (4250)
2nd or 3rd trimester; 2 credits
This course examines the turbulent history of the 1960s in the United States. For our purposes, the “decade” extends from the Brown decision of 1954 (also the year of the fall of Dienbienphu in Vietnam), through Watergate and the resignation of Richard Nixon in 1974, though on occasion students may explore events before 1954 or discuss developments in the years after 1974. Enriching the decade in this way is necessary because the social movements in which students are most interested, the civil rights and anti-war movements, as well as the shifts in cultural values associated with the “counterculture” of the 1960s, began before and persisted after the decade. Because many of the issues to be discussed are controversial, students are often asked to consider conflicting interpretations and arrive at their own judgments.

Understanding September 11 (4255)
1st trimester; 2 credits
This course examines the key issues surrounding the terrorist attacks of September 11, 2001. In seeking to understand this momentous event, we explore the recent history of the Middle East (and the wider Islamic world), as well as America’s often-conflicted role in this region. Using a variety of sources, media, and perspectives, students view 9/11 through a number of different “lenses.” None of these lenses is sufficient by itself, but each has something to contribute as we construct an understanding of this complex event. Students also assess 9/11’s impact on a global scale, looking at media reaction, policy responses, and the continued threat of terrorism worldwide.

Women’s History (4280)
1st or 2nd trimester, 2 credits
Do you know your grandmother’s maiden name? Your great-grandmother’s? Women make up half of the population, but their deeds and names tend to be obscured in the historical record. In the course of this class we attempt to reclaim women’s place in history from pre-1492 to the present. While much of this class covers women who lived in the public sphere and left their names in the history books, we also try to look at the lived experiences of women who never made the news. We pay particular attention to how women’s stories are recorded. While we focus primarily on women in American history, we also try to examine women and the birth of feminism in a global context.

Sports and Society (4285)
1st trimester; 2 credits
Sports and Society is an elective for students interested in expanding their knowledge of sport and how it relates to culture. It is based on the premise that sport is a reflection of society with all of its good points as well as its negative ones. Thus, sample questions include: To what extent is a sport connected to the culture of its place of origin? How closely linked is a country’s sport to the land’s customs, economy, and society? Ultimately, how can sports serve as a window into a particular culture? Beginning with a reading of Buzz Bissinger’s Friday Night Lights, regional, national, and international sports are covered, and topics range from those initially proposed by the teacher to student generated ones as the course develops. Students also examine the notion that the sports community can, and should, take a lead role in bringing about positive social change.

Introduction to Sociology (4290)
1st trimester; 2 credits
This course provides students with an introduction to sociology, defined in this case simply as the scientific study of society. It examines many different aspects of this discipline, beginning with an overview of how one studies the subject of sociology and culminating with students taking an in-depth look at their own lives as they have been shaped by the society around them. In between, the course asks students to examine the subjects of culture, institutionalized social structure, social
change, and inequality in today’s world. The course exposes students to the specialized vocabulary employed by sociologists, the various theoretical perspectives used by sociologists to explain different societal phenomena, and the many social policies that attempt to combat the various problems that have plagued societies over time. It also requires students to make use of extensive research, questioning, and writing skills.

**Inner Light: Traditions and Paths of Meditation (4305)**

2nd or 3rd trimester; 2 credits

*Why have humans around the world and throughout history cultivated personal and transpersonal awareness? Why has such insight become less central to recent Euro-American culture? What value can accrue from quietude and reflection? How might meditation change one’s life and one’s perception of the world?* In addressing those questions, Inner Light explores both Eastern and Western wisdom traditions. Pursuing independent research, each student chooses a focus for in-depth investigation and shares the findings in a class presentation. The experiential component of the course is also vital. Thus, students participate in daily group meditations and are encouraged to develop a personal practice outside of class.

**Big History (4350)**

Full year; 6 credits

This course may be taken for either History 4350 or Science 5950 credit.

This yearlong junior/senior level elective blends two disciplines as it seeks to tell the story of the universe from the Big Bang to the present day—no small feat. Inspired by the work of David Christian, this program divides the history of the universe into ten units, or thresholds, each examining points in time when ingredients combined to produce great change. These units include the Big Bang, the Stars Light Up, New Chemical Elements, the Earth and the Solar System, Life, Collective Learning, Agriculture, Expansion and Interconnection, the Modern Revolution, and the Future. While a unit such as the Big Bang sounds science oriented, the science is mixed with study of creation stories across the globe, a look at how human understanding of the universe changed (Copernicus, Galileo, etc.), intellectual history, and the politics of science. The emphasis of the course is on understanding what we know, how we know it, and how we prove what we know. Both historians and scientists examine evidence, form hypotheses (or theses), conduct experiments, gather more evidence, test theories, and refine them as more information comes available.

**Genocide in the Modern World (4380)**

3rd trimester; 2 credits

With our world “growing smaller” each day due to the advent of new technologies, particularly social media, what is our responsibility and what should be our response to mass violence and propagandized hate? Through a deep dive into case studies of modern genocides across each of the inhabited continents, students engage in not only historical analysis but also the study of human behavior, especially as it relates to racism, religious intolerance, and prejudice. Genocide in the Modern World asks students to wrestle with ethical decision making, themes of justice and equality, and the questions of whether genocide is always an intentional act, whether its result is always death and violence, and how communities attempt to reconcile with, repair, and remember their dead. In the end, students should expect to come away with a greater understanding of their own role and responsibilities as a global citizen.

**Economics and Society (4430)**

1st trimester or Summer on the Hill; 2 credits

The objective of Economics and Society is to gain a fundamental understanding of the concepts of economics and to study economic problems as they relate to the real world. Using primarily microeconomic concepts, students study how economic decisions get made, by whom, and to what end. Topics include, but are not limited to, production decisions made by different business models (e.g., monopolists, oligopolists, perfect competitors), market failures and social welfare consequences, and rational decision making, including some elementary game theory. The class culminates in a paper in which students must use the theories they have learned to analyze a current event.

**Advanced Placement Macroeconomics (4440)**

3rd trimester; 2 credits

Prerequisites: Students must submit an application and take an entrance test prior to enrolling in this class. All admitted students must take the Advanced Placement exam in May.

AP Macroeconomics is an introductory college-level course that affords students the opportunity to earn college credits by completing an exam with a satisfactory score. By way of theory and public policy applications, this course covers current major domestic and international macroeconomic issues in the U.S. economy, including the
determination of income and output, inflation, unemployment, and economic growth; money, banking, and the Federal Reserve System; federal spending, taxation, and deficits; and international trade, exchange rates, and the balance of payments.

**Advanced Placement Microeconomics (4450)**
2nd trimester; 2 credits
Prerequisites: Students must submit an application and take an entrance test prior to enrolling in this class. All admitted students must take the Advanced Placement exam in May.
AP Microeconomics is an introductory college-level course that affords students the opportunity to earn college credits by completing an exam with a satisfactory score. By way of economic theory, applications, and contemporary issues, this course treats (1) the behavior and decision making on the part of individuals, business firms, and governments; and (2) the function of costs, prices, incentives, and markets in the American economy. We discuss contemporary topics (e.g., distribution of income, the environment, education, sports, health care).

**Government in Action (4480)**
2nd or 3rd trimester or Summer on the Hill; 2 credits
The ultimate objective of this course is to help students become better-informed citizens regarding the workings of American government and politics. It is a process that begins with an in-depth study of the American political system, from its beginnings under the founding fathers to its current existence. Tracing and analyzing the evolution of government’s role allow students to gain insight into American politics and to assess how American government has been a constantly evolving entity. Topics of study include the U.S. Constitution, the three branches of the federal government, the electoral process, the ideas and organization of the two major parties, and current issues facing the U.S., both at home and abroad. Analyzing how these topics affect students’ lives—from knowing one’s legal rights to understanding the importance of suffrage to the value of participating politically—helps make this a hands-on course as well.

**Advanced Placement Government (4490)**
2nd and 3rd trimesters; 4 credits
Note: AP Examination in Government is required. Students are encouraged to consider AP Government if they have a) demonstrated proficiency in their previous history courses and b) displayed real interest in the study of politics and government. A grade of B or better in Atlantic Experience 9/10 is recommended and a statement of interest is required for enrollment in this course.
The AP Government course is designed to give students a critical perspective on government and politics in the United States. This two-trimester course, which is offered second and third trimesters, is designed for the highly motivated student who wishes to earn college credit in government by taking the AP test. This survey of our political system examines the constitutional underpinnings of our system of government, how it has evolved over time, and how various actors and influences shape the making of policy. Primary emphasis is placed on the national government, with special attention given to the interaction between the branches of the federal government and, to a lesser degree, the states. Materials for the course include texts, supplementary readings, current magazines, films, and videos.

**Tutorials in History/Social Science (4900)**
1st, 2nd, or 3rd trimester; 1–6 credits (Pass/Fail)

**Advanced Tutorials in History/Social Science (490G)**
1st, 2nd, or 3rd trimester; 1–6 credits (Graded)
One-trimester tutorials are available to advanced students. Topics are jointly proposed in writing by the student and instructor and approved by the Upper School History department chair/coordinator, the Head of Upper School and the Assistant Head of Upper School.

**Geopolitical Game Theory: Senior Seminar (4950)**
1st trimester; 2 credits
Note: Seniors only; enrollment is limited to approximately 12. Interested students need to submit a 1–2 page statement of interest to Mr. Martinez.
How can game theory be used to understand world events and decision-making? In this course students apply a variety of simple mathematical tools and game theory models to analyze geopolitical decision-making. Students study episodes of conflict and compromise, delving deep into source materials and devising analytical models with which to discern causes and consequences of the choices leaders make under uncertainty. Assignments and projects address historical contexts and events, game theory principles, and the development of strategies for finding rational solutions to complicated real-world problems. Students also gain the understanding of the history of game theory’s use in policymaking in situations like the American War in Vietnam. Scenarios examined may include the formation of the United Nations; the Cuban Missile Crisis; the North American Free Trade Agreement (NAFTA); and the institutional design in the United States, especially within the courts and laws of various states.

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**Integrated Studies**

**Wellness (117040)**
1st, 2nd, or 3rd trimester or Summer on the Hill; 2 credits
This class focuses on health and wellness issues relevant to adolescents. Students participate in discussions and activities throughout the course that address stress management, depression, suicide prevention, substance-abuse prevention, STDs, pregnancy prevention, proper nutrition, eating disorders, relationships, and violence prevention. Greenhill students entering grades 9–12 may take this course to fulfill the Upper School graduation requirement for Wellness, subject to Upper School approval.
Mathematics

The Greenhill School mathematics curriculum is designed to furnish students from 9th through 12th grades with a strong conceptual understanding of mathematics, an appreciation for the power of mathematics, the ability to communicate mathematically in an increasingly technological world, and the mathematical skills required for college and future careers.

While the graduation requirement entails the completion of Algebra I, Geometry, and Algebra II, virtually all students go beyond graduation requirements and complete four full years of mathematics. Some courses are offered at regular, advanced, and honors levels. In consultation with advisors and their current math teacher, students may move between levels from year to year. All courses require a math teacher recommendation. There are opportunities to double up in math in the same year at two junctures: Honors Algebra II and Honors Geometry, or with Precalculus or Calculus and Statistics. For the student who takes Calculus, it is usually a one-year program. High-level students who take AP Calculus AB prior to their senior year, and who have an interest in pursuing hard sciences such as Physics or Engineering, may be recommended to take AP Calculus BC the following year. Read the course requirements carefully for these options and consult your advisor and current teacher should you be considering this approach.

Each student in a math course is required to own a TI-83/84 or a TI-Nspire (non-CAS) graphing calculator. In all math classes, the calculator is used to enhance the understanding of concepts as well as to carry out certain processes. Proficiency in the use of a graphing calculator is an integral component of each course.

Greenhill does not allow for any yearlong mathematics course to be completed for Greenhill credit by independent study, by correspondence, or by a summer program.

Algebra I (2010)
Full year; 6 credits
This course includes the study of numbers and sets, properties of operations, real numbers, equations and inequalities, verbal problems, factoring, operations with rational expressions, systems of linear equations and inequalities, irrational numbers, and quadratic equations. Students also learn to graph linear equations, systems of linear equations, absolute value functions and quadratic functions, as well as inequalities of the aforementioned group. Students acquire the necessary manipulative skills of algebra along with an understanding of concepts involved. Additional topics are covered if time and talent permit.

Advanced Geometry (2020)
Full year; 6 credits
Prerequisite: Algebra I
This course integrates the concepts of plane and solid geometry with an effective use of algebra. Topics covered include points, lines, planes, angles and angle relationships, parallel lines and planes, triangles, quadrilaterals, circles, similar polygons, area of polygons and circles, surface area and volume of solids, the basic unit circle and right triangle trigonometry, vectors and transformational geometry. These topics are taught using induction as a method of discovery, deduction, and formal proof with emphasis on logical thinking.

Honors Geometry (202H)
Full year; 6 credits
Prerequisite: Algebra I and faculty recommendation
This course includes all topics studied in Geometry plus constructions, indirect proofs, and analytic proofs, as well as an introduction to non-Euclidean geometry. Note: If scheduling allows, and with permission of the Department Chairman, students who have performed at an exceptional level in Algebra I may elect to take Geometry Honors and Algebra II Honors concurrently. “Doubling students” must maintain a grade of at least B– in both courses every trimester or they will be required to drop Algebra II Honors and retake Algebra II the following year.

Honors Algebra II (203H)
Full year; 6 credits
Prerequisite: Successful completion of Algebra I and Geometry, and faculty recommendation
This course covers the first two trimesters of Advanced Precalculus (2150) plus work in modeling problems with data. Topics include general function concepts: absolute value, piecewise-defined functions, symmetry, inverses, and transformations. These concepts are reinforced through examples from families of graphs including polynomial, rational, exponential, and logarithmic functions. The study of conics and sequences and series is also included.

In addition, this course reviews triangle trigonometry and circular function definitions of sine and cosine, and then proceeds to a treatment of all six trig functions, their graphs, inverses, and applications. Solving techniques for trig equations as well as verification of trig identities are studied.

Algebra II (2045)
Full year; 6 credits
Prerequisite: Successful completion of Advanced Geometry and departmental approval
The purpose of this course is to complete mastery of basic algebra concepts and manipulations by stressing the “how” and “why” of mathematics. Topics include equations and inequalities, verbal problems, factoring, fractions, functions and graphs, polynomials, systems of equations and basic work in trigonometry, including triangle trigonometry with applications, and circular function definitions of sine and cosine.

Advanced Algebra II (2030)
Full year; 6 credits
Prerequisite: Algebra I (with an average for the year of at least C–), Advanced Geometry
The purpose of this course is to complete mastery of basic algebraic concepts and manipulations by stressing the “how” and “why” of mathematics. Topics include equations and inequalities, verbal problems, factoring, rational expressions, graph of elementary functions, complex numbers, systems of equations, conics, exponents, logarithms, and sequences and series.

Precalculus (2145)
Full year; 6 credits
Prerequisite: Successful completion of Algebra II or Advanced Algebra II and departmental approval
This course covers the first two trimesters of Advanced Precalculus (2150) plus work in modeling problems with data. Topics include general function concepts: absolute value, piecewise-defined functions, symmetry, inverses, and transformations. These concepts are reinforced through examples from families of graphs including polynomial, rational, exponential, and logarithmic functions. The study of conics and sequences and series is also included.

In addition, this course reviews triangle trigonometry and circular function definitions of sine and cosine, and then proceeds to a treatment of all six trig functions, their graphs, inverses, and applications. Solving techniques for trig equations as well as verification of trig identities are studied.
Advanced Precalculus (2150)
Full year; 6 credits
Prerequisite: Advanced Algebra II
First trimester covers general function concepts including absolute values, piecewise-defined functions, symmetry, inverses, transformations, and slope functions. These concepts are reinforced through examples from families of graphs including polynomial functions, rational functions, exponential and logarithmic functions, and conics. Second trimester reviews triangle trigonometry and circular function definitions of sine and cosine, and then proceeds to a treatment of all six trig functions, their graphs, inverses, and applications. Solving techniques for trig equations as well as verification of trig identities are studied. Third trimester presents limits, sequences and series, parametric equations, vectors, polar curves, complex numbers, and beginning calculus concepts. Many of these topics are prerequisites for a full year college calculus course.

Honors Precalculus (215H)
Full year; 6 credits
Prerequisite: Algebra II Honors and faculty recommendation
This course covers all of the topics of Advanced Precalculus, going into greater depth, including relations defined parametrically, basic matrix theory, and partial fraction decomposition. Additional topics include vectors, polar curves, the complex plane, and DeMoivre’s Theorem, plus more emphasis on the theory of limits, derivatives, and continuity with some of their applications. Many of these topics are prerequisites for the AP Calculus BC course.

Calculus (2055)
Full year; 6 credits
Prerequisites: Precalculus or the Advanced equivalent and faculty recommendation
This course is an introduction to the calculus of functions of a single variable intended for students who may need some calculus in their future for fields such as biology, economics, and business management. Topics include a brief review of polynomials, trigonometric, exponential and logarithmic functions, followed by a discussion of limits, derivatives, and applications of differential calculus. The course then moves on to an overview of integration, basic techniques for integration, and a variety of applications.

Advanced Placement Calculus AB (2050)
Full year; 6 credits
Prerequisite: Advanced Precalculus or the Honors equivalent and faculty recommendation
Note: The AP Examination in Calculus AB is required.
Calculus AB is an intensive first-semester college course in the calculus of functions of a single variable. An introduction to the methods of calculus is followed by several problem-solving applications. The content includes (but is not limited to) topics covered on the AP AB examination. Class attendance is required until the AP exam, usually in mid-May.

Advanced Placement Calculus BC (2060)
Full year; 6 credits
Prerequisite: Satisfactory completion of Precalculus Honors and faculty recommendation
Note: The AP Examination in Calculus BC is required.
Calculus BC is an intensive first-year college course in the calculus of functions of a single variable. An introduction to the methods of calculus is followed by several problem-solving applications. The content includes (but is not limited to) topics covered on the AP BC examination. Class attendance is required until the AP exam, usually in mid-May.

Statistics (2225)
Full year; 6 credits
Prerequisite: Satisfactory completion of, or concurrent enrollment in, Precalculus or Advanced Precalculus
This activity-based class introduces students to the world of data analysis. The course is built around four main topics: exploring data, planning a study, understanding probability theory, and acquiring critical inferential reasoning skills. There is an emphasis on basic probability, data analysis (graphical and numerical), regression analysis, simulations, standard statistical measurements (beyond mean, median, and mode), and drawing inferences from data. Many of these skills are required in many college majors. For example, students learn how experiments are designed and how polling organizations use sampling techniques to make predictions and draw conclusions from their data. Use of technology, including online applets and the graphing calculator, is prominent in the course. Each unit begins with a statistical question followed by the collection of appropriate data, the analysis of the data, and making reasonable conclusions about the question based on the data. Examples come from many fields, including sports, but no previous sports knowledge is necessary. There are also student projects in which data is collected and interpreted to make informed decisions.

Advanced Placement Statistics (2220)
Full year; 6 credits
Prerequisite: Satisfactory completion of Advanced Precalculus or the Honors equivalent (With departmental approval, these two courses may be co-requisites.)
Note: The AP Examination in AP Statistics is required.
The purpose of the AP course in statistics is to introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions about data. The course is built around four main topics: exploring data, planning a study, understanding probability theory, and acquiring critical inferential reasoning skills. Since the emphasis in the course is on conceptually understanding fundamental ideas, the memorization of formulas is not a desired outcome. Consequently, students writing the AP exam are given an extensive list of formulas and tables. It is also dependent on generating simulations and data for use in class. AP Statistics is a one-year course that is writing oriented (communication of results is emphasized) and calculator/computer based. Students who successfully complete the course and examination may receive credit and/or advanced placement for a one-semester introductory college statistics course. Class attendance is required until the AP exam, usually in the middle of May.

Mathematical Decision Making (2100)
1st or 2nd trimester; 2 credits
Prerequisite: Instructor permission
Ranging from airlines and hotels to Broadway shows, organizations use mathematical tools to enhance their decision-making process and compete in the current fierce business environment. Mathematical Decision Making is a course that exposes students to various applications of mathematics in the real world and equips them with the tools necessary to achieve an efficient allocation of scarce resources in different contexts. In addition, it allows them to improve their teamwork and communication skills as the entire course is designed to mimic a consulting group that works collaboratively and diligently to answer the needs of its clients.

This course is of great value to students interested in pursuing studies
in mathematics, business, economics, or finance. It is an opportunity to experience the power of mathematics through real and complex applied situations. Solving problems in this course involves the construction of mathematical models that describe a system. This is a crucial step in practice and at the end of the course, students develop a rigorous and structured process to analyze and model problems.

The course encompasses a wide range of problem-solving techniques and methods applied to optimize the decision-making process. Topics covered in this course include linear programming, Simplex method, transportation problems, network models, optimal investment strategies, staff scheduling, optimization using Excel, production planning, and more.

**Financial Analysis (2550)**
3rd trimester; 2 credits
Co-requisite: Algebra II or above

This course examines how to analyze stocks using various comparison ratios to determine the one with the best value, learn about the stock market and how to read the financial statements from an annual report. There is a focus on personal investment such as investing in the stock market, learning about mutual funds and bonds, CDs, IRAs and investing for retirement, along with revenue, cost, and profit functions. We also address income taxes by including a tax unit based on a curriculum developed by the IRS. These students learn how to complete the following forms: 1040EZ, 1040A, and the 1040 (including Schedules A, B, C, and D). This class is project oriented and has no final exam.

There is a mandatory service-learning component in this course involving between 6 and 12 hours outside of class, during evenings, and/or weekends. Students may use these hours for Greenhill Community Service credit.

**Personal Finance (2560)**
1st or 2nd trimester; 2 credits
Co-requisite: Algebra II or above

This one-trimester course is project oriented and asks you to create a one-year budget for your randomly drawn income. The costs of leasing vs. buying a vehicle, gas and transportation, housing, utilities, property taxes, retirement and savings, the importance of building a good credit score, purchasing food, entertainment, taking a vacation, having children, and obtaining various insurances—life, car, property, renter’s, health, disability, etc.—are discussed. There is a class presentation of this final product.

**Vector Calculus and Differential Equations (2300)**
Full year; 6 credits
Prerequisite: AP Calculus BC and approval of instructor

The first half of this course covers the content of a multiple variable and vector calculus course, including double and triple integrals and their applications to volumes and surface areas, cylindrical and spherical coordinate systems, and vector topics such as line and surface integrals, Green’s Theorem, curl and divergence, Stokes’ Theorem, and the Divergence Theorem. The second half of the course is devoted to an introduction to differential equations including standard methods of solution for linear equations of first and higher orders, linear systems and Laplace transforms. The course emphasizes graphical and numerical solutions as well as analytical ones. This course is considered an honors course.

**Advanced Tutorial in Mathematics (2900)**
1st, 2nd, or 3rd trimester; 2 credits

One-trimester tutorials are available to advanced students. Topics are to be jointly proposed in writing by the student and instructor, and must be approved by the Department Chair and the Head of Upper School.

**Advanced Tutorial in Mathematics (290G)**
1st, 2nd, or 3rd trimester; 2 credits (Graded)

One-trimester tutorials are available to advanced students. Topics are to be jointly proposed in writing by the student and instructor, and must be approved by the Department Chair and Head of Upper School.

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## Modern and Classical Languages

The Upper School curriculum of the Modern and Classical Languages Department traverses diverse cultures from ancient and modern times and prepares students to be thoughtful global citizens. The department offers a wide range of courses at all levels in Chinese, Latin, and Spanish.

The requirement for graduation in the Modern and Classical Languages Department is twofold: first, students must be enrolled in a language course during their 9th and 10th grade years; second, students must complete Level III of one language. In order to advance to the next level, students must earn a minimum yearlong course grade of C-. Yearlong courses are the structure of our foundational levels I–III, and trimester courses become available for students beyond the minimum requirement. While the trimester courses allow some degree of flexibility in scheduling, it is necessary for a student to maintain a level of competency through sustained enrollment. Thus, a student must seek departmental approval if s/he interrupts the study of language for more than one trimester.

The study of modern and classical languages at Greenhill provides students with the option of studying more than one language, with access to AP courses in all languages, and with a wealth of knowledge and experience from the instructors. Additionally, language study promotes the mission and embodies the core principles of Greenhill School. Regardless of the language or level, the instructors in this department constantly challenge students to actively engage not only with the language forms but also with the culture of the language they are studying.
Spanish I (3110)
Full year; 6 credits
Spanish I is the introductory level for students who have very little or no background in Spanish. Students focus on the basic grammar structures as well as vocabulary dealing with daily activities, cultural experiences, and differences in the Hispanic world. Students begin to develop the four basic language skills: listening, speaking, reading, and writing. The thrust of the program, taught predominantly in the target language, is to develop oral and written proficiency with the long-term goal of mastering the necessary linguistic skills in order to communicate with native speakers.

Spanish II (3120)
Full year; 6 credits
Prerequisite: 3110 with a minimum yearlong course grade of C- or placement by exam
Spanish II is the continuing course for students who have successfully completed Upper School Spanish I, 8th grade Spanish at Greenhill School, or who can satisfy the prerequisite through a placement test. The class reviews basic grammatical concepts presented in Spanish I and continues to improve the students’ communicative proficiency of the basic skills in listening, speaking, reading, and writing. The goal is to enhance language acquisition and oral expression, thus preparing students for Spanish III. Cultural awareness and appreciation of the ever-increasing Spanish-speaking world is emphasized through the use of supplemental materials.

Honors Spanish II (312H)
Full year; 6 credits
Prerequisite: 3110 or placement by exam and departmental recommendation
This course is designed for students who have demonstrated a strong background and interest at the beginning level of Spanish and would like to be considered candidates for AP level courses in the future. It aims to strengthen the basic skills: listening, speaking, reading, and writing. Spanish is the language of instruction and emphasis is placed on oral skills, but students are also expected to read short selections in Spanish and express themselves clearly and accurately in writing. Hispanic civilization is explored through audio, video, and written materials from the textbook as well as selected authentic materials from online sources. Assessments include traditional written exercises, voice recordings, and collaborative projects.

Spanish III (3130)
Full year; 6 credits
Prerequisite: 3120 with a minimum yearlong course grade of C- or placement by exam
The objective of Spanish III is to advance the students’ oral communication and writing skills, to strengthen their comprehension, and introduce them to contemporary and traditional topics in Hispanic countries. Additionally, students expand their grammar and vocabulary through spontaneous conversational situations and planned oral presentations. Students are also exposed to current events affecting Spanish-speaking countries, particularly in Latin America. Assessments include traditional written exercises, voice recordings, and collaborative projects.

Honors Spanish III (313H)
Full year; 6 credits
Prerequisite: 312H or placement by exam and departmental recommendation
Spanish III Honors is a yearlong course intended to further strengthen the student’s mastery of Spanish, and to prepare the student for AP level courses. It is conducted in Spanish and requires spontaneous use of the language in written, oral, and listening form. The course integrates a thorough review of previous material by using topic-based vocabulary and grammar activities with consistent exposure to authentic materials in Spanish. History, culture, and current events of Spanish-speaking countries are integrated into the lessons. Assessments include traditional written exercises, voice recordings, and collaborative projects.

Spanish IV (3140)
Full year; 6 credits
Prerequisite: 3130 with a minimum yearlong course grade of C- or placement by exam
Spanish IV is designed to take the students’ fluency to a more advanced level of oral and written expression. This course focuses on the culture and daily activities of Spain, Mexico, Central and South America, and introduces the students to the Hispanic culture in the United States. The course, taught predominantly in Spanish, also explores films, music, art, history, and current events from the Hispanic world.

Advanced Placement Spanish Language and Culture (3150)
Full year; 6 credits
Prerequisite: 313H, 3140 or placement by exam and departmental recommendation
Note: The AP examination in AP Spanish Language is required.
This course, which is preparation for the AP Spanish Language and Culture Exam, is conducted entirely in Spanish. Content of the course is in accordance with the College Board Advanced Placement program and is centered on six basic themes. Vocabulary expansion plays a major role due to the exposure to authentic and unabridged materials. Integration of advanced grammar as well as synthesis of information from various sources into written and oral work is expected. Extensive use of digital resources is essential for developing interpretive, interpersonal, and presentational skills.

Spanish V: Mexican Independence from Spain (3180)
1st trimester; 2 credits
Prerequisite: This course requires considerable competency in Spanish as demonstrated through successful completion of 3140 or 3150. It may be taken concurrently with 3625.
This course seeks to strengthen a student’s proficiency of Spanish through the social, cultural, and political developments of the Spanish colony in America known as La Nueva España in the 19th century. Students explore a journey through the history of the Independent Movement in Mexico and reflect upon the national and international conflicts that took place for Mexico to be recognized as a new, independent country in the world. Students apply the four language skills (listening, reading, speaking, and writing) and three modes of communication (interpretive, interpersonal, and presentational) to enhance their Spanish through an historical context. The course is taught entirely in Spanish, and it requires extensive reading and exposure to various digital media.

Spanish V: Mexican Revolution and its Consequences (3175)
2nd trimester; 2 credits
Prerequisite: This course requires considerable competency in Spanish as demonstrated through successful completion of 3140 or 3150. It may be taken concurrently with 3625.
This course seeks to strengthen a student’s proficiency of Spanish through the study of the
presidential term in which Porfirio Díaz ruled, the Mexican Civil War known as the Mexican Revolution, the search for a Mexican identity, and the creation of the institutions that shape contemporary Mexico in the 20th century. Students apply the four language skills (listening, reading, speaking, and writing) and three modes of communication (interpretive, interpersonal, and presentational) to enhance their Spanish through an historical context. The course is taught entirely in Spanish and new vocabulary and language structures are learned in context. It requires extensive reading and exposure to various digital media.

**Spanish V: Creative Writing in Spanish (3600)**  
3rd trimester; 2 credits  
Prerequisite: This course requires considerable competency in Spanish as demonstrated through successful completion of 3140 or 3150. It may be taken concurrently with 3625.  
In this course students focus on different forms of creative writing, reading examples from well known authors of the Spanish-speaking world. Students are then asked to use the styles of these authors as models for original essays, short stories, poetry, and comics. All student work is collected in a digital portfolio, both for assessment and sharing.

**Spanish V: Service Learning in Spanish (3700)**  
3rd trimester; 2 credits  
Prerequisite: This course requires considerable competency in Spanish as demonstrated through successful completion of 3140 or 3150. It may be taken concurrently with 3625.  
Before enrolling in this class, students must find a community service project where they would use their Spanish at least 75% of the time. They are expected to visit the site of the project at least twice per six-day cycle and meet with their instructor at Greenhill at least twice per six-day cycle. Students are responsible for providing their own transportation to and from the project. Assessment is based on attendance at the project, written journals in both English and Spanish, and a final oral and written presentation describing the experience.

**Honors Spanish Literature (3625)**  
Full year; 6 credits  
Prerequisite: 3150 or placement by exam and departmental recommendation  
This course is designed for students who have taken the AP Spanish Language course and wish to continue their studies with the same level of and depth as an AP course. The main objective is to use literature as a vehicle to examine the Spanish language and culture throughout history and to isolate some of the most important movements and voices. Themes include conquest and assimilation, the construction of gender, and Spanish-speakers in the United States. Students are expected to use the four basic language skills (listening, reading, writing, and speaking) daily in class with the goal of focusing more on content than language to empower spontaneous critical thinking.

**Latin I (3210)**  
Full year; 6 credits  
Prerequisite: This course requires considerable competency in Spanish as demonstrated through successful completion of 3140 or 3150. It may be taken concurrently with 3625.  
This is the introductory course for students who have very little or no background in Latin. This course introduces study skills required for language study as well as the language, history, and culture of the ancient Romans. Additionally, this course uses Standards-based Grading. The goal of this course is the mastery of objectives that fall into five categories: Analysis, Ancient in the Modern, Composition, Rhetoric, and Translation. Students engage in a variety of assessments that allow the opportunity to demonstrate their development of such mastery.

**Latin II (3220)**  
1st, 2nd, or 3rd trimester; 2 credits  
Prerequisite: 3210 with a minimum yearlong course grade of C– or placement by exam  
This course continues the work begun in Latin I, furthering students’ knowledge of the Latin language, and Roman history and culture. Additionally, this course utilizes Standards-based Grading, as do all Latin classes. The goal of this course is the mastery of objectives that fall into five categories: Analysis, Ancient in the Modern, Composition, Rhetoric, and Translation. Students engage in a variety of assessments that allow the opportunity to demonstrate their development of such mastery and prepare them for the next level of Latin.

**Latin III (3230)**  
Full year; 6 credits  
Prerequisite: 3220 with a minimum yearlong course grade of C– or placement by exam  
This course serves as a transition from adapted Latin and grammar paradigms to authentic Latin and complex grammatical structures. Students begin to read both prose and poetry from the Late Republic and Augustan Age. By utilizing Standards-based Grading, the goal of this course is the mastery of objectives that fall into five categories: Analysis, Ancient in the Modern, Composition, Rhetoric, and Translation. Students engage in a variety of assessments that allow the opportunity to demonstrate their development of such mastery and prepare them for the next level of Latin.

**Latin IV (3240)**  
Full year; 6 credits  
Prerequisite: 3230 with a minimum yearlong course grade of C– or placement by exam  
This course continues studies in authentic Latin and complex grammatical structures. Students read both prose and poetry from various genres of Latin literature. By utilizing Standards-based Grading, the goal of this course is the mastery of objectives that fall into five categories: Analysis, Ancient in the Modern, Composition, Rhetoric, and Translation. Students engage in a variety of assessments that allow the opportunity to demonstrate their development of such mastery and prepare them for the next level of Latin. Students develop a broader vocabulary base in Latin and in English that aids students in their overall reading comprehension ability that is so vital for standardized testing. Plus, they continue developing their skills of literary analysis and criticism, in preparation for the Advanced Latin Literature or AP course experiences.

**Advanced Latin Literature (3235)**  
1st, 2nd, or 3rd trimester; 2 credits  
Prerequisite: 3230 with a minimum yearlong course grade of C– or placement by exam  
With any portion of the extant literature of the ancient Romans at the fingertips of the instructor, students in this course delve into thematically related units. The goal of the course is the mastery of objectives that fall into four categories: Analysis, Ancient in the Modern, Rhetoric, and Translation. Through class discussion, collaborative projects, and scholarly analysis, Latin students engage with all facets of the language, culture, and history. By striving for mastery in the four objectives, students prepare themselves for further advanced study, both here and beyond. This course may be taken multiple times for credit.
Advanced Placement Latin (3260)
Full year; 6 credits
Prerequisite: Departmental recommendation
Note: The AP examination in AP Latin is required.
Students read excerpts from Caesar’s *De Bello Gallico* and Vergil’s *Aeneid* in English as well as all selections in Latin as set forth by the AP course syllabus. Students are expected to be able to translate accurately from Latin into English the texts they are reading, to demonstrate a grasp of grammatical structures and vocabulary, and to discuss passages within the context of each work as a whole. Stylistic analysis and interpretation, which develop from a student’s ability to read the Latin version, are integral parts of this course. Readings from modern critical commentaries and other ancient texts help students to place their thoughts and ideas into context.

Honors Latin Seminar (3295)
Full year; 6 credits
Prerequisite: 3260 or departmental recommendation
With any portion of the extant literature of the ancient Romans at their fingertips, students in this course delve into areas of their own interest. In the first two trimesters, teachers provide overarching themes within which the students research both primary and secondary works. Students engage in critical reading and participate in Socratic Seminars on these themes. They also craft teaching units that lead their peers through lesser known works. In the third trimester, students select one aspect of their research during the year to prepare and write a lengthy research paper (similar to an honors thesis.)

Chinese I (3410)
Full year; 6 credits
Chinese I initiates training in listening, speaking, reading, and writing in Modern Standard Mandarin Chinese. Its primary focus is the development of the broad foundational skills necessary for competence in and eventual mastery of Chinese. In order to facilitate accurate and nuanced acquisition of Mandarin phonology, students learn *Hanyu pinyin* phonetic representation system. Here also students gain proficiency in the lexical tone system. So that students fully comprehend the Chinese writing system and have the ability to code-switch among all varieties of Chinese characters, emphasis is placed on simplified characters with discussion of the history of the writing system and traditional characters. Various aspects of Chinese culture, geography, and history supplement the formal study of language, while training in the use of dictionaries and the *Liushu* character classification system ensure efficient study habits. Ultimately, students who successfully complete Chinese I have the ability to engage in limited, freestyle conversation and be easily understood by native-speaking interlocutors.

Chinese II (3420)
Full year; 6 credits
Prerequisite: 3410 with a minimum yearlong course grade of C–, or placement by exam
Building on the broad and unique curricular base of Chinese I, Chinese II is the second of the foundation courses in the Greenhill Chinese Program. Students delve further into the sound pattern of Mandarin, first strengthening and then making automatic their use of tones so that even more complex tone sandhi patterns become second nature, and self-correction becomes consistent. Emphasis is placed on increasing functional vocabulary and practicing to fluency with an ever-greater number of sentence patterns. Listening, speaking, reading, and writing remain central as the four major components of language acquisition, but cultural awareness, current events, and research skills are implicitly expected to be a part of all study. If character pace can serve as a gauge, students should be familiar with a minimum of 750 simplified characters and radicals upon completion of this course.

Chinese III (3430)
Full year; 6 credits
Prerequisite: 3420 with a minimum yearlong course grade of C–, or placement by exam
Chinese III introduces the students to greater structural complexity, both in terms of phonology and syntax. No longer is the short, simple sentence sufficient. Students must create sentences, both written and oral, of at least fifteen words while demonstrating creative engagement with a topic. Public speaking is also emphasized. Crucial is the student’s ability to communicate freely using vocabulary and sentence patterns in fresh, original ways. Students at this level must show that they are making Chinese an integral part of their lives and worldview. Successful completion of Chinese III means that a student should be familiar with at least 1,100 traditional and/or simplified characters and radicals, and recognition of the simplification patterns used for simplified characters is commonplace.

Chinese IV (3440)
Full year; 6 credits
Prerequisite: 3430 with a minimum yearlong course grade of C–, or placement by exam
Chinese IV introduces discourse-level complexity to both written and oral communication in Modern Standard Mandarin. Students are required to recognize differences in register based on position and context even as they continue to build their functional vocabulary and refine their pronunciation. Fluency, even in limited contexts, is the goal. Students are now expected to take fuller, individual responsibility for their study of Chinese, and they must work independently to develop automaticity in tonal contour while expressing themselves freely. Regular discussion based on readings in culture and current events exercise and extend the work in pronunciation and grammar of the first three years while introducing students to the practice of using Chinese to learn about the world we inhabit. After successful completion of Chinese IV, a Greenhill student will have secured a lifelong, habitual learning relationship with Chinese.

Advanced Chinese (3460)
Full year; 6 credits
Prerequisite: 3440 with a minimum yearlong course grade of C–, or placement by exam
Advanced Chinese is the precursor to AP Chinese. The course introduces the advanced student to the practice of developing cultural knowledge while training linguistic proficiency. Students in Advanced Chinese must at all times be prepared to use Chinese to learn Chinese, as the class is conducted primarily in the target language (Modern Standard Mandarin), and students become familiar with linguistic variation across Greater China. Advanced Chinese is demanding and engages all aspects of the Greenhill Chinese Program—listening, speaking, reading, writing, culture, the Chinese writing system, and research. Significant time and emphasis is placed on writing Chinese essays. Students taking this course should be making Chinese a crucial part of their worldview and daily experience.
Advanced Placement Chinese Language and Culture (3470)
Full year; 6 credits
Prerequisite: 3460 with a minimum yearlong course grade of C- and departmental recommendation
Note: The AP examination in AP Chinese Language is required.
AP Chinese Language and Culture is the capstone course to the Greenhill Chinese Program. The goal of this course is to provide highly qualified students with rich and varied opportunities to further their proficiency in listening, speaking, reading, and writing Modern Standard Mandarin Chinese. This in turn positions them for success on the AP Chinese exam. Students enrolled in this class experience maximal exposure to myriad aspects of Chinese culture integrated into the process of communicating in and learning through Mandarin. Students practice using Chinese to comprehend and analyze issues that are pertinent to their life and community. Chinese is both the target language and the language of instruction, and assessments are regular and varied.

Advanced Tutorials in Modern & Classical Languages (3300)
1st, 2nd, or 3rd trimester; 2 credits (Pass/Fail)
Prerequisite: Level III and approval of Department Chair
One-trimester tutorials are available to advanced students who are looking to pursue studies beyond, or in addition to, prescribed courses in the Modern and Classical Languages Department. Topics are to be jointly proposed in writing by the student and instructor and must be approved by the Department Chair and the Head of Upper School.

Advanced Tutorials in Modern & Classical Languages (330G)
1st, 2nd, or 3rd trimester; 2 credits (Graded)
Prerequisite: Level III and approval of Department Chair
One-trimester tutorials are available to advanced students who are looking to pursue studies beyond prescribed courses, not to shadow courses offered due to a scheduling conflict, in the Modern and Classical Languages Department. In order to be considered as a graded tutorial, clear expectations, syllabi, and rubrics must be presented for consideration. Topics are to be jointly proposed in writing by the student and instructor and must be approved by the Department Chair and the Head of Upper School.

Physical Education
The Greenhill Physical Education program provides students with opportunities for the acquisition of the knowledge and skills necessary to create the foundation for engaging in an active healthy lifestyle. Each course is designed to help students learn what it means to be physically fit by learning the components of health and skill-related physical fitness. Students are introduced to a wide variety of activities that emphasize how to manage and maintain a well-balanced fitness program. We strive to create a learning environment for our students to explore challenges in an active, supportive, and non-threatening atmosphere. Each student learns about the need for assessment and variety in their fitness program. In addition to the physical domain, it is our goal to help students develop a positive self-image, develop self-discipline, learn the basics of nutrition, and develop stress relief techniques. Ultimately it is our goal to develop students who value the role of physical fitness and take the personal responsibility for making informed decisions that help them to achieve and maintain a well-balanced healthy lifestyle.

As is stated in the requirements for graduation, students must complete two trimesters (4 credits) of physical education per school year. These credits may be earned through physical education courses or through participation on any Greenhill Interscholastic Athletics Team. Students may take only one physical education course per trimester.

Beginning & Intermediate Dance Class (8015)
1st or 3rd trimester; 2 credits (PE = Pass/Fail; FA = Graded)
This course may be taken for either Fine Arts 8910 or PE 8015 credit.
This course is designed as an introduction to the various aspects of dance technique. Emphasis is placed on dance technique, performance quality, building strength, increasing flexibility and stamina, and stylistic differences between concert style dances. Dance technique classes meet 2 to 3 times a week, one hour a day. Dance classes address ballet, modern, and jazz dance techniques.

Ultimate Frisbee (8020)
After school; 3rd trimester; 2 credits (Pass/Fail)
Class size is limited to 28 students.
Ultimate Frisbee is an exciting, non-contact team sport played by thousands the world over. Mixes the best features of sports such as soccer, basketball, and football into a demanding game. Students learn basic throwing skills, defensive skills, game rules, and concepts of team organization while improving their overall physical fitness.

Workout Challenge (8025)
1st, 2nd, or 3rd trimester; 2 credits (Pass/Fail)
This course enables the student to approach fitness with the intent to challenge, and improve one’s fitness level with individual or group instruction. It is designed to give students the opportunity to learn fitness concepts, and conditioning techniques used for obtaining optimal physical fitness. Students learn the basic fundamentals of strength training, aerobic training, and overall fitness training and conditioning. Students are empowered to make wise choices, meet challenges, and develop positive behaviors in fitness, wellness, and movement activity for a lifetime. This program offers the students total body workout and an opportunity to build self-confidence and self-esteem. This is an enjoyable, challenging, easy to follow workout for students of all abilities. This class is set up

The following teams represent Greenhill

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<td>Work Challenge (8025)</td>
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Greenhill School
for students who need the structure of having their physical education class scheduled during any of a student’s free periods.

Yoga (8045)
After school; 1st, 2nd, or 3rd trimester;
2 credits (Pass/Fail)
Class size is limited to 16 students.
This course is an introduction to the fundamental skills and strategies of organized disc games. The course focuses on the development of the skills necessary to throw and catch discs successfully. Specific focus is put on developing both throwing distance and accuracy. The course introduces the basic skills and then progresses to teaching more complex disc games such as Disc Golf, Ultimate Frisbee, Frisbee horseshoes, and Frisbee baseball.

Total Body Fitness (8855)
1st, 2nd, or 3rd trimester; 2 credits (Pass/Fail)
This course is designed to introduce students to the concepts necessary to improve levels of health, strength, fitness, wellness, and self-confidence. It is for students of all ability levels who are interested in learning more about developing a fitness program to fit their needs across a lifetime. Students learn the basic fundamentals of fitness, and are introduced to a variety of workout options needed to design a program that focuses on developing the entire body. This course is not scheduled during a class period. Students must complete two-and-a-half hours of supervised workouts each week in the High Performance Center, during the school day between the hours of 7:00 a.m. and 6:00 p.m. There may be times when blackout hours are posted due a large number of athletic teams in the HPC. All students must attend a mandatory TBF orientation session.

Advanced Dance Class (8860)
1st or 3rd trimester;
2 credits (PE = Pass/Fail; FA = Graded)
Prerequisite: Beginning & Intermediate Dance
This course may be taken for either Fine Arts 6915 or PE 8860 credit.
The Advanced Dance Class strives to increase coordination, flexibility, muscular development, and a greater understanding and appreciation for the art of dance. Emphasis is placed on further development of technical ability. Dance classes address ballet, modern, and jazz dance techniques.

Winter Musical Production (8865)
2nd trimester; 2 credits (PE = Pass/Fail; FA = Graded)
Prerequisite: By audition only
This course may be taken for either Fine Arts 6960 or PE 8865 credit.
This course is designed for the student whose interests lie in musical theater performance. Every student is expected to learn dances used in the Winter Musical Production. Emphasis is placed on performance quality and technical proficiency. Students perform movement sequences and learn characterization within the context of a musical production. In order to receive physical education credit students must be a cast dancer and perform in the musical.

Greenhill Interscholastic Athletics
Greenhill School places a high degree of importance on the educational value of our interscholastic athletics programs. Each trimester Greenhill offers a variety of varsity and junior varsity athletic teams. Our athletics teams strive to provide competitive opportunities for students to develop not only their athletic skills, but also an opportunity to learn the equally important concepts of sportsmanship, teamwork, leadership, relentless effort, resilience, and goal setting. Teams practice for approximately two hours at the conclusion of the academic school day. Games and practices may be scheduled on Saturdays and during the holidays. Greenhill’s teams participate in the Southwest Preparatory Conference (SPC).

Athletics Tutorials (8900)
1st, 2nd, or 3rd trimester; 2 credits (Pass/Fail)
Students who are participating at an advanced level in an outside activity or sport may apply for a tutorial in lieu of participating in PE/Athletics. An online application must be completed prior to the school year that meets a set of criteria for approval by the Athletics Tutorial Committee. Criteria for approval include participation at the highest level available within a student’s age group and a commitment of hours similar to that of an interscholastic sport team. A full list of criteria is listed on the online tutorial application.

Interscholastic Athletics

Greenhill Interscholastic Athletics Teams
1st, 2nd, or 3rd trimester; 2 credits (Pass/Fail)
Students who are participating at an advanced level in an outside activity or sport may apply for a tutorial in lieu of participating in PE/Athletics. An online application must be completed prior to the school year that meets a set of criteria for approval by the Athletics Tutorial Committee. Criteria for approval include participation at the highest level available within a student’s age group and a commitment of hours similar to that of an interscholastic sport team. A full list of criteria is listed on the online tutorial application.

Student Athletic Trainers (8700)
1st, 2nd, or 3rd trimester; 2 credits (Pass/Fail)
Prerequisite: Must receive prior approval of the Head Athletic Trainer.
The Student Athletic Trainer program offers students an opportunity to explore their interest in sports medicine and related allied health fields. This course provides students with an opportunity to assist and learn from a certified athletic trainer. Throughout the course, students are exposed to basic techniques used daily in the athletic training profession. This course satisfies a physical education requirement and requires some physical activity.
Sports Information Student Assistant (8750)
1st, 2nd, or 3rd trimester; 2 credits (Pass/Fail)
Class size is limited to 4 students.

This course is designed for students interested in any area of sports information, including journalism, photography, design, broadcasting, and media/public relations. Student assistants are directly involved in the day-to-day operations in the Greenhill athletics, as they are responsible for keeping up with sports information initiatives for varsity sports programs (often comprised of multiple teams within the same season). Interested students need to contact the physical education department head, and selection is based on criteria such as previous sports experience, knowledge/interest in sports journalism, photography, media relations, website production, video production, and athletics administration.

Full-time Team Managers
1st, 2nd, or 3rd trimester; 2 credits (Pass/Fail)
Prerequisite: Prior approval of the team’s head coach.
Note: Students accepted as team managers register for the sport and are added to the team roster.
The purpose of the team manager program is to provide support for the school’s interscholastic sports teams. The program is designed to give students valuable work experience by being a part of an interscholastic athletic team. A team manager’s duties may include assisting with practices, management of home contests, travel to away contests, scorekeeping, stat keeping, videotaping, and various other administrative duties. Team managers must invest an amount of time comparable to the athletes in order to receive physical education credit for being a student manager. Other managerial positions requiring less time are available, but do not receive physical education credit. However, either of these positions may earn the participant a varsity letter.

Science

Classes of 2020, 2021, 2022: At a minimum, all students are required to take a two-year sequence of Chemistry and Biology (core courses) and at least two trimesters of Physics, including both Physics I: Mechanics and Physics II: Motion or Sports plus four more science elective credits (2 one-trimester courses) OR AP Physics I plus two more elective credits (a one-trimester elective). Science elective courses, whether AP or not, are recommended for students interested in science, engineering, medicine, or liberal arts programs in college. Students doing exceptionally well in their Chemistry, Biology, or AP Physics I courses should consider taking the Subject Test in that subject after completing the course. Some topics covered on the SAT II are not included in the course curriculum and additional preparation for the examination will be necessary and offered free of charge. Students should consult the instructor in their specific subject area about such preparation.

Class of 2023: All students are required to take a three-year sequence of Physics, Chemistry, and Biology (core courses). Science elective courses, whether AP or not, are recommended for students interested in science, engineering, medicine, or liberal arts programs in college. Students doing exceptionally well in their Physics, Chemistry, Biology courses should consider taking the Subject Test in that subject after completing the course. Some topics covered on the SAT II are not included in the course curriculum and additional preparation for the examination will be necessary. Students should consult the instructor in their specific subject area about such preparation.

Minimum requirements for Science courses: Classes of 2020, 2021, 2022

9th Grade:
Chemistry or Advanced Chemistry

10th Grade:
Biology or Advanced Biology

11th & 12th Grades:
Physics I: Mechanics AND Physics II: Motion or Physics II: Sports

Elective I AND
Elective II

OR

AP Physics I

AND

Elective I

Minimum requirements for Science courses: Class of 2023

9th Grade:
Physics

10th Grade:
Chemistry

11th & 12th Grades:
Biology

LAB SCIENCES

Physics (5400): Class of 2023 ONLY
Full year; 6 credits

Physics is the introductory course in Upper School science. This course is hands-on, minds-on, and, in alignment with our 8th grade science class, frames science as a process of inquiry and model development. Class time is spent in lab investigations, group discussions, and problem-solving exercises as students create models to describe the natural world. These models are used to explore relevant, authentic, and interesting problems, such as a meteor impact, vision and the human eye, and imaging atoms. Learning progression is assessed using a standards-based, or competency based, model that is currently being used in our Greenhill Middle School Science Department, in several Upper School courses, at our online partner school the Global Online Academy, and in many
progressive independent institutions across the nation.

**Biology (5205)**
Full year; 6 credits. Prerequisite: Department approval
Biology is an introductory life science course to the Upper School, aimed to build upon topics learned in the first-year chemistry courses and prepare students for a life with an understanding of how the natural world works, from an explanation of antibiotic resistance to a description of mammalian systems. This is a project and case study-based course that emphasizes a holistic understanding of the unifying concepts of biology. Significant emphasis is placed on both in-class and out-of-class laboratory and field work. Topics covered in the course include:
- Evolution as the unifying theme in biology
- Biochemistry
- Cells
- Metabolism
- Molecular Genetics
- Heredity
- Diversity: a survey of the living world
- Physiology
- Ecology

**Advanced Biology (5200)**
Full year; 6 credits
Prerequisite: Chemistry
Advanced Biology serves to continue a student’s growing sophistication in modern sciences by building upon core concepts presented in Greenhill’s freshman Chemistry course. Units of study are tied together by central themes in biology such as emergent properties, cells, heredity, structure and function, environmental interactions, homeostasis, diversity, evolution, and science as a process of inquiry. This course utilizes inquiry-based labs to emphasize foundational concepts while drawing on concepts from all disciplines of science.

**Physics I: Mechanics (5420)**
1st trimester; 2 credits
Prerequisites: Completion of Biology and Chemistry
Note: Cannot be taken for credit after AP Physics I 5415.
This collaborative, lab- and discussion-based course introduces students to the concepts and techniques used to study physics and to the basic models used to describe force and motion. Students generate and apply conceptual and mathematical models to describe the motion of objects and the interactions affecting those motions. They develop their ability to design experiments, analyze and interpret data, make predictions, and solve problems.

**Physics II: Motion (5445)**
2nd trimester; 2 credits
Prerequisite: Completion of Physics 5420
Note: Physics 5445 and 5470 cannot both be taken for credit, and neither can be taken for credit after AP Physics I 5415.
The roller coaster is a complex system, the full understanding of which requires a sophisticated understanding of motion and interactions. Students in this course continue their study of motion, force, and mechanical energy. Along the way, they apply the models that they are developing to design a roller coaster. Specific topics include energy, momentum, projectile motion, and circular motion.

**Physics II: Sports (5470)**
2nd trimester; 2 credits
Prerequisite: Completion of Physics 5420
Note: Physics 5445 and 5470 cannot both be taken for credit, and neither can be taken for credit after AP Physics I 5415.
The study of matter in motion is the essence of both physics and sports. Sports often involve the complex control of moving objects and interactions between them—concrete, real world problems where millimeters or milliseconds often represent the difference between success and failure on the field. Students in this course continue their study of motion, force, and mechanical energy by examining specific examples of motion found in sports. The students learn to make use of tools such as graphical analysis of videos, qualitative reasoning based on the laws of physics, reasoning by analogy, dimensional analysis, numerical estimation, computer simulation, and the use of published resources.

**Advanced Placement Physics I (5415)**
Full year; 6 credits
Prerequisites: Algebra II, Chemistry, Biology, and departmental approval
Note: The AP Examination in Physics I is required.
This course provides an in-depth study of translational and rotational mechanics as well as mechanical waves and sound, electric forces, and simple electric circuits. The course has a strong laboratory component, Group collaboration, critical thinking, problem solving, and scientific inquiry and communication skills are stressed. Credit for the first semester of college physics is typically awarded by colleges for a qualifying AP exam score.

**SCIENCE ELECTIVES**

**Science of Deep Time (5950)**
Full year; 6 credits
This course may be taken for either History 4350 or Science 5950 credit.
This yearlong junior/senior level elective blends two disciplines as it seeks to tell the story of the universe from the Big Bang to the present day—no small feat. Inspired by the work of David Christian, this program divides the history of the universe into ten units, or thresholds, each examining points in time when ingredients combined to produce great change. These units include the Big Bang, the Stars Light Up, New Chemical Elements, the Earth and the Solar System, Life, Collective Learning, Agriculture, Expansion and Interconnection, the Modern Revolution, and the Future. While a unit such as the Big Bang sounds science oriented, the science is mixed with study of creation stories across the globe, a look at how human understanding of the universe changed (Copernicus, Galileo etc.), intellectual history, and the politics of science. The emphasis of the course is on understanding what we know, how we know it, and how we prove what we know. Both historians and scientists examine evidence, form hypotheses (or theses), conduct experiments, gather more evidence, test theories, and refine them as more information comes available.

**Physics III: Waves (5450)**
3rd trimester; 2 credits
Prerequisite: Completion of Physics 5445/5470
The wave concept is central to our understanding of hearing, music, vision, and most modern forms of communication. In this course, students build on their understanding of motion and interactions to model a variety of wave phenomena. Specific applications include music and light.

**Physics III: Electricity (5455)**
3rd trimester; 2 credits
Prerequisite: Completion of Physics 5445/5470 or 5415
Electrical interactions are at the heart of most modern technology. In this course, students develop and apply models to describe electric and magnetic forces and fields.
Specific applications include electric circuits, motors and generators, and electric power generation and transmission.

**Chemistry of Photography (5340)**

1st trimester; 2 credits

Prerequisites: Completion of Basic Photography and Introductory Chemistry, Grades 11 & 12 or instructor’s approval

This course may be taken for either Fine Arts 6120 or Science 5340 credit.

This course allows students to explore the interconnectedness of a Fine Arts discipline (photography) and Science discipline (chemistry). Students simultaneously explore several photographic techniques and the chemical explanations behind those techniques. Students who have completed this course are able to reflect and speak on the artistic meaning of their pictures and explain, on a chemical level, the processes and techniques used to achieve the final works of art. Experiments and imagery are produced with the wetplate collodion process, black and white toning techniques, solarization, and 19th century printing/shooting techniques. A final portfolio is produced along with weekly tests/quizzes, critiques, and a final project assessed on artistic and chemical understanding.

**Organic Chemistry (5530)**

2nd trimester; 2 credits

Prerequisite: Completion of Chemistry and Biology

This laboratory course is a survey of organic chemistry. An introduction to organic reaction mechanisms is included to explore how organic compounds are produced in biological and industrial systems. Students who are interested in medical, pharmacological, petroleum or plastics careers should consider this course.

**Biotechnology Lab Techniques (5095)**

1st and 2nd trimester; 4 credits

Prerequisites: Completion of Chemistry and Biology

Students study the theory, practice, and ethics of the biotechnology revolution and develop specific skills in extracting, isolating, amplifying, purifying, and evaluating DNA and protein samples. The practical applications include restriction analysis, DNA fingerprinting, bacterial transformation, DNA sequencing, polymerase chain reaction (PCR), and production of Southern and Western blots. This course arms students with laboratory techniques that enable them to perform research at the undergraduate level or in a senior capstone project.

**Marine Biology (5550)**

1st trimester; 2 credits

Prerequisite: Completion of a year of Chemistry and Biology

This course is an introduction to the ocean environment and the life within. Topics covered include the physical features of ocean basins and their formation, basic oceanography, sea water chemistry, marine microorganisms, marine macro organisms, and human impacts on the ocean. Marine biology is a laboratory course and includes two required field trips, including one to the Gulf of Mexico. The class is taught in a blended format making use of online resources allowing for flexibility in class meetings and maximizing laboratory experiences.

**Biochemistry (5230)**

1st and 2nd trimester; 4 credits

Prerequisites: Departmental approval and completion of AP Biology or AP Chemistry

The goal for this course is to provide a pathway for AP students to further explore several of the key topics covered in AP Biology and AP Chemistry by studying and researching background biochemical information so as to discuss the rationale for biochemical reactions and processes. Extensive individual and group research are utilized so as to understand core principles and common laboratory techniques.

**Meteorology (5080)**

2nd trimester; 2 credits

Prerequisite: Completion of a year of Chemistry and Biology

This course is as an introduction to the dynamic processes at play within the Earth’s atmosphere and the role of these processes in producing weather. Topics covered include the origin and evolution of the Earth’s atmosphere, the structure and characteristics of the atmosphere, the Earth/Sun relationships and their influence on the seasons, solar and terrestrial radiation, the hydrologic cycle, the gas laws, global circulation, weather systems and fronts, storms and analysis of weather maps. The course includes several required field trips and regular laboratory exercises. The class is taught in a blended format making use of online resources allowing for flexibility in class meetings and maximizing laboratory experiences.

**Science and Sustainability (5570)**

3rd trimester; 2 credits

Prerequisites: Completion of Chemistry and Biology

When addressing the fate of the natural world for generations to come, we often question the sustainability of human activities. Implied is the idea of a carrying capacity for our planet, a finite amount of resources and space. Population biology tells us that rapid extension beyond a carrying capacity may lead to collapse for any species, including our own. But where is the line? When will we cross it? Have we already? What are sustainable solutions going forward? Science and Sustainability is a single-trimester course that quantitatively explores these questions within a scientific and engineering framework. Given the scope and complexity of the topic, this multidisciplinary course draws upon students’ skills from physics, biology, chemistry, and mathematics, and students are expected to use advanced problem solving methods including preliminary research, hypothesis construction, experimental design, data analysis and interpretation, and solution development. The course format includes traditional instruction, design-based inquiry, and multiple laboratory opportunities.

**Advanced Tutorials in Science (5900)**

1st, 2nd, or 3rd trimester; 2 credits (Passed/Fail)

**Advanced Tutorials in Science (590G)**

1st, 2nd, or 3rd trimester; 2 credits (Graded)

One-trimester tutorials are available to advanced students. Topics are to be jointly proposed in writing by the student and instructor, and must be approved by the Department Chair and the Head and Assistant Head of Upper School.

**ADVANCED PLACEMENT ELECTIVE COURSES**

**Advanced Placement Biology (5290)**

Full year; 6 credits

Prerequisites: Completion of Chemistry, Biology, Physics 5420 (may be concurrent), and departmental approval. Select sophomores who satisfy stringent departmental guidelines are invited to take AP Biology instead of 10th grade Biology.

Note: The AP Examination in Biology is required.

This is a rigorous one-year college-level biology program culminating in the AP examination. Course work includes...
Senior Projects

Senior Projects (7900–01)
3rd trimester; 2 credits
Senior projects are offered during the last half of the third trimester of the senior year. Seniors who participate in this program conclude their classes with full credit at the time the project begins. Arrangements are made for those who expect to take the AP exams, are involved in spring athletics or performing arts groups.

Under the guidance of a school sponsor and an off-campus supervisor, a senior may develop, participate in, and help evaluate an experience that he or she would not have a chance to do in the course of the regular school year. A Senior Project is an opportunity for students who wish to finish Greenhill in a different and satisfying way. A project may be with a nonprofit or a business, but must be on a voluntary basis. A Senior Project is a hands-on experience working with practicing professionals in a field or area of interest. Ideally, projects go beyond the routine experiences encountered during the summer vacation, and explore areas beyond the scope of the student’s normal activities. Via the process of choosing and participating in a project a student should learn to effectively communicate professionally which includes interview skills and email and phone etiquette.

Senior Projects are coordinated by the Director of Service-Learning & Community Service and the Director of Alumni Relations.

Course Catalog 2019–2020
Summer on the Hill
The Summer on the Hill Program offers myriad courses over an 11-week season for students of all ages. Below are the courses that are available for Upper School students that also are accepted as credits toward graduation. These courses and credits are recorded on transcripts. Online registration is open through MyBackPack on February 13. Inquiries, questions, and clarifications may be sent to Vicki Truitt in the Summer on the Hill Office (x5490).

Please note: Greenhill does not accept summer work from other programs or schools.
Note: Courses, schedules, and costs shown in this section are offered during summer 2019.

Intermediate Photography/Advanced Photography
For credit: Course 6105, 6110; Grades 9–12; Weeks 2–4
Class size of Intermediate and Advanced Photography together is limited to 16 students.
To receive credit, students are required to have 100% of class attendance.

Intermediate Photography (6105)
Prerequisite: Beginning Black and White Photography
This is an exploration of techniques utilizing the programs Photoshop and Lightroom.
Assignments given explore creative ways to solve problems in the darkroom and challenge the student both creatively and technically.

Advanced Photography (6110)
Prerequisite: Intermediate Photography
This course is a further investigation into black and white photography as artistic expression. Experimentation with a variety of shooting techniques, advanced darkroom and digital manipulation broadens each student’s creative capabilities. Students also are expected to print a specific number of photos for critique and exhibition.

Economics & Society
For credit: Course 4430; Grades 11–12; Weeks 3–5
The objective of the course is to gain a fundamental understanding of the concepts of economics and to study economic problems as they relate to the real world. We look at economic history and study the workings of the national economy, as well as the theories that govern economic decisions on the national and international levels. Using primarily macroeconomic concepts, students study how economic decisions are made, by whom and to what end. Topics include monetary and fiscal policy, Gross Domestic Product, government’s role in the economy, globalization, and business cycles.
To receive credit, students are required to have 100% class attendance.

Government in Action
For credit: Course 4480; Grades 11–12; Weeks 4–6
This course helps students become better-informed citizens regarding the workings of American government and politics. We begin with an in-depth study of the American political system, from its beginnings under the founding fathers to its current existence. Tracing and analyzing the evolution of government’s role allows students to gain insight into American politics and to assess how American government has been a constantly evolving entity. Topics of study include the U.S. Constitution, the three branches of the federal government, the electoral process, the ideas and organization of the two major parties, and current issues facing the U.S., both at home and abroad. We also analyze how these topics affect students’ lives—from knowing one’s legal rights to understanding the importance of suffrage to the value of participating politically.
To receive credit, students are required to have 100% class attendance.

Introduction to Computer Science: Engineering I
For credit: Course 9110; Grades 10–12; Weeks 2–3
This course draws from the core elements of computer science and teaches them in context with engineering processes, design, modeling, and 3D printing. Students work with the Arduino prototyping environment as an introduction to electrical and electronic engineering using C. Students design and build robots using Tetrix parts and programming with Labview!
To receive credit, students are required to have 100% class attendance.

Light, Paper, Process:
Abstract & Experimental Photography
For credit: Course 6135; Grades 9–12; Weeks 2–4
Prerequisite: Beginning Black & White or instructor approval
Photography has been defined by the subject that the photographer has chosen to convey and the materials that he/she chose to utilize. This course delves deeper into meaning and redefining the process of photography by utilizing traditional and contemporary processes to explore the relationship between silver, light, metal, and glass. Students explore making their own cameras with a simple box camera. Additionally, students create cyanotypes, chemigraphs, solargraphs, alternative toning methods, silver emulsion, and pinhole imagery.
To receive credit, Upper School students are required to have 100% class attendance.

Mathematical Decision Making:
Problem Solving
For credit: Course 2100; Grades 10–12; Weeks 2–3
Prerequisite: Geometry and Algebra II
Ranging from airlines and hotels to Broadway shows, organizations use mathematical tools to enhance their business decisions. Mathematical Decision Making is a course that exposes students to various applications of mathematics in the real world. It is of great value to students interested in pursuing studies in mathematics, business, or finance. It encompasses a wide range of problem-solving techniques including linear programming, Simplex method, network models, optimal investment strategies, scheduling, optimization using Excel, and more.
To receive credit, Upper School students are required to have 100% class attendance.
Video Production
For credit: Course 6800 or for enrichment; Grades 9–12; Weeks 2–3
Join Mr. Doyle this summer on campus at Greenhill’s newest, state-of-the-art building, the Marshall Family Performing Arts Center for a one-of-a-kind film class. We'll break into groups each week (materials can change between each group) to make short narrative films. We can make stop motion films, documentary films, comedies, dramas, and whatever your minds can create. In prior years, films created during the summer have screened at film festivals including South by Southwest, Los Angeles CineFest, and the Oak Cliff Film Festival. Many of you will want to enroll in both classes to receive Upper School course credit. Spots are limited so sign up now!
To receive credit, Upper School students are required to attend both weeks and have 100% class attendance.

Wellness
For credit: Course 117040; Grades 9–10; Weeks 2–3, 4–5, 11–12
Drawing upon neuroscience and experiential activities, students learn the essentials of well-being. By exploring new practices, students can directly impact their brain development and form a deeper understanding of their own life stories to build compassion and resilience. Students participate in discussions and activities throughout the course that address: self-care, mindfulness, learning, gratitude, intrinsic motivation, intimacy and relationships, and prevention of substance use, violence, and suicide. Greenhill students entering Grades 9–10 may take this course to fulfill the Upper School graduation requirement for Wellness, subject to Upper School approval.

Global Online Academy
Greenhill is a member of a global consortium of independent schools that is collectively known as the Global Online Academy or GOA. GOA is a nonprofit, global partnership of leading independent schools bringing intellectually challenging programs and excellent teaching online. These courses are open to all Greenhill students during their junior and senior years. Greenhill covers 50% of the tuition during the school year.

Students interested in enrolling in GOA courses must complete the application process online. The form is located through the GOA box on the Greenhill Resource Board. Enrollment in GOA courses is also contingent upon advisor and GOA Site Director approval.

While Greenhill is on trimesters, GOA functions on a semester schedule. Students are allowed to take one GOA class each semester for a total of four GOA classes during their time at Greenhill. Under special circumstances, these limits may be waived to accommodate the special needs of an individual student. Those requests originate with the advisor and are approved by the GOA Site Director.

Reasons for taking a GOA class include:
- GOA offers a course that is not currently offered at Greenhill.
- You need to create flexibility in your schedule.
- The class you want at Greenhill is full and GOA offers a similar course.
- You would like to explore the world of online learning before going to college.
- You would like the opportunity to take a class with students from across the country and around the world.
- You have been on “The Hill” your entire educational career and would like to experience teaching and learning beyond this community.

Online courses are not for everyone. They require a high level of ability to be self-disciplined and self-directed. These courses follow set schedules and are NOT self-paced. You will be involved in group work and assignments will have due dates throughout the semester. Like traditional classes, there is work “in class” and out of class. Students should expect to commit a minimum of 5 to 7 hours a week to a single GOA class and often more. If you think about this in terms of a traditional class, this would be the same as 5 hours of “seat time” with additional time as homework each week.

Students taking a GOA class are not expected to meet and work on their class at a set time determined by their school schedule. It is up to each student to set aside the time to work. It is recommended that students plan to set aside a regular time to work on their GOA class just as they have regular times that their Greenhill classes meet on campus.

Credits: Greenhill requires that all students be enrolled in 10 credits / 5 classes minimum each trimester. All GOA classes count as one of those 5 classes. For some students, this may replace a 5th class they would have otherwise taken on campus while others may take it as a 6th or 7th class. Students earn 3 credits for each semester class taken. 2 credits are applied in one trimester with the remaining credit applied to the second trimester. Credits are distributed at the end of the semester. This means that students will receive a Pass during the first trimester grading period and will have the final grade distributed across two trimesters at the end of the course.

YEARLONG COURSES
Arabic Language Through Culture
This unique, mixed-level course is designed to help motivated students develop interpersonal communication skills in Arabic as well as build the skills required to be successful 21st century language learners. This course has an explicit focus on Levantine dialect and the cultures of the Middle East and North Africa (MENA). Students in levels I to III share the same communal classroom and collaborate with their teachers to assess their proficiency level and begin at the appropriate unit. Coursework includes English-language culture units as well as a series of language learning units. Language units consist primarily of asynchronous learning experiences and synchronous conversations...
with instructors, peers from all levels, and discussion partners at King's Academy in Jordan. In addition to building their speaking and writing skills, students learn to leverage a modern understanding of language acquisition, how to align goals with practice, how to ask questions, how to curate resources from the internet and an extended network of Arabic speakers. Proficiency targets are based on the 2017 NCSSFL-ACTFL Can-Do Statements.

Arabic I
Full year; 6 credits
Department: Modern and Classical Languages
Prerequisite: Must have completed Greenhill language graduation requirement
Through study of Levantine (Jordanian) Arabic and the Arabic writing system, students develop Novice proficiency in interpersonal communication. Students communicate in spontaneous spoken conversations on very familiar and everyday topics, including personal introductions, families, daily routines, and preferences, using a variety of practiced or memorized words, phrases, simple sentences, and questions.

Arabic II
Full year; 6 credits
Department: Modern and Classical Languages
Prerequisite: Must have completed Greenhill language graduation requirement and Arabic Language through Culture I or permission from the instructor.
Arabic II students have one year of Arabic Language Through Culture or have demonstrated Novice proficiency through summer coursework or other experiences. Students communicate in spontaneous spoken conversations on familiar topics, including food, weather, and hobbies, using a variety of practiced or memorized words, phrases, simple sentences, and questions.

Arabic III
Full year; 6 credits
Department: Modern and Classical Languages
Prerequisite: Must have completed Greenhill language graduation requirement and Arabic Language through Culture II or permission from the instructor.
Students in Arabic III have demonstrated Intermediate interpersonal proficiency in Arabic (MSA or a dialect) through two years in Arabic Language Through Culture or other coursework, and have demonstrated an ability to work online independently and reliably with instructors and peers in Arabic Language Through Culture or another GOA class. Students in Arabic III have opportunities to direct their own study through choice of material and topic. They use Arabic to interact with native speakers on topics of their choosing, and to explore topics of interest through a variety of media (written works, audio, video, face-to-face interviews).

Chinese Language through Culture I
Full year; 6 credits.
Department: Modern and Classical Languages
Prerequisite: Must have completed Greenhill language graduation requirement or permission from instructor.
Through this introduction to Mandarin Chinese language and culture, students learn the building blocks of spoken and written communication: pronunciation, tones, stroke order, and radical recognition. Students carry out basic interactions in Chinese orally and in writing. Interpersonal communication and functional vocabulary acquisition lay the foundations for a more in-depth study of Chinese writing and grammar. Vocabulary is practiced in a thematic and communicative way and leaves students prepared to exchange introductory greetings, as well as to discuss family, dates and time, hobbies, visiting friends, and making plans, among other topics. Students also study cultural and historic elements of the Chinese-speaking world. Audio and video materials, computer software, games, projects, and presentations foster student interaction and participation. By the end of the first year, students will have achieved novice-level proficiency.

Japanese Language and Culture I
Full year; 6 credits
Department: Modern and Classical Languages
Prerequisite: Must have completed Greenhill language graduation requirement.
This full-year course is a unique combination of Japanese culture and language, weaving cultural comparison with the study of basic Japanese language and grammar. While examining various cultural topics such as literature, art, lifestyle, and economy, students learn the basics of the Japanese writing system (Hiragana and Katakana), grammar, and vocabulary. Through varied synchronous and asynchronous assignments, including hands-on projects and face-to-face communications, students develop their speaking, listening, reading, and writing skills. The cultural study and discussion is conducted in English, with topics alternating

Global Online Academy

Computer Science
All courses labeled Computer Science count toward the 2-credit graduation requirement.

Fine Arts
Courses labeled Fine Art count toward the 4 credits of art and are applied to the year you take the class (junior or senior).

History and Social Science
Courses labeled History and Social Science count toward the 8 credits of junior/senior history electives.

Mathematics
These courses count as Math elective credits but cannot be used to fulfill any part of our existing sequential course requirements.

Modern and Classical Languages
Students must complete Greenhill requirement of level III in any single language. GOA language classes may be taken concurrently to expand a student’s experiences in languages. These classes earn a language elective credit.

Science
Courses labeled Science count toward 4 credits of elective science.

Integrated Studies
These classes count toward general graduation credits but do not satisfy any specific graduation requirement of any one department.
Global Online Academy Academic Calendar 2019–2020

Summer 2019 dates: June 17–August 2, 2019
These 7-week summer courses may be taken by Greenhill students, but fees for summer courses are the responsibility of the student.

- 9/11 in a Global Context
- Abnormal Psychology
- Computer Science I: Computational Thinking
- Computer Science II: Java
- Fiction Writing
- Introduction to Investments
- Introduction to Psychology
- Medical Problem Solving I
- Microeconomics
- Number Theory

Semester 1 dates: September 4–December 20, 2019

Semester 2 dates: January 15–May 1, 2020

Full year dates: September 4–December 20, 2019, and January 15–May 1, 2020

Semester 1
August 16, 2019 . . . . . . . . . . . . . . . . Semester 1 and yearlong course welcome pages published for students
August 19–September 3 . . . . . Synchronous teacher/student pre-course conversations. These are important (ungraded) initial conversations between teachers and students.
September 4 . . . . . . . . . . . . Semester 1 and yearlong courses open
October 26 . . . . . . . . . . . . End of Grading Period 1
Semester Break . . . . . . . . . . . . Due to the diversity of GOA schools’ calendars, teachers in Semester 1 may choose the week during which their class will be on break. They make this choice the first week of the semester based on the schedules of the students on their roster, and communicate that to students, Site Directors, and GOA.
November 8 . . . . . . . . . . . . Grade Reports distributed
December 6 . . . . . . . . . . . . Course Catalog for 2020–2021 is published, along with 2020–2021 Academic Calendar
December 20 . . . . . . . . . . . . Semester 1 ends (end of Grading Period 2)
January 10, 2020 . . . . . . . . . . Semester 1 Grade Reports distributed

Semester 2
December 13, 2019 . . . . . . . . . . . . . . . . Semester 2 course welcome pages published for students
January 3–15, 2020 . . . . . Synchronous teacher/student conversations for Semester 2 courses. These are important (ungraded) initial conversations between teachers and students.
January 15 . . . . . . . . . . . . Semester 2 courses open (yearlong courses resume)
January 27 (5 pm PST) . . . . . Last day to ADD a Semester 2 GOA course (and last day to DROP with no financial penalty)
February 3 (5 pm PST) . . . . . Last day to DROP a Semester 2 GOA course
March 6 . . . . . . . . . . . . End of Grading Periods 1 (semester) and 3 (yearlong)
Semester Break . . . . . . . . . . . . Due to the diversity of GOA schools’ calendars, teachers in Semester 2 may choose the week during which their class will be on break. They make this choice the first week of the semester based on the schedules of the students on their roster, and communicate that to students, Site Directors, and GOA.
March 20 . . . . . . . . . . . . Grade Reports distributed
March 31 . . . . . . . . . . . . Enrollment opens at 00:00 UTC (7:00 pm CDT on March 30)
April 23–27 . . . . . . . . . . . . Catalyst Conference
May 1 . . . . . . . . . . . . Semester 2 ends; end of Grading Periods 2 (semester) and 4 (yearlong)
May 15 . . . . . . . . . . . . Grade Reports distributed

Japanese Language and Culture II
Full year; 6 credits
Department: Modern and Classical Languages
Prerequisite: Must have completed Greenhill language graduation requirement and Japanese Language through Culture I or permission from the instructor.

Through language learning, students in this course share their voices, cultivate global perspectives, and foster appreciation of self and others. Students expand their knowledge of the basic skills introduced in Japanese Language through Culture I while further developing their speaking, listening, writing, and reading skills. Each unit follows the IPA model (Integrated Performance Assessment), blending three modes of communication: interpretation of authentic material in Japanese, synchronous and asynchronous practice in speaking and writing, and oral and written presentations. Each unit focuses on one of the following cultural topics: Design and Expression, Ecology, Entertainment, East meets West, Harmony, and Nature. In addition, students have the opportunity to select and pursue topics of their own interest. Grammar topics cover the essential forms that are typically introduced in the second and third year of a high school Japanese program. By learning the Dictionary Form, Nominalizer, TE form, TA form, NAI form, and Noun Modifier, students are able to add more complexity to their sentence construction. In doing so, they shift from forming simple sentences to communicating in a coherent paragraph. As online learners, students are expected to exhibit superb time management and communication skills, as well as to take ownership of their learning. While grammar instruction is delivered through asynchronous work and face-to-face meetings, much of the course content is curated and created by students through their research and collaboration. The focus of this course is 60 percent on language and 40 percent on culture.
Japanese Language through Culture III
Full year; 6 credits
Department: Modern and Classical Languages
Prerequisite: Must have completed Greenhill language graduation requirement and Japanese Language through Culture II or permission from the instructor.
Students in Japanese III have mastered most of the conjugation patterns (TE/TA form, dictionary form, and NAI form) that are necessary to speak and write in complex structures. While advancing their grammatical knowledge (including giving and receiving, potential form, and honorific form), students compare and examine similar functions and their subtle differences. In speaking, students are allowed to speak in informal/casual style with each other and with the teacher in order to solidify their control of the Plain Form. Interpersonal communications are done through face-to-face conversation and recorded messages. In reading and listening, students curate, share, and practice with grasping the gist of authentic materials. Such material may include TV commercials, news, movies, children’s books, online newspapers, and cooking recipes. In writing, students work on creative writing, expository writing, and analytical writing (compare-and-contrast in the AP format). Semester 1 incorporates JLPT N5 exam material. Taking the exam is not necessary but encouraged. In Semester 2, students participate in that GOA Catalyst Conference.

SEMESTER COURSES

Business Problem Solving
Fall; 3 credits. Department: Integrated Studies
How could climate change disrupt your production and supply chains or impact your consumer markets? Will tariffs help or hurt your business? How embedded is social media in your marketing plan? Is your company vulnerable to cybercrime? What 21st century skills are you cultivating in your leadership team? Students in this course tackle real-world problems facing businesses large and small in today’s fast-changing global marketplace, where radical reinvention is on the minds of many business leaders. Students work collaboratively and independently on case studies, exploring business issues through varied lenses including operations, marketing, human capital, finance and risk management, as well as sustainability. As they are introduced to the concepts and practices of business, students identify, analyze, and propose solutions to business problems, engaging in research of traditional and emerging industries, from established multinationals to startups.

Graph Design
Fall or Spring; 3 credits
Department: Integrated Studies
What makes a message persuasive and compelling? What helps audiences and viewers sort and make sense of information? This course explores the relationship between information and influence from a graphic design perspective. Using an integrated case study and design-based approach, this course aims to deepen students’ design, visual, and information literacy. Students are empowered to design and prototype communication projects about which they are passionate. Topics include: principles of design and visual communication, infographics, networks and social media, persuasion and storytelling with multimedia and social activism on the internet. Student work includes individual and collaborative group projects, graphic design, content curation, some analytical and creative writing, peer review and critiques, and online presentations.

Introduction to Legal Thinking
Fall; 3 credits. Department: Integrated Studies
Inspired by GOA’s popular Medical Problem Solving series, this course uses a case-based approach to give students a practical look into the professional lives of lawyers and legal thinking. By studying and debating a series of real legal cases, students sharpen their ability to think like lawyers who research, write, and speak persuasively. The course focuses on problems that lawyers encounter in daily practice, and on the rules of professional conduct case law. In addition to practicing writing legal briefs, advising fictional clients, and preparing opening and closing statements for trial, students approach such questions as the law and equity, the concept of justice, jurisprudence, and legal ethics.

Problem Solving with Engineering and Design
Fall; 3 credits. Department: Integrated Studies
This course investigates various topics in science, technology, computer programming, engineering, and mathematics using a series of projects and problems that are both meaningful and relevant to the students lives. Students develop engineering skills, including design principles, modeling, and presentations, using a variety of computer hardware and software applications to complete assignments and projects. This is a course that focuses on practical applications of science and mathematics to solve real-world issues. Prototyping and project based learning are therefore essential components of the course. Upon completing this course, students will have an understanding of the application of science and mathematics in engineering and will be able to make informed decisions concerning real-world problems. Furthermore, students will have worked on a design team to develop a product or system. Throughout the program, students step into the varied roles engineers play in our society, solve problems in their homes and communities, discover new career paths and possibilities, and develop engineering knowledge and skills. There are no particular math or science prerequisites for this course, just an interest in using STEM to solve problems, and a desire to learn!

Race & Society
Fall; 3 credits. Department: Integrated Studies
What is race? Is it something we’re born with? Is it an idea that society imposes on us? An identity we perform? A privilege with? Is it an idea that society imposes on us? Students participate in that GOA Catalyst Conference.

for more information please visit www.greenhill.org

Greenhill School
Digital Photography
Spring: 3 credits. Department: Fine Arts
Note: Students must have daily access to a DSLR camera.
In an era where everyone has become a photographer obsessed with documenting most aspects of life, we swim in a sea of images, whether posted on Instagram, Facebook, Snapchat, Pinterest, or another digital medium. Yet what does taking a powerful and persuasive photo with a 35mm digital single lens reflex (DSLR) camera require? Digital Photography explores this question in a variety of ways, beginning with the technical aspects of using and taking advantage of a powerful camera, then moving to a host of creative questions and opportunities. Technical topics such as aperture, shutter, white balance, and resolution get ample coverage in the first half of the course, yet each is pursued with the goal of enabling students to leverage the possibilities that come with manual image capture. Once confident about technical basics, students apply their skills when pursuing creative questions such as how to understand and use light, how to consider composition, and how to take compelling portraits. Throughout the course, students tackle projects that enable sharing their local and diverse settings, ideally creating global perspectives through doing so. Additionally, students interact with each other often through critique sessions and collaborative exploration of the work of many noteworthy professional photographers, whose images serve to inspire and suggest the diverse ways that photography tells visual stories.

Filmmaking
Fall: 3 credits. Department: Fine Arts
This course is for students interested in developing their skills as filmmakers and creative problem-solvers. It is also a forum for screening the work of peers and providing constructive feedback for revisions and future projects, while helping students develop critical thinking skills. The course works from a set of specific exercises based on self-directed research, and builds to a series of short experimental films that challenge students on both a technical and creative level. Throughout, we increasingly focus on helping students express their personal outlooks and develop their unique styles as filmmakers. We review and reference short films online and discuss how students might find inspiration and apply what they find to their own works.

Architecture
Spring: 3 credits. Department: Fine Arts
In this course students explore the field of architecture through a series of units covering elements architectural design, materials and structure, architectural analysis, and 3D design. The course starts with students learning the basic elements of architectural design, and then using Google SketchUp to build models of these elements. In the second unit students study buildings like Stonehenge, the Parthenon in Athens, the Roman Aqueduct of Pont du Gard in France, and the Pantheon in Rome to develop an understanding of materials and structures. At each stage students learn how changes in materials, technology, and construction techniques lead to the evolution of architecture over time. In the third unit students learn how to analyze structures using Ancient Greek temples as an example. The course ends with a final project in which each student has the opportunity to design and build a sacred structure of their choice based on their new understanding of architecture, construction, and engineering.

Creative Nonfiction
Fall: 3 credits. Department: English
This course focuses on shaping real experiences into powerful narratives. Students learn how to identify the genre of creative nonfiction both through the examination of professional examples of this genre and their own work of creative nonfiction. Students learn how to write in the genre of creative nonfiction both by exploring great stories in their lives and in the world around them and by effectively and respectfully writing about other people and their experiences. Feedback is an essential component of this course, and students gain experience in the workshop model, learning how to effectively critique and discuss one another’s writing in a digital environment. In addition, students have the opportunity to use technology to transform written work into audio experiences.

Poetry Writing
Fall: 3 credits. Department: English
This poetry-writing workshop explores identity and seeks to answer the question, How are you shaped (or not) by the community you live in? Our goal is to create a supportive online network of writers that uses language to discover unique and mutual understandings of what it means to be a global citizen from a local place. Students draft and revise poems, provide and receive frequent feedback, and read a range of modern and contemporary poets whose work is grounded in place. Sample assignments include audio and video recording, an online journal, study of performance poetry, peer video-conferences, a video interview with a renowned poet, collaborative poetry anthologies, and a class publication. All writers have the opportunity to send their work to international contests and publications.

Fiction Writing
Summer, Spring: 3 credits. Department: English
This course connects students interested in creative writing (primarily short fiction) and provides a space for supportive and constructive feedback. Students gain experience in the workshop model, learning how to effectively critique and discuss one another’s writing in an online environment. In addition to developing skills as a reader within a workshop setting, students strive to develop their own writing identities through a variety of exercises. The course capitalizes on the geographic diversity of the student body by eliciting stories that shed light on both the commonalities and differences of life experiences in different locations. Additionally, we read and discuss the work of authors from around the globe. Students’ essential responsibilities are twofold: to engage in the class as readers and writers and to focus on their development as writers and readers. Both require participation in discussions of various formats within our online community, as well as dedicated time outside of class reading and providing feedback on one another’s work and writing original pieces for the workshop.
Macroeconomics  
Spring; 3 credits. Department: History  
In this course students study macroeconomic theory as it relates to domestic and global policies on employment, national income, government spending, and the impact of foreign spending on domestic economies and foreign exchange markets. Students use real world events and data as case studies in order to develop a better understanding of the driving forces behind domestic and international macroeconomic markets. In the final portion of the course, students have the opportunity to develop their own solutions to a local/global issue of their choice (such as poverty, environmental pollution, and limited access to education) based on their new understanding of macroeconomic theory.

Microeconomics  
Fall, Summer; 3 credits. Department: History  
In this course, students learn about how consumers and producers interact to form a market, and then how and why the government may intervene in that market. Students deepen their understanding of basic microeconomic theory through class discussion and debate, problem solving, and written reflection. Students visit a local production site and write a report using the market principles they have learned. Economic ways of thinking about the world help them better understand their roles as consumers and workers, and someday, as voters and producers.

Advocacy  
Spring; 3 credits. Department: History  
This skills-based course explores the creativity, effort, and diversity of techniques required to change people's minds and motivate them to act. Students learn how to craft persuasive arguments in a variety of formats (written, oral, and multimedia) by developing a campaign for change around an issue about which they care deeply. We explore a number of relevant case studies and examples as we craft our campaigns. Units include persuasive writing, social media, public speaking, informational graphics, and more. The culminating project is a multimedia presentation delivered and recorded before a live audience.

Introduction to Investments  
Summer, Fall; 3 credits. Department: History  
In this course, students simulate the work of investors by working with the tools, theories, and decision-making practices that define smart investment. We explore concepts in finance and apply them to investment decisions in three primary contexts: portfolio management, venture capital, and social investing. After an introduction to theories about valuation and risk management, students simulate scenarios in which they must make decisions to grow an investment portfolio. They manage investments in stocks, bonds, and options to learn a range of strategies for increasing the value of their portfolios. In the second unit, they take the perspective of venture capital investors, analyzing startup companies and predicting their value before they become public. In the third unit, students examine case studies of investment funds that apply the tools of finance to power social change. Throughout the course, students learn from experts who have experience in identifying value and managing risk in global markets. They develop their own ideas about methods for taking calculated financial risks and leave this course not just with a simulated portfolio of investments, but with the skills necessary to manage portfolios in the future.

International Relations  
Fall; 3 credits. Department: History  
Are China and the U.S. on a collision course for war? Can the Israelis and Palestinians find a two-state solution in holy land? Will North Korea launch a nuclear weapon? Can India and Pakistan share the subcontinent in peace? These questions dominate global headlines and our daily news feeds. In this course, you go beyond the soundbites and menacing headlines to explore the context, causes, and consequences of the most pressing global issues of our time. Through case studies, you explore the dynamics of international relations and the complex interplay of war and peace, conflict and cooperation, and security and human rights. Working with classmates from around the world, you also identify and model ways to prevent, mediate, and resolve some of the most pressing global conflicts.

Social Psychology  
Fall or Spring; 3 credits. Department: History  
Social Psychology examines how the thoughts, feelings, and behaviors of a person are influenced by the actual, imagined, or implied presence of others. Students design research projects that explore contemporary issues relevant to this course, including but not limited to social media, advertising, peer pressure, and social conflict. In order to equip students to do this work, the course begins with an overview of research methods in psychology as well as several historical studies by Solomon Asch, Stanley Milgram, and Philip Zimbardo. Students develop foundational knowledge of social psychology by exploring a diversity of topics, including attitudes and actions, group behavior, prejudice and discrimination, interpersonal relationships, conformity, attraction, and persuasion. The capstone project of this course is a student-designed research project that will be submitted for publication, presentation to an audience, or used to catalyze change in local communities.

Introduction to Psychology  
Summer, Fall, Spring; 3 credits. Department: History  
What does it mean to think like a psychologist? With this question anchoring Introduction to Psychology, students explore three central psychological perspectives—the behavioral, the cognitive, and the sociocultural—in order to develop a multi-faceted understanding of what thinking like a psychologist encompasses. The additional question of “How do psychologists put what they know into practice?” informs study of the research methods in psychology, the ethics surrounding them, and the application of those methods to practice. During the first five units of the course, students gather essential information that they apply during a group project on the unique characteristics of adolescent psychology. Students similarly anticipate a case study on depression, which also enables application of understandings from the first five units. The course concludes with a unit on positive psychology, which features current positive psychology research on living mentally healthy lives. Throughout the course, students collaborate on a variety of activities and assessments, which often enable learning about each other’s unique perspectives while building
their research and critical thinking skills in service of understanding the complex field of psychology.

Positive Psychology
Fall, Spring; 3 credits. Department: History
What is a meaningful, happy, and fulfilling life? The focus of psychology has long been the study of human suffering, diagnosis, and pathology, but in recent years, positive psychologists have explored what’s missing from the mental health equation, taking up research on topics such as love, creativity, humor, and mindfulness. In this course, we dive into what positive psychology research tells us about the formula for a meaningful life, the ingredients of fulfilling relationships, and changes that occur in the brain when inspired by music, visual art, physical activity, and more. We seek out and lean on knowledge from positive psychology research and experts, such as Martin Seligman’s Well Being Theory, Mihaly Csikszentmihalyi’s idea of flow, and Angela Lee Duckworth’s concept of grit. In exploring such theories and concepts, students imagine and create real-world measurements using themselves and willing peers and family members as research subjects. As part of the learning studio format of the course, students also imagine, research, design, and create projects that they share with a larger community. Throughout the development of these projects, they collaborate with each other and seek ways to make their work experiential and hands-on. Students leave the class with not only some answers to the question of what makes life meaningful, happy, and fulfilling, but also the inspiration to continue responding to this question for many years to come.

Abnormal Psychology
Spring; 3 credits. Department: History
This course focuses on psychiatric disorders such as schizophrenia, eating disorders, anxiety disorders, substance abuse, and depression. As students examine these and other disorders, they learn about their symptoms, diagnoses, and treatments. Students also deepen their understanding of the social stigmas associated with mental illnesses. This course may be taken as a continuation of Introduction to Psychology, although doing so is not required.

Applying Philosophy to Modern Global Issues
Fall; 3 credits. Department: History
This is an applied philosophy course that connects pressing contemporary issues with broad-range philosophical ideas and controversies, drawn from multiple traditions and many centuries. Students use ideas from influential philosophers to examine how thinkers have applied reason successfully, and unsuccessfully, to many social and political issues across the world. In addition to introducing students to the work of philosophers as diverse as Confucius, Kant, John Rawls, and Michel Foucault, this course also aims to be richly interdisciplinary, incorporating models and methods from diverse fields including history, journalism, literary criticism, and media studies. Students learn to develop their own philosophy and then apply it to the ideological debates that surround efforts to improve their local and global communities.

Entrepreneurship in a Global Context
Spring; 3 credits. Department: History
How does an entrepreneur think? What skills must entrepreneurs possess to remain competitive and relevant? What are some of the strategies that entrepreneurs apply to solve problems? In this experiential course students develop an understanding of entrepreneurship in today’s global market; employ innovation, design, and creative solutions for building a viable business model; and learn to develop, refine, and pitch a new start-up. Units of study include Business Model Canvas, Customer Development vs. Design Thinking, Value Proposition, Customer Segments, Iterations & Pivots, Brand Strategy & Channels, and Funding Sources. Students use the Business Model Canvas as a roadmap to building and developing their own team start-up, a process that requires hypothesis testing, customer research conducted in hometown markets, product design, product iterations, and entrepreneur interviews. An online start-up pitch by the student team to an entrepreneurial advisory committee is the culminating assessment. Additional student work includes research, journaling, interviews, peer collaboration, and a case study involving real world consulting work for a current business.

Gender Studies
Spring; 3 credits. Department: History
This course uses the concept of gender to examine a range of topics and disciplines that might include feminism, gay and lesbian studies, women’s studies, popular culture, and politics. Throughout the course students examine the intersection of gender with other social identifiers: class, race, sexual orientation, culture, and ethnicity. Students read about, write about, and discuss gender issues as they simultaneously reflect on the ways that gender has manifested in and influenced their lives.

Genocide and Human Rights
Spring; 3 credits. Department: History
Students in this course study several of the major genocides of the 20th century (Armenian, the Holocaust, Cambodian, and Rwandan), analyze the role of the international community in responding to and preventing further genocides with particular attention to the Nuremberg Tribunals, and examine current human rights crises around the world. Students read primary and secondary sources, participate in both synchronous and asynchronous discussions with classmates, write brief papers, read short novels, watch documentaries, and develop a human rights report card website about a nation in the world of their choice.

9/11 in a Global Context
Fall, Spring, Summer; 3 credits. Department: History
September 11, 2001, was a tragic day that changed the world in profound ways. In this course students explore the causes of 9/11, the events of the day itself, and its aftermath locally, nationally, and around the world. In place of a standard chronological framework, students instead view these events through a series of separate lenses. Each lens represents a different way to view the attacks and allows students to understand 9/11 as an event with complex and interrelated causes and outcomes. Using a variety of technologies and activities, students work individually and with peers to evaluate each lens. Students then analyze the post-9/11 period and explore how this event affected the U.S., the Middle East, and the wider world.
Climate Change and Global Inequality
Spring; 3 credits. Department: History
Nowhere is the face of global inequality more obvious than in climate change, where stories of climate-driven tragedies and the populations hit hardest by these disasters surface in every news cycle. In this course students investigate the causes and effects of climate change, and the public policy debates surrounding it. In case studies, we research global, regional, and local policies and practices, along with what the choices of decision makers mean to the populations they serve. Who benefits, who suffers, and how might we change this equation? Following the Learning Studio model, in the second half of the course, students work with their teacher to design their own independent projects, reflecting their individual interests and passions, and collaborate in workshops with classmates to deepen our collective understanding of the complex issues surrounding climate change. Throughout the semester we build and curate a library of resources and share findings in varied media, engaging as both consumers and activists to bring increasing knowledge to challenge and advocate for sustainable norms. Finally, students have the opportunity to reach a global audience, by participating in GOA’s Catalyst Conference in the spring 2019, as they present their individual projects to spark change in local communities through well-informed activism.

Prisons and the Criminal Law
Spring; 3 credits. Department: History
Criminal courts in the United States have engaged in an extraordinary social experiment over the last 40 years: they have more than quintupled America’s use of prisons and jails. Has this experiment with “mass incarceration” produced more bad effects than good? Is it possible at this point to reverse the experiment without doing even more harm? In this course, students become familiar with the legal rules and institutions that determine who goes to prison and for how long. Along the way, students gain a concrete, practical understanding of legal communication and reasoning while grappling with mass incarceration as a legal, ethical, and practical issue. In an effort to understand our current scheme of criminal punishments and to imagine potential changes in the system, we immerse ourselves in the different forms of rhetoric and persuasion that brought us to this place: we read and analyze the jury arguments, courtroom motions, news op-eds, and other forms of public persuasion that lawyers and judges create in real-world criminal cases. Topics include the history and social functions of prisons; the definition of conduct that society will punish as a crime; the work of prosecutors, defense attorneys, and judges in criminal courts to resolve criminal charges through trials and plea bargains; the sentencing rules that determine what happens to people after a conviction; the alternatives to prison when selecting criminal punishments; and the advocacy strategies of groups hoping to change mass incarceration. The reading focuses on criminal justice in the United States, but the course materials also compare the levels of imprisonment used in justice systems around the world. Assignments ask students to practice with legal reasoning and communication styles, focused on specialized audiences such as juries, trial judges, appellate judges, sentencing commissions, and legislatures. The work involves legal research, written legal argumentation, peer collaboration, and oral advocacy.
Note: This course is offered through Wake Forest University School of Law and is taught by Ronald Wright, the Needham Y. Gulley Professor of Criminal Law. Students who take this course should expect a college-level workload (8–10 hours a week). Successful completion of this course will be rewarded with a certificate from the law school.

Computer Science I:
Computational Thinking
Summer, Fall, Spring; 3 credits
Department: Computer Science
This course is a prerequisite to all Computer Science II classes at GOA. Computational thinking centers on solving problems, designing systems, and understanding human behavior. It has applications not only in computer science, but also myriad other fields of study. This introductory level course focuses on thinking like a computer scientist, especially understanding how computer scientists define and solve problems. Students begin the course by developing an understanding of what computer science is, how it can be used by people who are not programmers, and why it’s a useful skill for all people to cultivate. Within this context, students are exposed to the power and limits of computational thinking. Students also are introduced to entry level programming constructs that help them apply their knowledge of computational thinking in practical ways. They learn how to read code and pseudocode as well as begin to develop strategies for debugging programs. By developing computational thinking and programming skills, students gain the core knowledge to define and solve problems in future computer science courses. While this course would be beneficial for any student without formal training as a programmer or computer scientist, it is intended for those with no programming experience.

Computer Science II:
Game Design and Development
Spring, Summer; 3 credits
Department: Computer Science
Prerequisite: Completion of Computer Science I:
Computational Thinking
This course teaches students how to write programs in the Java programming language. Java is the backbone of many web applications, especially eCommerce and government sites. It is also the foundational code of the Android operating system and many tools of the financial sector. Students learn the major syntactical elements of the Java language through object oriented design. The emphasis in the course is on creating intelligent systems though the fundamentals of Computer Science. Students write working programs through short lab assignments and more extended projects that incorporate graphics and animation.

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this time, students also learn how to use Unity, the professional game development tool they use throughout the class. They become familiar with the methodologies of constructing a game using such assets as graphics, sounds, and effects, and controlling events and behavior within the game using the C# programming language. Throughout the remainder of the course, students work in teams to brainstorm and develop new games in response to a theme or challenge. Students develop their skills in communication, project- and time- management, and creative problem-solving while focusing on different aspects of asset creation, design, and coding.

**Computer Science II: Analyzing Data with Python**

Fall, Spring; 3 credits. Department: Computer Science

In this course, students utilize the Python programming language to read, manipulate, and analyze data. The course emphasizes using real world datasets, which are often large, messy, and inconsistent. The prerequisite for this course is familiarity with Python or its equivalent. Students learn how to model social networks using matrices and discover things about the network with linear algebraic techniques. Students learn how to read, manipulate, and analyze data using the computer software package Geogebra (free) is used to do most of the calculating and most calculations are simple enough to do by hand, we sometimes use the computer to see how the fundamental ideas can be applied to the huge numbers needed for modern applications.

**Linear Algebra**

Spring; 3 credits. Department: Mathematics

The course covers vector spaces and matrices by looking at how images of objects in the plane and space are transformed in computer graphics. Some paper-and-pencil calculations are done early in the course, but the use of the computer software package Geogebra (free) is used to do most of the calculating in the course. No prior experience with this software or linear algebra is necessary. This introduction is followed by looking at the analysis of social networks using linear algebraic techniques. Students learn how to discover things about the network with linear algebra as your tool. We consider applications like Facebook and Google.

**Number Theory**

Summer, Fall; 3 credits. Department: Mathematics

The course covers the fundamentals of number theory, but even more, it develops the skills of mathematical reasoning and proof in a concrete and intuitive way, good preparation for any future course in upper-level college mathematics or theoretical computer science. We progressively develop the tools needed to understand the RSA algorithm, the most common encryption scheme used worldwide. Along the way we invent some encryption schemes of our own and discover how to play games using number theory. We also get a taste of the history of the subject, which involves the most famous mathematicians from antiquity to the present day, and we see parts of the story of Fermat’s Last Theorem, a 350-year-old statement that was fully proved only twenty years ago. While most calculations are simple enough to do by hand, we sometimes use the computer to see how the fundamental ideas can be applied to the huge numbers needed for modern applications.
significant public-health challenges facing today’s global population. Topics addressed are the biology of infectious disease (specifically HIV and malaria); the statistics and quantitative measures associated with health issues; the social determinants of health; and the role of organizations (public and private) in shaping the landscape of global health policy. Students use illness as a lens through which to examine critically such social issues as poverty, gender, and race. Student work includes analytical and creative writing; research and peer collaboration; reading and discussions of nonfiction; and online presentations.

Medical Problem Solving I
Summer, Fall, Spring; 3 credits. Department: Science
In this course students collaboratively solve medical mystery cases, similar to the approach used in many medical schools. Students enhance their critical thinking skills as they examine data, draw conclusions, diagnose, and treat patients. Students use problem-solving techniques in order to understand and appreciate relevant medical/biological facts as they confront the principles and practices of medicine. Students explore anatomy and physiology pertaining to medical scenarios and gain an understanding of the disease process, demographics of disease, and pharmacology. Additional learning experiences include studying current issues in health and medicine, building a community-service action plan, interviewing a patient, and creating a new mystery case.

Medical Problem Solving II
Spring; 3 credits. Department: Science
Prerequisite: completion of Medical Problem Solving I
This course is an extension of the problem-based learning done in Medical Problem Solving I. While collaborative examination of medical case studies remain the core work of the course, students tackle more complex cases and explore new topics in medical science, such as the growing field of bioinformatics. Students in MPS II also have opportunities to design cases based on personal interests, discuss current topics in medicine, and apply their learning to issues in their local communities.

Neuropsychology
Spring; 3 credits. Department: Science
This course is an exploration of the neurological basis of behavior. It covers basic brain anatomy and function as well as cognitive and behavioral disorders from a neurobiological perspective. Additionally, students explore current neuroscience research as well as the process of funding that research. Examples of illnesses that may be covered include Alzheimer’s disease, traumatic brain injury, and stroke. Diagnostic and treatment issues (including behavioral and pharmaceutical management) also are addressed, and additional topics may include attention, learning, memory, sleep, consciousness, and emotional intelligence. The course culminates with students developing a fundraising campaign to support research and/or patient care initiatives related to a specific neurological condition and nonprofit foundation. Neuropsychology can be taken as a continuation of Introduction to Psychology, although it is not required.
It is the policy of Greenhill School to administer its educational programs, including admission and financial aid, without regard to race, color, religion, sex, sexual orientation, gender identity, gender expression, national or ethnic origin, or disability.