Introduction

This section is intended to provide an overview of Upper School courses and graduation requirements for the 2020–2021 academic year. For students who enroll, the requirements for graduation in the boxes on pages 2 and 3 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 semester if that student is in a minimum of six courses and at least one fine arts course or enrolled in a PE course or on an athletic team for that season. However, from a college admissions perspective, most students are best served, and best prepared, by studying each academic discipline each year and preferably each semester.
### Requirements for Graduation: Class of 2021 only

#### Department

**COMMUNITY SERVICE**
- 24 hours (9th & 10th)
- 24 hours (11th & 12th)

**COMPUTER SCIENCE**
- 1 trimester of computer science before 12th

**ENGLISH**
- Full year of 1010 English (9th)
- Full year of 1020 English (10th)
- 1 trimester of 1200 Narrative Nonfiction during 11th
- 2 trimesters of electives during 11th
- 2 consecutive semesters of electives during 12th

**FINE ARTS**
- 3 trimesters during 9th & 10th
- 1 trimester during 11th
- 1 semester during 12th

**HISTORY AND SOCIAL SCIENCE**
- Full year of 4005 Atlantic Experience 9
- Full year of 4045 Atlantic Experience 10
- 4 trimesters during 11th & 12th; at least 1 trimester must be for a Government course
  - *Note: Students who took 1 trimester of History in 11th will need to take 2 semesters of History in 12th*
  - *Note: Students who took 2 or 3 trimesters of History in 11th will need to take 1 semester of History in 12th*

**MATHEMATICS**
- 6 consecutive trimesters starting in 9th grade
- Students must earn credit in 2010 Algebra I, 2020 Advanced Geometry or 202H Honors Geometry, and either 2030 Advanced Algebra II, 203H Honors Algebra II, or 2045 Algebra II

**MODERN AND CLASSICAL LANGUAGES**
- 6 consecutive trimesters starting in 9th grade
- Students must demonstrate competency through Level III of one language

**PHYSICAL EDUCATION/ATHLETICS**
- 2 trimesters of Physical Education or Team Sports (9th)
- 2 trimesters of Physical Education or Team Sports (10th)
- 2 trimesters of Physical Education or Team Sports (11th)
- 1 semester of Physical Education or 1 season of Team Sport (12th)

**SCIENCE**
- Full year of 5305 Chemistry or 5300 Advanced Chemistry (9th)
- Full year of 5205 Biology or 5200 Advanced Biology (10th)
  - *Note: Students who completed AP Physics 1 in 11th grade have completed their Science requirements*
  - *Note: Students who completed Physics I, Physics II, and Physics III in 11th grade have completed Science requirements*
  - *Note: Students who completed Physics I and Physics II only will need 1 semester of Science in 12th grade*

**WELLNESS**
- 1 trimester of Classroom Wellness (9th or 10th)

### Requirements for Graduation: Class of 2022 only

#### Department

**COMMUNITY SERVICE**
- 24 hours (9th & 10th)
- 24 hours (11th & 12th)

**COMPUTER SCIENCE**
- 1 trimester or 1 semester of computer science before 12th

**ENGLISH**
- Full year of 1010 English (9th)
- Full year of 1020 English (10th)
- 1 semester of 1200 Narrative Nonfiction (11th)
- Juniors and seniors must complete an English elective every semester of 11th and 12th grade. In 11th grade, students must complete 1200 Narrative Nonfiction as one of their electives.

**FINE ARTS**
- 3 trimesters during 9th & 10th
- 1 trimester during 11th
- 1 semester during 12th

**HISTORY AND SOCIAL SCIENCE**
- Full year of 4005 Atlantic Experience 9
- Full year of 4045 Atlantic Experience 10
- 4 trimesters during 11th & 12th; at least 1 trimester must be for a Government course
  - *Note: Students who took 1 trimester of History in 11th will need to take 2 semesters of History in 12th*
  - *Note: Students who took 2 or 3 trimesters of History in 11th will need to take 1 semester of History in 12th*

**MATHEMATICS**
- 6 consecutive trimesters starting in 9th grade
- Students must earn credit in 2010 Algebra I, 2020 Advanced Geometry or 202H Honors Geometry, and either 2030 Advanced Algebra II, 203H Honors Algebra II, or 2045 Algebra II

**MODERN AND CLASSICAL LANGUAGES**
- 6 consecutive trimesters starting in 9th grade
- Students must demonstrate competency through Level III of one language

**PHYSICAL EDUCATION/ATHLETICS**
- 2 trimesters of Physical Education or Team Sports (9th)
- 2 trimesters of Physical Education or Team Sports (10th)
- 2 trimesters of Physical Education or Team Sports (11th)
- 1 semester of Physical Education or 1 season of Team Sport (12th)

**SCIENCE**
- Full year of 5305 Chemistry or 5300 Advanced Chemistry (9th)
- Full year of 5205 Biology or 5200 Advanced Biology (10th)
  - *Full year of AP Physics I OR Full year of Physics I and Physics II*

**WELLNESS**
- 1 trimester of Classroom Wellness (9th or 10th)
### Requirements for Graduation: Class of 2023 only

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<tr>
<th>Department</th>
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<tbody>
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<td>FINE ARTS</td>
<td>• Full year over 9th and 10th grades</td>
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<td>• 1 semester during 12th</td>
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<td>HISTORY AND SOCIAL SCIENCE</td>
<td>• Full year of 4010 Global History</td>
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<td>• Full year of 4020 U.S. History</td>
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<td></td>
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<tr>
<td>SCIENCE</td>
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<td>WELLNESS</td>
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### Requirements for Graduation: Class of 2024 only

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<tr>
<td>FINE ARTS</td>
<td>• 4 semesters of Fine Arts classes</td>
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<tr>
<td>HISTORY AND SOCIAL SCIENCE</td>
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<td>• Full year of 4020 U.S. History</td>
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<td></td>
<td>• 2 semesters during 11th &amp; 12th; at least 1 semester must be a Government course</td>
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<tr>
<td>MATHEMATICS</td>
<td>• 6 consecutive semesters starting in 9th grade</td>
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<td>MODERN AND CLASSICAL LANGUAGES</td>
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<td>PHYSICAL EDUCATION/ATHLETICS</td>
<td>• 2 semesters of Physical Education or 1 semester and 1 season of Team Sport (9th); Foundations of PE course required if you are not in a Team Sport in 9th grade and 10th grade</td>
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<tr>
<td>WELLNESS</td>
<td>• Completed in group and class settings</td>
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</tbody>
</table>
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 semester course is a 3-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 completion of the minimum of 6 courses each semester.

COLLEGE PREPARATION

The graduation requirements provide students with more 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, and remember that the colleges are looking for evidence of a balanced course of study.

ADVANCED PLACEMENT COURSE PROCEDURES AND POLICIES

A maximum of the equivalent of three, yearlong AP courses is permitted per student, per year. With the exception of AP Government, AP Macroeconomics, and AP Microeconomics, 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 AP course are required to take the examination in that course. Most AP 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.
The Capstone Project

The Capstone Project (7900)
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.

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.

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 this block of hours the summer before their 9th 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 at an organization outside of Greenhill School by the end of their 10th grade year.
- For students in the Class of 2023, it is expected that all service hours are submitted and approved by May 21, 2021.

A minimum of 24 hours during 11th and 12th grades.

- Students may begin accumulating this block of hours the summer before their junior year.
- Of the 24 hour requirement, 10 hours may come from in-school service to Greenhill School.
- For students in the Class of 2021, it is expected that all service hours are submitted and approved by February 26, 2021.
- New students entering senior year are required to complete at least 12 hours at organizations outside of Greenhill School. It is expected that all hours will be completed by February 26, 2021.

Summer hours begin June 1, 2020.
All summer hours must be submitted by September 30, 2020.

Community Service Guidelines

Greenhill School defines community service as time contributed to a nonprofit 501c3 organization. As a rule, the community should be benefitting from your volunteer service and you should not be receiving payment for your service.

Community service hours are also allowed for volunteering on political campaigns, museums, schools, Scout programs, public libraries, hospitals, nursing homes, marathons/races that benefit charitable organizations, service trips through travel and service organizations, teen courts within the juvenile justice system, and serving the outside community through religious organizations.

There are many volunteer opportunities that DO NOT meet the Community Service Guidelines. 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. The exception is students assisting adults/faculty who are running summer or other programs for pay on campus outside of his/her regular contract. Providing assistance for these types of programs is NOT in-school service, and, furthermore, in this capacity, students should be paid for their time.

Note: Please see Upper School Community Service box below.
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.

Students who are coming into the program with limited or no prior experience are encouraged to take Comp Science: Engineering or Comp Science: Game Design and Python. Students with more experience or an intrinsic interest in programming may want to consider starting with Comp Science: JAVA Programming.

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.

Comp Science: Engineering I (9110)
1st or 2nd semester or Summer on the Hill; 3 credits
This course serves as a foundation for entry to more advanced options and focuses on several big ideas related to computer science. The 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.

Comp Science: JAVA Programming (9120)
1st semester; 3 credits
This course is designed for those who want to explore the world of computer programming using a high-level object-oriented language. The course is designed for students who have an intrinsic interest in computer science. Students are introduced to the programming environment, basic class structures, sequence, iteration, and recursion. They learn about basic software design practices and apply these principles to create simple programs that address problems related to science and mathematics. 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.

Comp Science: Game Design and Python (9130)
1st or 2nd semester; 3 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.

Comp Science: Machine Learning (9220)
2nd semester; 3 credits
Prerequisite: AP Comp Science Principles, Data Science, or Department approval
The course examines the foundations of Machine Learning, a sub field of Artificial Intelligence. Real world case studies in healthcare, autonomous driving, natural language processing, finance, and computer vision are explored. Students learn Machine Learning algorithms including Convolutional Networks, RNNs, LSTMs, and more. Students discover the impact of AI in multiple industries and learn to apply it in real world applications. These ideas are practiced using the Python programming language and TensorFlow library.

Comp Science: Data Science (9230)
1st semester; 3 credits
Prerequisite: Comp Science: Engineering I, Comp Science: Game Design and Python, or Comp Science: JAVA Programming
The course examines real world examples of how data science has been used to make a positive impact on society. These examples include Moneyball, Framingham Heart Study, election forecasting, IBM Watson on Jeopardy, Twitter, and Netflix. Within these case studies, students learn analytical methods of data science including linear and logistic regression, trees, text analytics, clustering, and visualization. Through these inspiring examples and stories, students discover the power of data and be able to apply data science to real world applications. The programming language used is Python.

Computer Science graduation requirement

All students who have not taken a Computer Science course before the 2020–2021 school year are required to complete one semester of Computer Science by the end of junior year to satisfy the Computer Science graduation requirement.

for more information please visit www.greenhill.org
Comp Science: Engineering II (9240)
2nd semester; 3 credits
Prerequisites: Comp Science: Engineering I
This 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, modeling and simulation skills using SolidWorks 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.

Advanced Placement Computer Science Principles (9410)
Full year; 6 credits
Prerequisites: at least one Computer Science course 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.

Comp Science: Robotics (9500)
Full year; 6 credits
This course does NOT fulfill the Computer Science graduation requirement.
This class allows students to work on one of the two Greenhill Robotics teams. Students spend at least 8 hours per week during the Robotics competition season. The Robotics season starts the first week of September and it ends by the end of April or beginning of May. A lot of training and practice is needed for new members to achieve the level of competition needed to be successful. Robotics encourages problem-solving, creative thinking, and a healthy sense of competition that drives innovation from students. As students improve their design, building, and programming skills, they learn determination, perseverance, and how to plan and process with technology. These are all skills that will help them in their future education.

Comp Science: Advanced Topics Tutorial (9910 or 9920)
1st or 2nd semester; 3 credits
|9910 = Pass/Fail; 9920 = Graded
Prerequisite: 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 semester 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 semester. The only required course is Narrative Nonfiction, which is offered only second semester 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 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 a variety of 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 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.

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, explications, 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 second semester of junior year.

Narrative Nonfiction:
Finding Your Voice (1730)
Required for juniors
2nd semester; 3 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 complete an English elective every semester. 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.

**Modern Fiction (1110)**
1st or 2nd semester; 3 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.

**Reading and Writing Short Fiction (1120)**
1st semester; 3 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.

**Sublime Darkness: Gothic Literature and High Romanticism (1130)**
1st or 2nd semester; 3 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.

**Frontier Literature and American Identity (1140)**
1st or 2nd semester; 3 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” (Skladkin, 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 commonplace) formed through American experience with shrinking frontiers.

**Global Literature (1150)**
1st semester; 3 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 course supports the mission of creating cross-cultural dialogues. Students will have the opportunity to do independent reading projects.

**Coming of Age in America (1160)**
1st or 2nd semester; 3 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 Cosmic Horror and the Supernatural (1170)**
2nd semester; 3 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.
Tragedy through the Ages (1180)
1st or 2nd semester; 3 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 and Detective Fiction (1190)
1st semester; 3 credits
Detective fiction has become one of the most popular types of genre fiction today. It originated in America in the early 19th 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.

Literature of the American Wild (1210)
2nd semester; 3 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 utopia 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.

Social Class in Literature:
Class on Class (1310)
2nd semester; 3 credits
This course explores the issue of socioeconomic 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 Bambara, 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.

Literature of the Black Atlantic (1340)
2nd semester; 3 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, Chinamanda Ngozi
Adichie, Claude McKay, Toni Morrison, Zadie Smith, Simone Schwartz-Bart, Jamaica Kinkaid, Ishmael Reed, Junot Diaz, Darius James, and Leonardo Padura Fuentes.

**Race and Subjectivity in Literature (1350)**
2nd semester; 3 credits
This is a course for people of all backgrounds to think about and discuss structures of race. Our ability to understand issues of race, our own story and role in race relations and our own ability to participate in constructive dialogue and healing is constrained and limited by the belief systems we have inherited and embody, often unconsciously. We all possess implicit bias, and it colors our perceptions of everything we encounter, and importantly one of these being the way we perceive the issue and realities of race in our world. Even when challenged, these belief systems often hold fast stubbornly, and prevent us from understanding ourselves and others fully, as well as from understanding the consequences of systemic oppression on individuals, our social fabric, our cultural, economic, political and educational institutions. Students in this course develop tools of self-compassion and lovingkindness that can help us live with and heal from the hurts and the trauma that systemic oppression has caused.

**Literature of Latin America (1360)**
1st semester; 3 credits
Literature of Latin America engages 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 Latin American authors, both poetry and prose, both male and female, literature both in translation and in English.

**Literature of World Religions (1410)**
1st semester; 3 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.

**Literature and Philosophy (1420)**
2nd semester; 3 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 semester; 3 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.

2nd semester; 3 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 semester 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!

**Multicultural Literature: Survey of Modern Poetry (1530)**
1st semester; 3 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.

**Women’s Literature (1620)**
1st or 2nd semester; 3 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.

**Creative Writing (1710)**
1st semester; 3 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).

**Nature and Uses of Language (1720)**
1st or 2nd semester; 3 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.

**Advanced Tutorials in English (1910)**
1st or 2nd semester; 3 credits
Permission from instructor and approval by the Head of the Upper School and the English Department are required.
One semester–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**
Permission from instructor and approval by the Head of the Upper School and the English Department are required.

**Writing Tutorial (1950)**
1st or 2nd semester; 3 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 semester.

**Reading Tutorial (1960)**
1st or 2nd semester; 3 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.**

Some Fine Arts courses are offered for credit during Summer on the Hill. Most students at Greenhill graduate with more than the minimum requirements. Fine Arts courses are offered at both the beginning and advanced levels, and all classes are graded.

**STUDIO ARTS**

**Studio Art I (6000)**
1st or 2nd semester; 3 credits
No prerequisite
This beginning studio art course is a one-semester elective that prepares students for continuation in other high school art courses. Students are introduced to skills and media that are utilized in the other art electives, including drawing, painting, the elements, principles of design, color theory, the critical thinking process, and the art and process of keeping a sketchbook journal. This course is offered to students who wish to gain an appreciation of the arts while they experience basic art technique and style.

**Studio Art II (6020)**
2nd semester; 3 credits
Prerequisite: Students must have taken Studio Art I or Instructor approval
This is a one-semester elective offered to students who have completed Studio Art I and have a desire to learn further fundamental skills of drawing and painting. The elements and principles of design are further explored and applied to the creative process of planning and executing various drawing and painting challenges. Personal interpretation and design exploration are strongly encouraged in this intermediate studio art course.

**Drawing I (6010)**
1st or 2nd semester; 3 credits
This course gives a strong foundation in drawing. Instruction on technical and conceptual skill building, understanding of vocabulary as it relates to drawing, experimentation of materials through creative problem solving and critical thinking are the focus for the course. Learning how to create strong visual narratives is a component of this course so students can begin to find their voice as an artist. Outside sketchbook work helps to reinforce skills and concepts as students navigate class assignments. Various surfaces, media, techniques, and concepts are explored.

**Drawing II (6060)**
1st or 2nd semester; 3 credits
Prerequisite: Drawing I or Studio Art I or Instructor approval
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 to 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 semester. 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.
Painting I (6030)
1st or 2nd semester; 3 credits
This course gives students a strong foundation of painting concepts and techniques that allow for experimentation and exploration of materials and painting media, painting methodology, brush techniques, and basic color theory. Students have the opportunity to explore water-based and oil-based media as well as mixed media while working on observational and conceptual assignments. A background in art history that includes important movements and artists aids in experimentation and exploration of media. Learning how to create strong visual narratives is a component of this course so students can begin to find their voice as an artist.

Painting II (6070)
1st or 2nd semester; 3 credits
Prerequisite: Painting I or Studio Art I or Instructor approval
This course continues the foundational skills and concepts explored in Painting I while helping students find their artistic voice. Printmaking, experimental painting, and mixed media works are created while exploring both traditional and non-traditional surfaces including fabric, Masonite, clay board, corrugated, and un-stretched canvas as well as sewing, collage, weaving, and relief. A final series or large work is the culminating assignment for the course. This course may be repeated for credit.

Ceramics I (6210)
1st semester; 3 credits
Students choose to work on hand-building skills or throwing skills. With basic hand-building skills, pinch, coil, and slab working are included. Students also experience working with plaster molds for shaping clay and texture application. Figurative clay and modeling are explored. With throwing skills, students learn basic wheel throwing skills, beginning with throwing cylinders and cutting them in half to determine wall thickness. Students progress to throwing and trimming bowls. After mastering bowls, students begin throwing mugs and attaching handles. Following mugs, students proceed to throwing and trimming plates.

Ceramics II (6260)
1st or 2nd semester; 3 credits
Prerequisite: Ceramics I
Students continue to advance their wheel working skills. Projects include lidded containers, teapots, plates, large bowls, platters, and works combining thrown forms. Students begin to find their voice with clay.

Advanced Ceramics (6270)
1st or 2nd semester; 3 credits
Prerequisite: Ceramics I & Ceramics II
This course refines students’ hand-building and throwing skills. Students build upon already mastered skills in order to create multi-piece works that can be either functional or sculptural. Students should be working with a theme and discovering their voice. Students use high-temperature stoneware and classical glazing techniques. Texture and alternative surface decoration are explored. Students learn the technical components of working with clay including loading/unloading kilns and glaze mixing. Vocabulary and technical considerations of ceramics also are taught. Works created in all levels of this class may be used for the breadth portion of an AP 3D portfolio.

Sculpture I (6220)
1st or 2nd semester; 3 credits
Students learn sculpting skills including the forming methods: additive, subtractive, fabrication, casting, and found object. Work is created in the round and presentation of sculpture is addressed. Students work on assignments with paper, cardboard, wood, clay, glass, plaster, wax, found object, and cast resin.

Sculpture II (6230)
1st or 2nd semester; 3 credits
Prerequisite: Sculpture I
Students may choose to either proceed with the beginner’s assignments or begin to work independently on their own body of work. Students are encouraged to begin to find their voices sculpturally.

Advanced Sculpture (6280)
1st or 2nd semester; 3 credits
Prerequisite: Sculpture I & II
Students create works independently, both in concept as well as media. Students are required to create two major works of art that contain high levels of craftsmanship as well as convey their personal voice. Each piece is designed and approved before commencing work and the instructor serves as the sculptural coach. Works created in all levels of this class may be used for the breadth portion of an AP 3D.

AP 2D Art and Design (6095)
Full year; 6 credits
Prerequisite: 3 semesters of Studio Art, Drawing, Painting, or Design, and Instructor approval
Note: The AP Examination in Art is required. AP 2D Art and Design focus on the development of a portfolio addressing the principles of 2D drawing and 2D 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 Art, students must submit a written request and portfolio by the end of the previous year to be admitted to the program. Summer work, whether working at home or taking an outside course, is strongly suggested before the start of their AP year. A packet with possible assignments to choose from is handed out at the end of the year.

AP 3D Art and Design (6290)
Yearlong; 6 credits
Prerequisite: 3 semesters of Sculpture or Ceramics, and Instructor approval
The AP 3D class assists students in creating a portfolio to submit to the College Board for college credit. The individual sections of each portfolio include Selected Works (5 artworks) and Sustained Investigation (15 images, may include process). Students are expected to produce work that develops mastery in concept, composition, and execution of ideas. Additionally, students’ works are expected to show development of individual artistic voice.

Design I (6050)
1st semester; 3 credits
This course explores the basic elements of design in both fine art and print design. Connections between visual and written works in art are also explored. Students have the opportunity to use their writing and visual skills, gain knowledge of typography and basic color theory, and create drawings, paintings, and mixed media works incorporating the two to express their ideas. Printmaking techniques are covered, including monoprint, intaglio, and relief printing.
Design II (6080)
2nd semester; 3 credits
Prerequisite: Design I or Instructor approval
This course continues to explore the basic elements of design in both fine art and print design. Students have the opportunity to use the skills and knowledge gained in Design I and focus on work based on prompts given in class. For the second half of the semester, students have two options for exploration. The first is to create a sequential series or final large work for exhibition, which could include book art, installation art, printmaking, mixed media, or more traditional 2D art approaches. The second option is a practical application of design, which incorporates work on our school’s literary magazine, Montage.

Digital Art (6090)
1st semester; 3 credits
Class size is limited to 22 students.
This art class uses the very powerful program Adobe Photoshop as a tool to form drawings. The class learns the program together. No computer drawing experience is needed. The projects start with the class learning the basic elements of the program to create images. Over the semester, the projects correlate to the students’ acquisition of new tools with the computer. Students use images from the internet, their digital photography, scanned objects, and shapes made directly from the program to form drawings. Assignments are given to challenge and sharpen the students’ picture-making skills. The class also incorporates some Photoshop-based animation-making to the process. After 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.

Photography I (6110)
1st or 2nd semester; 3 credits
Class size is limited to 11 students.
Prerequisite: Students must provide their own 35mm camera with full manual controls. There is a fee for class-related supplies.
This is a beginning level course for the novice photographer. A series of projects introduces students to an understanding of the black & white photographic process, camera capabilities, and beginning darkroom techniques. Students learn how to process and print film and how to improve their visual perception through individual assignments. Selected prints are matted for display, student exhibitions, and local contests.

Photography II (6120)
1st semester or Summer on the Hill; 3 credits
Prerequisite: Photography I. Students must furnish a digital DSLR or mirrorless camera. There is a fee for class-related supplies.
Photography II is an exploration of digital photography as an artistic expression utilizing the programs Photoshop and Nik Software. Assignments explore creative ways to solve problems in the digital darkroom and challenge the artist both creatively and technically. An introduction to studio lighting and creative control of exposure enhances the technical prowess of the artist. This course may be repeated for credit.

Advanced Photography (6130)
1st semester or Summer on the Hill; 3 credits
Prerequisite: Photography I. Students must furnish a digital DSLR or mirrorless camera. There is a fee for class-related supplies.
Advanced Photography is an exploration of digital photography as an artistic expression utilizing the programs Photoshop and Nik Software. Assignments include proposing and supporting an artist statement that is sustained throughout the latter half of the semester. Peer critiques, evaluations and weekly online artist postings are conducted throughout the semester. This course may be repeated for credit.

Chemistry of Photography (6140)
1st semester; 3 credits
Prerequisites: Photography I and Chemistry, Grades 11 & 12 or approval of Instructor. Students may enroll in this course for either Science 5340 or Fine Arts 6140 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 & white developer techniques, toning techniques, sabattier effects, and 19th century printing techniques. A final portfolio is produced along with a final project assessed on artistic and chemical understanding.

Abstract & Experimental Photography (6135)
Summer on the Hill only
Prerequisite: Photography I or Instructor approval. There is a fee for class related supplies.
Photography has been defined by the act of capturing a moment with time, light, and subject matter. This course delves deeper into redefining the process and manipulation of photographic materials, utilizing traditional and contemporary processes. Students explore the relationship between silver, light, metal, glass, and paper in addition to creating alternative toning methods, silver emulsion manipulation, and pinhole imagery. To receive credit, Upper School students are required to have 100% class attendance.

Honors Photography (6150)
Full year; 6 credits
Prerequisites: Photography I & II and either Advanced Photography OR Chemistry of Photography OR Abstract & Experimental. Instructor approval 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 portfolio, a custom-printed book, and an online account detailing the process of artistic intent. All aspects of 19th, 20th, and 21st century technologies are utilized and integrated. These include historical and alternative printmaking, 20th century silver gelatin, and further exploration of new digital media (19th–21st century integration). Alternative aspects of book art and collaborative work are highly encouraged. The AP Examination in 2D Visual Art is optional; however, it is not a core focus of the class.

Video Production (6510)
1st or 2nd semester or Summer on the Hill; 3 credits
Prerequisite: This course can be many things. We work in small groups to produce several short films in a semester. For the Middle School student who worked in a large group, this class allows you to be much more in charge of learning all aspects of film preproduction, production, and postproduction. For the film fan, this class gets your feet wet with a greater appreciation of the art form. For
the driven young filmmaker, this class starts to shape your skills and voice and 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. Prompts change from project to project and class to class, including animation projects. Students can take Video Production more than once if moving to the rigors of AVP isn’t an option.

**Advanced Video Production (6560)**
Yearlong; 6 credits
Class size limited to 26 students.
Prerequisite: US Video Production or Video Production: Animation and Instructor approval
Advanced Video Production (AVP) is a yearlong class for the student who wants a more rigorous class of filmmaking. 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, as well as preproduction and postproduction of shorts, field trips, and visiting artists. AVP films have been shown all over the state, nation, and world. AVP is a rigorous class and a strong family of makers.

**Tutorial in Advanced Studio Art (6910)**
1st or 2nd semester; 3 credits
Prerequisite: Students must have taken a beginning visual art course for a tutorial.
One-semester 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.

**Tutorial in Advanced Photography (6920)**
1st or 2nd semester; 3 credits
Prerequisite: Students must have taken a beginning photography course for a tutorial.
One-semester tutorials are available to advanced photography 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.

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**THEATER**

**Theater 101 (6310)**
1st semester; 3 credits
This survey course is an exploration of everything theater and designed to familiarize the student with all the exciting hands-on aspects of theater onstage and backstage. This course establishes a basic knowledge of theater terms and explores the power of this art form by taking students to professional live performances, as well as different projects such as stage/wound make-up, writing and performing a personal monologue, set building, stage combat/movement, lighting effects, and vocal work. At the end of this course, students have a deeper understanding of the art form and their potential place in it.

**Technical Theater (6320)**
1st or 2nd semester; 3 credits
A hands-on course based on the process of and innovative techniques of creating and manipulating scenery, properties, costumes, light, and sound to enhance the theatrical event. Workshop demonstrations and hands-on experience are featured and offer the community a project-based learning environment. This class can be repeated and tailored to the individual concentration and skill level of each student.

**Technical Theater Design & Production (6350)**
1st or 2nd semester; 3 credits
Prerequisite: Theatre 101 or Instructor approval
An in-depth course focusing on finding your vision as a designer and learning to communicate your designs as an artist and craftsman. In this course students dive into works from theater, dance, and visual art to develop their personal design style. Through discovery and creative freedom, students create their own designs and gain tools to communicate their ideas through research, sketches, visual renderings, light plots, and building models. This class can be repeated and tailored to offer real world design projects and possibly lead to designing main stage productions for Greenhill.

**Acting I (6330)**
1st semester; 3 credits
This course is for the beginning actor or those with acting experience solely in Middle School. The class focuses on developing the actor’s performance skillset in a low-risk, high-success environment with theater games, exercises, vocal work, and character/script analysis. Over the semester, students are introduced to preparation techniques and fundamental performance skills. Students develop and present monologue audition pieces and scenes that challenge them to create lively exciting characters. This course culminates in a final showcase of work.

**Acting II (6235)**
2nd semester; 3 credits
Prerequisite: Acting I or Instructor approval
This course may not be offered every year.
This course is for the experienced actor and focuses on various acting styles for stage and screen. Actors are challenged with scene work, movement, and improvisational acting. Work includes texts written for the stage, film, and television. Scene work is often video recorded for review and critique. A final showcase of work is performed for an invited audience.

**Introduction to Writing for Stage and Film (6360)**
1st semester; 3 credits
This practical course leads new and developing playwrights and screenwriters through the structures of theatrical and on-screen storytelling by experimenting with practical writing techniques. Students understand the use of physical space, create believable dramatic characters and dialogue, and build a strong plot structure through the principles of movement, action, and conflict. In addition to various short playwriting and screenwriting assignments, students complete a 10-minute play and a short film to be potentially used in AVP. The course culminates in a staged reading of student work.

**Student Directing: Directing and Acting (6370)**
2nd semester; 3 credits
Prerequisite: Acting I and/or Theater Company or Instructor approval
Formal applications of interested student directors are due in fall. This course includes developing a schedule, casting, speaking to actors, and producing for theater. Student actors undergo an audition process with the selected student director. Each director produces a one-act play for public performance.
Theater Company (6380)  
1st or 2nd semester, 3 credits  
Prerequisite: Instructor approval  
This course is for students interested in finding their voice and expressing it through theater. An immersive theater production course that encompasses acting, directing, design, playwriting, and stage management. It creates a completely self-sustaining student-run Greenhill Theater Company, focused on developing new student works, addressing the challenges of street and non-traditional theater. The course concludes with a showcase of the students’ work designed for Greenhill audiences.

Introduction to Improvisation (6340)  
1st or 2nd semester, 3 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. 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 can help to shape a culture and foster independence.

Tutorials in Advanced Drama (6930)  
1st semester, 3 credits  
Prerequisite: Acting I and/or Theater 101 or by permission of the Theater Director  
Tutorials are available to advanced drama students. Topics are to be jointly proposed in writing by the student and instructor, then must be approved by the Department Head and the Head of the Upper School.

THEATER PRODUCTIONS

Fall Musical Production (6450 FA or 8560 PE)  
Students may enroll in this course for either Fine Arts or Physical Education credit.  
1st semester; 3 credits (FA = Graded; PE = Pass/Fail)  
Prerequisite: By audition only!  
This course is designed for the student whose interests lie in musical theater performance. Every student is part of the ensemble, attends rehearsals and learns dances and songs in the production. Students also develop exciting characters suitable for the production with the emphasis on character development, technical proficiency (correct posture, alignment, breath) and performance quality (focus, style, and musicality). Auditions generally take place the first week of the first semester. This course culminates in a performance weekend where students will be showcased to the Greenhill community and beyond. Later in the year, the production travels to the ISAS Arts Festival.

Fall Technical Practicum: Tech Crew (6460)  
1st semester, 3 credits  
Prerequisite: Approval from Tech Director  
Tech Crew assists in the creation of sets, props, costumes, light and sound throughout the term during the production cycle of theatre and dance performances. Stage Managers and Assistant Stage Managers are also selected from the crew. During performances, tech crew members are responsible for running lights, sound, special effects, stage managing, facilitating costume changes, and moving set pieces and props. This rewarding yet time-intensive course culminates in producing all technical elements for an audience either in the Studio Theatre or Rose Hall.

Spring Play Production (6470)  
2nd semester; 3 credits  
Prerequisite: By audition only!  
Students may enroll in this course for Fine Arts credit. It is designed for students interested in developing and showcasing their performance skills performing non-musical theater production. Every student is part of the performing ensemble, attending rehearsals, learning lines and blocking, and creating lively exciting characters. Participation in an Acting I or Theater 101 class is strongly encouraged. Auditions generally take place during the first week of the second semester. This course culminates in a performance weekend for the Greenhill community and beyond. The production also travels to the ISAS Arts Festival.

SPEECH AND DEBATE

Introduction to Debate (6710)  
1st or 2nd semester; 3 credits  
Introduction to Debate is a one-semester entry level course for students who are new to Greenhill School, have limited Middle School debating experience, or have never debated before. This course surveys the formats of Lincoln-Douglas Debate, Policy Debate, and World Schools Debate over the semester. Students learn portable skills such as best practices in public speaking and critical thinking; learning to develop, defend, and respond to well-reasoned arguments; enhanced research skills; and collaboration and teamwork. Together these skills build a foundation for effective argumentation and advocacy, vital skills needed in an ever-changing world. Students should take this course in the first semester as the curriculum in the second semester builds on the concepts learned in the first semester. Students are encouraged to compete in interscholastic competitions throughout the Metroplex. Most students in this class are 9th graders, but any student who chooses to explore Debate could enroll in the class.

for more information please visit www.greenhill.org  
Greenhill School
Intermediate Debate (6720)
1st or 2nd semester; 3 credits
Prerequisite: Introduction to Debate or Instructor approval
This course builds upon the principles of Introduction to Debate by emphasizing the research component of argumentation, in addition to building on skills such as effective writing of arguments as well as enhancing delivery techniques to persuade audiences and judges in interscholastic competitions. Students, typically sophomores, take this course after taking Introduction to Debate, but any student who has the written permission of the instructor may take this course. Students in this class primarily focus on Policy Debate. Students in Intermediate Debate are required to attend a minimum of three interscholastic competitions per semester.

Advanced Debate (6740)
1st or 2nd semester; 3 credits
Prerequisite: Intermediate Debate or Instructor approval
This course, intended for students active in interscholastic competition, covers advanced concepts in Policy Debate. Each year the course material changes to correspond to the National High School Debate Resolution. This course may be repeated for credit.

Lincoln-Douglas Debate/World Schools Debate (6760)
1st or 2nd semester; 3 credits
This course examines the practice of contemporary Lincoln-Douglas and World Schools 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. The course may be repeated for credit. The minimum participation requirement for successful completion of this course is three tournaments per semester. Students of all grade levels may take this course with the approval of the Director of Debate.

Tutorial in Advanced Forensics (6940)
1st or 2nd semester; 3 credits
One-semester 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 Director of Debate and the Head of the Upper School.

MUSIC

Greenhill Singers (6410)
Full year; 6 credits
This course is an intermediate music course. It is a non-auditioned course and all are welcome. Singers perform an eclectic array of choral repertoire spanning many styles, periods, and traditions. It covers basic and advanced principles of musicianship, theory, vocal technique, performance and professionalism practices. Singers perform at various functions and concerts throughout the year. Students have the opportunity to compete in individual and interscholastic contests, such as all-region choir and all-state choir.

Greenhill Concert Band (6430)
Full year; 6 credits
The Greenhill Concert Band is a full instrumentation band, which performs a variety of music with a focus on the musicianship and ensemble playing. The band plays at various functions and interscholastic contests throughout the year. Students 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 (6420)
Full year; 6 credits
This course focuses on music from a wide range of styles with special emphasis on the standard repertoire for orchestra. Students are encouraged to form their own trios or quartets to pursue chamber music, earning extra credit for each semester in which they perform. Students are expected to progress in skill and musicianship through their participation in the Chamber Orchestra. Private lessons are not required but are highly encouraged. Participation is by audition and is open to students of intermediate to advanced ability.

Tutorial in Advanced Music (6950)
1st or 2nd semester; 3 credits
One-semester 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

Dance Technique (6445 FA or 8570 PE)
Students may enroll in this course for either Fine Arts or Physical Education credit.
2nd semester; 3 credits (FA = Graded; PE = Pass/Fail)
This course is designed to address the various aspects of dance technique, including correct posture, alignment, movement qualities, musicality, breath, and expression. Emphasis is placed on technical proficiency, performance quality, and stylistic variations between concert style dance (ballet, modern, and jazz). The class strives to increase coordination, strength, and flexibility, and a greater understanding and appreciation for the art of dance. Dance technique classes meet two to three times a week, one hour a day.

Greenhill Dance Company (6440 FA or 8570 PE)
Students may enroll in this course for either Fine Arts or Physical Education credit, and may change enrollment each semester depending on credit needs. Many students enroll in Dance Company all four years of Upper School.
Full year; 6 credits (FA = Graded; PE = Pass/Fail)
Prerequisite: By audition only
This is the dance performance group. This course is designed for the dance student whose interests lie in dance technique and performance. Emphasis is placed on technical proficiency, performance quality, and working as a vital member of the company. Students perform advanced movement sequences, participate in improvisation experiences, learn choreography, engage in class discussions and peer-to-peer critique sessions. For those who are interested, students also have the opportunity to choreograph. Company members 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.

Greenhill Jazz Band (6460)
1st or 2nd semester; 3 credits
Students in Intermediate Debate are required to attend a minimum of three interscholastic competitions per semester.

The class strives to increase coordination, strength, and flexibility, and a greater understanding and appreciation for the art of dance. Dance technique classes meet two to three times a week, one hour a day.

Greenhill Dance Company (6440 FA or 8570 PE)
Students may enroll in this course for either Fine Arts or Physical Education credit, and may change enrollment each semester depending on credit needs. Many students enroll in Dance Company all four years of Upper School.
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**PUBLICATIONS**

**Montage Literary Magazine: Publication Creation (6670)**
2nd semester; 3 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 semester club, this second semester 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 (6650)**
Full year; 6 credits
Students receive Fine Arts credit for the full-year course. No Fine Arts credit is awarded for one semester of participation. 

*Cavalcade* allows students to learn about all of the many essential elements that go into producing a publication from conception to finished product. Students work in teams on different sections of the book and create layouts centered on the ideas, graphics, typography, and design that the editor(s)-in-chief finalize based on group discussions at the beginning of the year. Areas of concentration include: team building; how to create an effective theme; writing for publication; typography and graphic design; effective caption writing; organization of the book; how to get the best coverage of an event, story, game, or activity; the interviewing process; email etiquette; and how to get the most out of photo ops. Instruction of InDesign, Photoshop, and Lightroom is a huge component of the course as these programs are used for the layout and design of the publication. At the end of the second semester, students can apply for leadership roles. These are decided by the editor(s)-in-chief after interviewing all applicants.

**Introduction to Journalism (6610)**
Full year; 6 credits
Note: Students receive Fine Arts credit for a full year of participation on the Evergreen staff. No Fine Arts credit is awarded for one semester of participation. This course supports and challenges students as they join the staff that produces the school newspaper, the *Evergreen*. Students learn the elements of journalism, focusing on the fundamentals of news gathering and writing. They recognize, evaluate, and write in various journalistic modes including news stories, in-depth features, sports articles, editorials, columns, reviews, and profiles. As they learn how to responsibly inform and represent the Greenhill community, students demonstrate comprehension of the goals and ethics of a student newspaper. They also consider which stories are best suited for print versus online or broadcast media.

**Advanced Journalism (6640)**
Full year; 6 credits
Prerequisite: Introduction to Journalism. Permission from instructor is required.
Note: Students receive Fine Arts credit for a full year of participation on the Evergreen staff. No Fine Arts credit is awarded for one semester of participation. This course is designed for students interested in deepening their involvement on the *Evergreen* staff. In addition to planning, writing, and editing articles, students assume more editorial responsibilities, including story selection, evaluation and feedback, headline and caption writing, and participation in staff policy decisions. They also learn the fundamentals of effective page design and how art and text work together to communicate meaning. Students who serve on the editorial staff must sign up for this course.

**History/Social Science**

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 semester 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. Prior to 2018–2019, freshmen took Atlantic Experience 9, and prior to 2019–2020, sophomores took Atlantic Experience 10. 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: Government in Action or 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, and guest speakers 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. 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

History/Social Science Courses

Yearlong Courses
Global History (4010)
U.S. History (4020)

1st Semester Courses
Government in Action (4110)
AP Government (4120)
Radicals and Extremists in U.S. History (4250)
Women's History (4280)
History of World Religions (4330)
Introduction to Sociology (4420)
Inner Light: Traditions and Paths of Meditation (4510)
Economics and Society (4610)
AP Microeconomics (4630)
Senior Seminar: Archival Research (4840)

2nd Semester Courses
Government in Action (4110)
Struggles for Independence (4210)
History of Human Rights in U.S. (4220)
Human Rights in the Modern World (4230)
Cold War: Global History and Politics (4240)
Understanding September 11 (4270)
Women's History (4280)
Genocide in the Modern World (4310)
History of World Religions (4330)
Modern Europe (4340)
Race and the American Political Tradition (4350)
Introduction to Sociology (4420)
Critical History of Psychology (4470)
Economics and Society (4610)
AP Macroeconomics (4620)

ELECTIVES

Juniors and seniors are encouraged to take electives that reflect their interests in history or social science. At least three credits of electives must be from a government course. Students satisfy their government credit by taking either Government in Action (4110, 3 credits) or AP Government (4120, 3 credits). Students may not take both government courses without departmental approval.

Government in Action (4110)
1st or 2nd semester or Summer on the Hill; 3 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 (4120)
1st semester; 3 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 Global History and U.S. History 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 1st semester course 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 interact with the environment and the world beyond.
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.

Struggles for Independence in the Non-Western World (4210)
2nd semester; 3 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 U.S. (4220)
2nd semester; 3 credits
This course may be taken for either English 1330 or History 4220 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 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 1950s–60s
- Contemporary LGBT Struggles

History of Human Rights in the Modern World (4230)
2nd semester; 3 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. Through 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.

The Cold War: Global History and Politics from 1945 to 1991 (4240)
2nd semester; 3 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.

Radicals and Extremists in U.S. History (4250)
1st semester; 3 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.

Understanding September 11 (4270)
2nd semester; 3 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 semester; 3 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.

Genocide in the Modern World (4310)
2nd semester; 3 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 propagated 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.

History of World Religions (4330)
1st or 2nd semester; 3 credits
The History of World Religions course provides the opportunity for students to gain an in-depth insight into the diversity of religions throughout the world. Throughout the semester students become familiar with the historical origins, central teachings, and practices of the history of world religions. The course stresses founding and normative principles; identifies similarities and differences of thought and practice among traditions; and explores the emergence of “religion” as a central component of the modern social order. Interpretive skills appropriate to religious studies are explored by researching historical events, constructing thesis-driven essays, analyzing and annotating primary sources, secondary sources, and maps.

Modern Europe (4340)
2nd semester; 3 credits
This course is designed to examine themes of modern Europe’s political, social, and cultural history. From the Renaissance to the formation of the European Union, wars, revolutions, social transformations, and conflicting ideologies are all milestones in the course of developments in Europe over the past five centuries. The course focuses on state building, empire building, industrialization and urbanization, the reemergence of nationalism, globalization and multiculturalism. We also look at how these larger developments affected people and individuals’ relationship with the state. Units of study include Renaissance and Reformation, Absolutism and Enlightenment, Revolution, Industrialization, Imperialism, Europe at War in the Twentieth Century, Cold War and Europe in the Union.

Race and the American Political Tradition (4350)
2nd semester; 3 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.

Introduction to Sociology (4420)
1st or 2nd semester; 3 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.

Critical History of Psychology (4470)
2nd semester; 3 credits
This course provides students with an introduction to psychology. It examines many different aspects of the discipline, beginning with a general overview, and then students take an in-depth look at various aspects of the discipline. Areas that are covered include how learning takes place, cognitive processes, personality, and abnormal psychology. Students are exposed to psychological research techniques, specialized vocabulary, and a wide variety of psychological techniques. In addition, students study the biological aspects of psychology and learn how the brain and nervous system help determine personality and persona. The course requires students to conduct some outside research and to research, design, and conduct some individual experiments in the field.

Inner Light: Traditions and Paths of Meditation (4510)
1st semester; 3 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.
Economics and Society (4610)
1st or 2nd semester or Summer on the Hill; 3 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. Students cannot take both Economics and Society and one of the Advanced Placement economics courses.

Advanced Placement Macroeconomics (4620)
2nd semester; 3 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. Students must take AP Microeconomics before taking Macroeconomics.
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 (4630)
1st semester, 3 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).

Senior Seminar: Archival Research (4840)
1st semester; 3 credits
Note: Seniors only; enrollment is limited to approximately 12. Interested students need to submit a 1–2-page statement of interest to Dr. Bresie.
At Greenhill we successfully produce students who know how to read history. This class is about uncovering history. In the department we teach through textbooks, articles, and some carefully curated primary sources. What we don’t do, however, is teach students how to do archival research, how to take information from disparate sources and create a unified argument. This course uses a school resource—our own archives—to teach these skills that most students do not get to explore until graduate school. It teaches how historians work in the field. In addition, it explores how the choices historians and museum curators make when they talk about the past matter. Books and museums are not neutral territory. The end product of the course is the creation of a museum exhibit telling the story of Greenhill and how it has reflected U.S. society over the past 70 years.

Tutorials in History/Social Science (4900)
1st or 2nd semester; 3 credits (Pass/Fail)

Advanced Tutorials in History/Social Science (4910)
1st or 2nd semester; 3 credits (Graded)
One-semester 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 and the Head of Upper School.

LEGACY CORE HISTORY COURSES

Atlantic Experience 9 (4005)
Full year; 6 credits
This course is a comparative study of Europe and the United States and explores the various political, economic, religious, and social links between these two regions. The goal of Atlantic Experience 9 is to develop a student’s understanding of the complex historical relationship between Europe and the United States and help shape the modern world in the period from 1492 to the 1860s. Some topics to be considered are the age of exploration and colonization; the development of a global economy; the rise of nation states; the emergence of new intellectual and artistic patterns; revolutions in America and France and their consequences; 19th century industrialization and geopolitical conflicts; and factors leading up to the American Civil War. The development of critical reading, writing, and analytical skills, as well as an appreciation for diversity, are emphasized. The research paper, a public speaking piece, and a final comprehensive geography test are requirements of the history department.

Atlantic Experience 10 (4045)
Full year; 6 credits
This course is a comparative study of Europe and the United States from the 1860s to the present. The goal of Atlantic Experience 10 is to further develop the student’s understanding of the interrelationship of European and American history, as well as the impact of these regions on broader patterns of world history. Topics include imperialism, the world wars, the rise of totalitarian dictatorships, the civil rights movement, the Cold War, and the September 11 attacks. Along with course content, key skills such as critical reading, analytical writing, text analysis, and research continue to be developed. An understanding of diversity and global cultures is also emphasized. In order to earn credit for this class, students must complete a research paper and pass a final geography assessment.
Integrated Studies

Wellness (7100)
1st or 2nd semester or Summer on the Hill; 3 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. Only Greenhill students in the Class of 2022 and Class of 2023 who have not yet taken Wellness may sign up for this course.

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 three consecutive years of mathematics in the Upper School, 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: Algebra II and Geometry, or with Precalculus or Calculus and Statistics. Students doubling in Algebra II and Geometry must maintain a B– average in both courses or they will be required to drop Algebra II and retake it the following year. 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 the curriculum.

Greenhill does not allow 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 (2110)
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, and other extended topics as time permits. These topics are taught using induction as a method of discovery, deduction, and formal proof with emphasis on logical thinking.

Honors Geometry (211H)
Full year; 6 credits
Prerequisite: Algebra I and faculty recommendation
This course includes all topics studied in Advanced Geometry, going into greater depth and with a more rigorous approach.

Algebra II (2210)
Full year; 6 credits
Prerequisite: Advanced Geometry and faculty recommendation
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, 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 (2220)
Full year; 6 credits
Prerequisite: Algebra I (with an average for the year of at least C–), Advanced Geometry or the Honors equivalent and faculty recommendation
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.

Honors Algebra II (222H)
Full year; 6 credits
Prerequisite: Algebra I, Advanced or Honors Geometry, and faculty recommendation
This course includes all topics studied in Advanced Algebra II, going into greater depth and with a more rigorous approach.

Precalculus (2310)
Full year; 6 credits
Prerequisite: Algebra II or Advanced Algebra II and faculty recommendation
This course covers the initial topics of Advanced Precalculus (2320) with a focus on functions and trigonometry. 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 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 (2320)**
Full year; 6 credits  
Prerequisite: Advanced or Honors Algebra II and faculty recommendation  
This course bridges the foundational material learned in Algebra II and the concepts needed in Calculus, with a focus of preparing students to be prepared for AP Calculus AB. Topics include general function concepts: 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. The course also 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. Finally, students learn elementary calculus concepts and other advanced topics including limits, sequences and series, parametric equations and vector equations. Many of these topics are prerequisites for a full-year college calculus course.

**Honors Precalculus (232H)**
Full year; 6 credits  
Prerequisite: Honors Algebra II and faculty recommendation  
This course covers all of the topics of Advanced Precalculus, going into greater depth and with a more rigorous approach. Additional topics include: relations defined parametrically, basic matrix theory, and partial fraction decomposition, polar curves, the complex plane, and DeMoivre’s Theorem. The course ends with an in-depth introduction to Calculus including a deeper 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 (2410)**
Full year; 6 credits  
Prerequisites: Precalculus or Advanced Precalculus 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 (2420)**
Full year; 6 credits  
Prerequisite: Advanced Precalculus or Honors Precalculus 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, in May.

**Advanced Placement Calculus BC (2430)**
Full year; 6 credits  
Prerequisite: Honors Precalculus 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, in May.

**Vector Calculus and Differential Equations (post-AP) (2450)**
Full year; 6 credits  
Prerequisite: AP Calculus BC and faculty recommendation  
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.

**Statistics (2510)**
1st semester; 3 credits  
Prerequisite: Precalculus or Advanced Precalculus (may be concurrent)  
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 or activity 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 (2520)**
Full year; 6 credits  
Prerequisite: Advanced Precalculus or the Honors equivalent  
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
emphasize in the course is on conceptually understanding fundamental ideas, the memorization of formulas is not a desired outcome. Consequently, students are given an extensive list of formulas and tables. The course 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, in May.

**Personal Finance (2810)**
1st or 2nd semester; 3 credits
Co-requisite: Algebra II or above

This one-semester course is project oriented. The larger project asks students to create a one-year budget from a randomly drawn scenario. The costs of leasing vs. buying a vehicle, gas and transportation, housing, utilities, 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 as well as accompanying assessments.

The second project involves analyzing three companies within an industry and determining which companies your client should invest. The students examine how to analyze stocks using ratio analysis, 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.

This class allows students to graduate more informed and prepared to understand and handle the financial responsibilities of being independent while in college and afterward.

**Mathematical Decision Making (2820)**
2nd semester; 3 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.

**Advanced Tutorial in Mathematics (2910)**
1st or 2nd semester; 3 credits

One-semester 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.

**Advanced Tutorial in Mathematics (2920)**
1st or 2nd semester; 3 credits (Graded)

One-semester 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.

**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 semester courses become available for students beyond the minimum requirement. While the semester 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 they interrupt the study of language for more than one semester.

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 through the three modes of communication: interpretive, interpersonal and presentational. The objective of the course is to develop and strengthen the grammatical components crucial to succeed in future honor courses. 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. It continues to strengthen the basic skills: listening, speaking, reading, and writing through the three modes of communication: interpretive, interpersonal, and presentational. Students expand their grammar and vocabulary through spontaneous conversational situations and planned oral presentations. In addition, students continue to build cultural awareness and personal responsibility skills throughout the course.

Honors Spanish III (313H)
Full year; 6 credits
Prerequisite: 312H or placement by exam and departmental recommendation
Honors Spanish III 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 through the three modes of communication: interpretive, interpersonal and presentational. 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.

Spanish IV (3140)
Full year; 6 credits
Prerequisite: Spanish 3130 with a minimum yearlong course grade of C– or placement by exam
Spanish IV is designed to review previously learned grammar concepts while taking the students’ fluency to a more advanced level of oral and written expression through the three modes of communication: interpretive, interpersonal, and presentational. This course focuses on the culture and daily activities of Spain, Mexico, and Central and South America, and introduces 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. In addition, students continue to build cultural awareness and personal responsibility skills throughout the course.

Spanish V: Readings in Mexican History (3150)
1st semester; 3 credits
Prerequisite: Spanish 3140 or 3170; it may be taken concurrently with 3180. This course requires considerable competency in Spanish.
This course seeks to strengthen a student’s proficiency of Spanish through the social, cultural, and political developments in Mexico throughout the 19th and 20th centuries. Students explore a journey through the history of the Independence Movement in Mexico and reflect upon the national and international conflicts that took place for Mexico to be recognized as a new, independent country. Students also explore the presidential term in which Porfirio Diaz 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 21st century. In order to enhance their Spanish through a historical context, students apply the four language skills: listening, reading, speaking, and writing through three modes of communication: interpretive, interpersonal, and presentational. The course is taught entirely in Spanish, and it requires extensive reading and exposure to various digital media.

Spanish V: Composition and Culture (3160)
2nd semester; 3 credits
Prerequisite: Spanish 3140 or 3170; it may be taken concurrently with 3180. This course requires considerable competency in Spanish.
In this course students focus on different forms of creative writing by reading examples from influential authors of the Spanish-speaking world. Students then use the styles of these authors as models for original essays, short stories, poetry, and comics. Students explore contemporary cultural topics in the Hispanic world such as art, history, identity, politics, and pop culture. Students are expected to enhance their four language skills: listening, reading, speaking, and writing through three modes of communication: interpretive, interpersonal, and presentational. The course is taught entirely in Spanish, and it requires extensive reading and exposure to various digital media.
Advanced Placement Spanish Language and Culture (3170)
Full year; 6 credits
Prerequisite: Spanish 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.

Honors Spanish Literature (post-AP) (3180)
Full year; 6 credits
Prerequisite: Spanish 3170 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
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)
Full year; 6 credits
Prerequisite: Latin 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: Latin 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: Latin 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 Placement Latin (3250)
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.

Advanced Latin Literature (3260)
1st or 2nd semester; 3 credits
Prerequisite: Latin 3240 with a minimum yearlong course grade of C– or placement by exam and departmental recommendation
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.

Honors Latin Seminar (post-AP) (3280)
Full year; 6 credits
Prerequisite: 3250 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: Chinese 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: Chinese 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: Chinese 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: Chinese 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 (3480)**
Full year; 6 credits
Prerequisite: Chinese 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.
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 6 credits of physical education in the 9th and 10th grades. In the 11th and 12th grades, students must complete 3 credits of physical education. 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 semester (unless prior approval has been granted by department chair). It is recommended that students vary their physical education selection by taking a different course each semester.

Note: Foundations of Lifetime Fitness is the course that lays the foundation for many of the other courses in the physical education program. Students participating on Greenhill Athletics teams for four seasons in 9th/10th grades will receive this foundational information through their work with our HPC staff during those seasons. Students not completing their physical education requirement by completing four seasons on a Greenhill Athletics team in 9th/10th grade will be required to take Foundation of Lifetime Fitness. Students may take Yoga, Ultimate Frisbee, or Group Fitness prior to taking Foundations of Lifetime Fitness as long as Foundations of Lifetime Fitness is taken during the next semester in that school year.

Foundations of Lifetime Fitness (8010)
1st or 2nd semester; 3 credits (Pass/Fail)
This course is designed to introduce students to the knowledge and skills that are necessary to build a lifelong balanced approach to fitness and wellness. Throughout the course, students gain an understanding of the components of health-related fitness, learn safe techniques, participate in fitness assessments, learn a variety of effective training principles, develop effective goal setting strategies, and explore the psychological benefits of exercise. It is the goal of the course to help students begin to create fitness habits to support them in maintaining a healthy lifestyle.

Ultimate Frisbee (8020)
After school; 1st or 2nd semester; 3 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. It 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 (8030)
1st or 2nd semester; 3 credits (Pass/Fail)
Prerequisite: Foundations of Lifetime Fitness or 4 seasons of a Greenhill Athletics team
This course is designed to be an enjoyable, challenging, easy to follow workout program for students of all abilities. Students participate in a program designed by the High-Performance staff. This course builds upon skills learned in Foundations to Lifetime Fitness. Workouts include elements of cardio, strength, core, and flexibility training. 9th/10th: must take this course as a scheduled course. 11th/12th: may take Workout Challenge Unscheduled, meaning it is not scheduled during a class period.
Yoga (8040)
Before/After School; 1st or 2nd semester; 3 credits (Pass/Fail)
Class size is limited to 36 students.

Beyond being a physical system of exercise, yoga is a discipline, a philosophy, and a way of life. Through yoga we become clearer of mind, stronger of body, and more peaceful at heart. We learn breathing practices, physical postures, and flowing sequences that bring body and mind into alignment.

Total Body Fitness (8050)
1st or 2nd semester; 3 credits (Pass/Fail)
Prerequisite: Foundations of Lifetime Fitness or 4 seasons of a Greenhill Athletics team

This course is designed for self-motivated students who are ready to implement a personal fitness plan. Students are responsible for reaching their fitness goals on their own time. Workouts may be conducted on campus, or a student can set up a plan to complete the program off campus. Students are monitored by an instructor but are responsible for maintaining a complete fitness portfolio including workout logs, food journals, activity monitor reports, and pre- and post-fitness tests. Students must be willing to supply the necessary activity monitoring devices. This course will require multiple orientation sessions prior to beginning the individualized program.

Group Fitness (8060)
1st or 2nd semester; 3 credits (Pass/Fail)

This course helps students face the challenge of finding enjoyable and effective ways to exercise while improving their quality of life. Students learn basic moves, principles, and etiquette of group fitness while physically challenging themselves to meet and conquer current fitness goals. Group fitness topics vary but may include activities such as step aerobics, pilates, kickboxing, cardio dance, zumba, and modified group power.

Dance Technique (8510 PE or 6445 FA)
Students may enroll in this course for either Physical Education or Fine Arts credit.
2nd semester; 3 credits (PE = Pass/Fail; FA = Graded)

This course is designed to address the various aspects of dance technique, including correct posture, alignment, movement qualities, musicality, breath, and expression. Emphasis is on technical proficiency, performance quality, and stylistic variations between concert style dance (ballet, modern, and jazz).

The class strives to increase coordination, strength, and flexibility, and a greater understanding and appreciation for the art of dance. Dance technique classes meet two to three times a week, one hour a day.

Musical Dance Class (8560 PE or 6450 FA)
Students may enroll in this course for either Physical Education or Fine Arts credit.
1st semester; 3 credits (PE = Pass/Fail; FA = Graded)
Prerequisite: By audition only

This course is for the student whose interests lie in musical theater performance. Students learn dances to be performed in the Musical production with the emphasis on character development, technical proficiency (correct posture, alignment, breath), and performance quality (focus, style, and musicality).

Greenhill Dance Company (8570 PE or 6440 FA)
Students may enroll in this course for either Physical Education or Fine Arts credit, and may change enrollment each semester depending on credit needs. Many students enroll in Dance Company all four years of Upper School.

Full year; 6 credits (PE = Pass/Fail; FA = Graded)
Prerequisite: By audition only

This is the dance performance group. This course is designed for the dance student whose interests lie in dance technique and performance. Emphasis is placed on technical proficiency, performance quality, and working as a vital member of the company. Students perform advanced movement sequences, participate in improvisation experiences, learn the choreography, engage in class discussions and peer-to-peer critique sessions. For those that are interested, students also have the opportunity to choreograph. Company members also engage in various aspects of production and promotion for dance performances, including the ISAS Fine Arts Festival and the Greenhill Dance Company spring dance concert.

Athletics Tutorials (8900)
1st or 2nd semester; 3 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 or 2nd semester; 3 credits (Pass/Fail)

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).

Student Athletic Training Aide (8610)
1st or 2nd semester; 3 credits (Pass/Fail)

Prerequisite: Must receive prior approval of the Head Athletic Trainer

The Student Athletic Training Aide 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.
The following teams represent Greenhill

**FALL**
- Boys: 8100 Cross Country, 8120 Football, 8140 Volleyball, 8400 Cheerleading
- Girls: 8110 Cross Country, 8130 Field Hockey, 8150 Volleyball, 8400 Cheerleading

**WINTER**
- Boys: 8200 Basketball, 8220 Soccer, 8250 Swimming, 8400 Cheerleading
- Girls: 8210 Basketball, 8230 Soccer, 8250 Swimming, 8400 Cheerleading

**SPRING**
- Boys: 8300 Baseball, 8320 Golf, 8340 Lacrosse, 8360 Tennis, 8380 Track
- Girls: 8310 Softball, 8330 Golf, 8350 Lacrosse, 8370 Tennis, 8390 Track

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**Science**

**LAB SCIENCES**

**Advanced Chemistry (5320)**
- Full year; 6 credits
- Prerequisite: 9th Grade Physics

Advanced Chemistry comprises a study of the many areas of general chemistry, focusing both on those foundational areas necessary to understand modern biology and advanced topics necessary to succeed in a follow-on AP course in biology or chemistry. The character of this course is lab-centered, inquiry-based, and challenging. The process of science and the acquisition of essential facts are covered implicitly, and students are expected to integrate conceptual aspects from all disciplines of science while achieving an advanced chemistry experience. Specific topics include atomic and molecular structure, intermolecular forces, particulate understanding of matter, systems-based approach to chemical reactions and thermodynamics. Learning progression is assessed using a standards-based, or competency-based, model that is currently being used in several Upper School courses, at our online partner school the Global Online Academy, and in many progressive independent institutions across the nation.

**Honors Chemistry (532H)**
- Full year; 6 credits
- Prerequisite: 9th Grade Physics and departmental approval

Honors Chemistry is an introductory course in chemistry delivered at an accelerated pace. The course comprises a study of the many areas of general chemistry, focusing both on those foundational areas necessary to understand modern biology and advanced topics necessary to succeed in a follow-on AP course in biology or chemistry. The character of this course is lab-centered, inquiry-based, in-depth and fast-paced. The process of science and the acquisition of essential facts are covered implicitly, and students are expected to integrate conceptual aspects from all disciplines of science while achieving an honors chemistry experience. Specific topics include atomic and molecular structure, intermolecular forces, particulate understanding of matter, systems-based approach to chemical reactions, kinetics, equilibrium, and thermodynamics. Learning progression is assessed using a standards-based, or competency-based, model that is currently being used in our Greenhill Middle School courses: Class of 2023 & 2024

**Physics (5410): 9th Grade**
- 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. Specific topics include motion, momentum and force in one dimension, energy, electric force and energy, mechanical waves, and models of light. 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 courses: Classes of 2021 & 2022

**9th Grade:**
- Chemistry or Advanced Chemistry

**10th Grade:**
- Biology or Advanced Biology

**11th Grade:**
- Physics I: Mechanics AND Physics II
- OR
- AP Physics I

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**Minimum requirements for Science courses:**

**9th Grade:**
- Physics

**10th Grade:**
- Chemistry

**11th & 12th Grades:**
- Biology
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.

**Physics I: Mechanics (5420): 11th Grade**
1st semester; 3 credits
Prerequisites: Biology and Chemistry
Note: Cannot be taken for credit after AP Physics
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. Specific topics include motion, momentum and force in one and two dimensions, mechanical energy, and projectile motion.

**Physics II: Astronomy (5435)**
2nd semester; 3 credits
Prerequisite: Physics I
This is a descriptive, survey course studying our struggle to comprehend the universe. It begins with an extension of the Physics I topics to celestial motion as described using Kepler’s Laws and Newton’s Law of Universal Gravitation. Additional topics covered include changing skies, constellations, the solar system, astronomical tools, strange and distant celestial phenomena, extraterrestrial life, and cosmological theories.

**Physics II: Electricity (5450)**
2nd semester; 3 credits
Prerequisite: Physics I
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.

**Physics II: Biophysics (5455)**
2nd semester; 3 credits
Prerequisite: Physics I
Biophysics is the branch of physics that applies the principles and methods of physics to study biological systems. Biophysics is rapidly becoming one of the most important frontiers of basic research and already has an enormous impact on our daily lives and on the environment. This includes, for example, using and developing tools from physics to study biological systems, such as Medical Imaging, Structural Biology (examining proteins in 3D), Single Molecule Biophysics (examining intact cells in their environment, real time). The focus of this course is to study life from the molecular scale to cells. The ultimate goal is to computationally describe the dynamics of how neurons and muscle cells work, and apply cutting-edge technology to find out how biological systems function on the most detailed level.

**SCIENCE ELECTIVES**

**Biochemistry (post-AP) (5230)**
1st semester; 3 credits
Prerequisites: AP Biology or AP Chemistry and departmental approval
Biochemistry is a field that encompasses a broad range of scientific queries and serves as a foundation for numerous careers in the field of biomedicine. It is both life science and chemical science and explores the chemistry of living organisms and the molecular basis for the changes occurring in living cells. 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 learn the rationale for how an organism functions on a molecular level. Students are expected to apply theoretical knowledge gained during discussions, instructor guided and inquiry-based laboratory activities, and critical readings of scientific literature toward application of efforts on novel projects involving the expression, isolation, and characterization of proteins.

**Biotechnology Lab Techniques (5240)**
1st semester; 3 credits
Prerequisites: Chemistry and Biology
Biotechnology is the use of biological processes, organisms, or systems to manufacture products intended to improve the quality of human life. Society is facing physical and biological problems of global proportions. How will we continue to get sufficient energy? How can we feed the world’s population? How do we remediate global warming? How do we preserve biological diversity? How do we secure clean and plentiful water? These are crises that require scientific insight and innovation. Biotechnology provides valuable insight and technologies for meeting these challenges. This semester-long elective course involves the application of biology toward solving problems. Many disciplines, including medical research, bioinformatics, bioengineering, agriculture, and environmental sciences routinely draw upon biotechnological tools to treat sickness, develop sustainable industries, address hunger, and decontaminate waste, etc. Much of the work that goes into solving these problems involves the application of modern molecular biological and microbial techniques. This biotechnology course stresses the development of good laboratory techniques and skills through the application of different laboratory activities, while also understanding and applying theoretical and supplemental information developed during class discussions. The focus of the curriculum is to enhance student knowledge of theoretical and practical applications involved with basic work with microbes, bioengineering, and biomediation. Through this process, students become familiar with and are able to apply good laboratory practices toward any potential future biotechnology problem.

**Human Reproductive Biology (5250)**
2nd semester; 3 credits
Prerequisite: Chemistry and Biology
Human Reproductive Biology continues students’ familiarization with their reproductive biology, personal development, and their expression. Providing greater depth and exploration of topics presented in other areas, students examine the evolution of sexual reproduction; hormone regulation of living systems; sexual anatomy, development, and diversity; sexual activity; pregnancy and childbirth; embryonic development; puberty; fertility, contraception, and sexually transmitted infections; and other topics that explore and represent the variety of human sexuality.
Chemistry of Photography (5340)
1st semester; 3 credits
Prerequisites: Basic Photography and Introductory Chemistry, Grades 11 & 12 or instructor’s approval
This course may be taken for either Fine Arts 6140 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 (5350)
2nd semester; 3 credits
Prerequisite: 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.

Science and Sustainability (5530)
2nd semester; 3 credits
Prerequisites: 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-semester course that quantitatively and qualitatively 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, project-based learning, and design-based inquiry.

Climate Science (5550)
1st semester; 3 credits
Prerequisite: Chemistry and Biology
The objectives of the course include using effective claim-evidence-reasoning argumentation to clarify concepts related to climate science and anthropogenic climate change. The course examines essential questions such as: What is climate change? What is Earth’s energy budget? What role do greenhouse gases play in determining climate? What impacts does climate change have on physical systems? What are the consequences of climate change on living systems and adaptations? What is the current scientific consensus and how has the climate change debate progressed in the scientific, public, and political arenas? What are climate change mitigation strategies, and how effective might they be? Essential skills that are assessed through the course include: explaining climate concepts, processes, and models presented in written format; analyzing visual representations of climate concepts and processes; determining scientific questions and methods; representing and describing data; performing statistical tests and mathematical calculations to analyze and interpret data; and developing and justifying scientific arguments using evidence.

Advanced Tutorials in Science (5910)
1st or 2nd semester; 3 credits (Pass/Fail)

Advanced Tutorials in Science (5920)
1st or 2nd semester; 3 credits (Graded)
One-semester 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 PLACEMENT ELECTIVE COURSES

Advanced Placement Biology (5290)
Full year; 6 credits
Prerequisites: Chemistry, Biology, Physics 5420 (may be concurrent), and departmental approval
This is a rigorous one-year college-level biology program culminating in the AP examination. Course work includes laboratory and independent projects. Students perform an extensive series of laboratory investigations as specified by the College Board. Students taking this course are expected to complete a series of summer assignments to review basic chemistry and biology concepts they may not have considered for several years. Credit for two semesters of biology is typically awarded by colleges for a qualifying AP exam score.

Advanced Placement Chemistry (5390)
Full year; 6 credits
Prerequisites: Chemistry, Biology, Physics 5420 (may be concurrent), Algebra II, and departmental approval
Note: The AP Examination in Chemistry is required. AP Chemistry covers all topics studied in a typical, one-year, college-level chemistry course. The course has an intensive lab component. Students taking this course are expected to complete a series of summer assignments to review basic chemistry concepts they may not have considered for several years. Credit for two semesters of chemistry is typically awarded by colleges for a qualifying AP exam score.

Advanced Placement Physics I (5470)
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.
Advanced Placement Physics II (5480)
Full year; 6 credits
Prerequisites: Physics; Precalculus or Honors Algebra II (may be concurrent), and departmental approval
Note: The AP Examination in Physics II is required. This course provides a study of fluid mechanics, thermodynamics, electricity and magnetism, optics, and elementary modern physics. Group collaboration, critical thinking, problem solving, and scientific inquiry and communication skills are stressed. Credit for the second semester of college physics is typically awarded by colleges for a qualifying AP exam score. This course of advanced physics study is most appropriate for students interested in a medical or life science major in college.

Advanced Placement Physics C (5490)
Full year; 6 credits
Prerequisites: AP Physics I 5470 OR Physics II 5430 and Physics III: Electricity 5450; AP Calculus AB or BC (may be concurrent); and departmental approval
Note: The AP Examinations in both Physics C-Mechanics and Physics C-Electricity & Magnetism are required.
This is a college-level physics course for students intending to pursue advanced study in physics, chemistry, or engineering. It includes an in-depth study of mechanics as well as electricity and magnetism at a mathematical level that requires the use of calculus. There is a significant laboratory component to the course and it moves at a brisk pace. Credit for one semester of engineering physics is typically awarded by colleges for each qualifying AP exam score. This course of advanced physics study is most appropriate for students interested in an engineering or physical science major in college.

Advanced Placement Environmental Science (5590)
Full year; 6 credits
Prerequisites: Chemistry, Biology, Physics (may be concurrent), Algebra II, and departmental approval
Note: The AP Examination in Environmental Science is required.
Dynamic processes operating on a timescale of milliseconds to millennia to millions of years shape the landscape and ecosystems that we experience every day. Perhaps the two most compelling revelations in environmental and earth science are: 1) these processes are intricately connected, and 2) we, as humans, have a unique ability to impact these unlike any other species. Understanding environmental systems begins with a broad understanding of biology, chemistry, physics, geology, and ecology and how these disciplines interconnect. In addition, there is great social, political, and economic significance to the appreciation of environmental dynamics over the past century. This college-level course gives students a solid, quantitative background in addressing environmental issues and affords students the opportunity to wrestle with the monumental task of deciding what to do about it.

LEY CORE SCIENCE COURSES

Chemistry (5305)
Full year; 6 credits
Chemistry is one of two introductory course options in Upper School science. This course comprises a study of the basic topics in general chemistry, focusing most carefully on those areas necessary to understand modern biology, which is the next required course in the Upper School science sequence. A lab-centered and inquiry-based course, students review foundational science topics while incorporating computational skills developed at the level of Algebra I.

Advanced Chemistry (5300)
Full year; 6 credits
Advanced Chemistry is one of two introductory course options in Upper School science. The course comprises a study of the many areas of general chemistry, focusing both on those foundational areas necessary to understand modern biology as well as advanced topics necessary to succeed in a follow-on AP course in biology or chemistry. The character of this course is lab-centered, inquiry-based, and fast-paced. The process of science and the acquisition of essential facts are covered implicitly, and students are expected to integrate conceptual aspects from all disciplines of science while achieving an advanced chemistry experience.

Biology (5205)
Full year; 6 credits
Prerequisite: Chemistry
Biology is an introductory life science course, aimed to build upon topics learned in the first and second-year Physics and Chemistry courses, respectively. Biology prepares students for an understanding of how the natural world works, from an explanation of antibiotic resistance to a description of mammalian systems. Other topics include evolution as a unifying theme, biochemistry, cells, genetics, and ecology. 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.

Advanced Biology (5200)
Full year; 6 credits
Prerequisite: Chemistry and departmental approval
Advanced Biology serves to continue a student’s growing sophistication in modern sciences by building upon core concepts presented in Greenhill’s freshman and sophomore Physics and Chemistry courses. 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.
Senior Projects

### Senior Projects (7500)

**2nd semester; 3 credits**

Senior projects are offered during the last part of the second semester 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 12th Grade Dean in conjunction with the Director of Service-Learning & Community Service and the Director of Alumni Relations.

### 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 on February 4 at [www.greenhill.org/summer](http://www.greenhill.org/summer).**

Please note: Greenhill does not accept summer work from other programs or schools.

**Abstract & Experimental Photography**

For credit: Course 6135; Grades 9–12; Weeks 2–4
Prerequisite: Photography I 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, chemigrams, solargraphs, alternative toning methods, silver emulsion, and pinhole imagery.

To receive credit, Upper School students are required to have 100% class attendance.

**Photography II**

For credit: Course 6120; Grades 9–12; Weeks 2–4
Prerequisite: Photography I. Students must furnish a digital DSLR or mirrorless camera. There is a fee for class-related supplies.

Class size is limited to 16 students.

To receive credit, students are required to have 100% of class attendance.

Photography II is an exploration of digital photography as an artistic expression utilizing the programs Photoshop and Nik Software. Assignments explore creative ways to solve problems in the digital darkroom and challenge the artist both creatively and technically. An introduction to studio lighting and creative control of exposure enhances the technical prowess of the artist.

**Advanced Photography**

For credit: Course 6130; Grades 9–12; Weeks 2–4
Prerequisite: Photography I. Students must furnish a digital DSLR or mirrorless camera. There is a fee for class-related supplies.

Class size is limited to 16 students.

To receive credit, students are required to have 100% of class attendance.

Advanced Photography is an exploration of digital photography as an artistic expression utilizing the programs Photoshop and Nik Software. Advanced assignments include proposing and supporting an artist statement that is sustained throughout the latter half of the course. Peer critiques, evaluations and weekly online artist postings are conducted throughout the course.

**Economics & Society**

For credit: Course 4610; Grades 11–12; Weeks 5–7

To receive credit, students are required to have 100% class attendance.

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.

**Government in Action**

For credit: Course 4110; Grades 11–12; Weeks 2–4

To receive credit, students are required to have 100% class attendance.

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.

**Introduction to Comp Science: Engineering I**
For credit: Course 9110; Grades 10–12; Weeks 2–4
To receive credit, students are required to have 100% class attendance.
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!

**Mathematical Decision Making: Problem Solving**
For credit: Course 2820; Grades 10–12; Weeks 2–3
Prerequisite: Geometry and Algebra II
To receive credit, Upper School students are required to have 100% of class attendance.
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.

**Video Production**
For credit: Course 6510 or for enrichment; Grades 9–12; Weeks 2–3
To receive credit, Upper School students are required to attend both weeks and have 100% class attendance.
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 stopmotion 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!

**Wellness**
For credit: Course 7100; Students in Class of 2022 and Class of 2023 who have not yet taken Wellness. Weeks 2–3, 6–7, 9–10, 11–12
To receive credit, students are required to have 100% class attendance. Additional options are available during the 2020–2021 academic year. Athletes: Two-a-day practices will be held August 5–9. Practices will not interfere with the August class. 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 in the Class of 2022 and Class of 2023 who have not yet taken Wellness may take this course to fulfill the Upper School graduation requirement for Wellness, subject to Upper School approval. Students in the Class of 2024 will receive their Wellness credit through a series of classes throughout the 2020–2021 academic year.

**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 classes 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. (For select courses, Department Chair approval is also needed.)

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.
Global Online Academy

Computer Science
All courses labeled Computer Science count toward the graduation requirement.

Fine Arts
Courses labeled Fine Art count toward the graduation requirement and are applied to the year the course is taken (junior or senior).

History and Social Science
Courses labeled History and Social Science count toward 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 elective science.

Integrated Studies
These classes count toward general graduation credits but do not satisfy any specific graduation requirement of any one department.

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. Students should expect to commit a minimum of 5 to 7 hours a week (or more) to a single GOA class.

GOA courses must be part of a student’s daily schedule and cannot exceed Greenhill’s definition of a full schedule of 7 academic classes and 1 afterschool course/activity. It is recommended that students schedule a GOA course in lieu of a free period and utilize the designated time to work on their GOA class as if it were a Greenhill class meeting on campus.

Students earn 3 credits for each semester class taken.

Global Online Academy Academic Calendar 2020–2021

Summer 2020 dates: June 15–July 31, 2020
These 7-week summer courses may be taken by Greenhill students for credit. Summer courses are exempt from the 50% tuition coverage Greenhill provides during the school year.

- 9/11 in a Global Context
- Abnormal Psychology
- Business Problem Solving
- Computer Science I: Computational Thinking
- Computer Science II: JAVA
- Creative Nonfiction
- Fiction Writing
- Genocide & Human Rights
- Geometry
- Introduction to Investments
- Introduction to Psychology
- Medical Problem Solving I
- Microeconomics
- Number Theory
- Race & Society
- Spanish Language Through Culture I

Semester 1 dates: September 2–December 18, 2020
Semester 2 dates: January 13–April 30, 2021, and January 13–April 30, 2021

Important note: Students should follow Greenhill add/drop deadlines as these take priority for scheduling and transcript purposes.

Semester 1
August 17, 2020 . . . . . . . . . . . . . . . . . . . Semester 1 and yearlong course welcome pages published for students
August 19–September 2 . . . . . . Synchronous teacher/student pre-course conversations. These are important (ungraded) initial conversations between teachers and students.
September 2 . . . . . . . . . . . . . . . . . . . Semester 1 and yearlong courses open
September 11 (5 pm PST) . . . Last day to ADD a GOA course (and DROP with no financial penalty)
September 18 (5 pm PST) . . . Last day to DROP a GOA course
October 23 . . . . . . . . . . . . . . . . . . . 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.
December 6 . . . . . . . . . . . . . . . . . . . Course Catalog for 2021–2022 is published, along with 2021–2022 Academic Calendar
December 18 . . . . . . . . . . . . . . . . . Semester 1 ends (end of Grading Period 2)
January 8, 2021 . . . . . . . . . . . . . . . . . Semester 1 Grade Reports distributed

Semester 2
December 11, 2020 . . . . . . . . . . . . . . . . . Semester 2 course welcome pages published for students
January 4–13, 2021 . . . . . . Synchronous teacher/student conversations for Semester 2 courses. These are important (ungraded) initial conversations between teachers and students.
January 13 . . . . . . . . . . . . . . . . . . . Semester 2 courses open (yearlong courses resume)
January 22 (5 pm PST) . . . . Last day to ADD a Semester 2 GOA course (and last day to DROP with no financial penalty)
January 29 (5 pm PST) . . . Last day to DROP a Semester 2 GOA course
March 5 . . . . . . . . . . . . . . . . . . . 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 31 . . . . . . . . . . . . . . . . . . . Enrollment opens at 00:00 UTC (7:00 pm CDT on March 30)
April 22–26 . . . . . . . . . . . . . . . . . . . Catalyst Conference
April 30 . . . . . . . . . . . . . . . . . . . Semester 2 ends; end of Grading Periods 2 (semester) and 4 (yearlong)
May 14 . . . . . . . . . . . . . . . . . . . Grade Reports distributed
YEARLONG COURSES

GOA World Language courses seek to awaken student interest in language and culture through an approach that is at once rigorous and modern. With the exception of our new summer Spanish class, the courses are all yearlong, competency-based classes in which students are given considerable autonomy to progress through language acquisition modules and demonstrate mastery to their teachers as their skills develop. Our competencies and learning outcomes for these courses are adapted from ACTFL’s “can-do” statements. Our students typically achieve Novice proficiency by the end of a level I course, Intermediate proficiency by the end of level II and Intermediate High/Advanced Low proficiency by the end of level III. While our courses teach all four language skills, they place particular emphasis on interpersonal communication (as opposed to more presentational modes of communication). 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 native speakers of the target language. Students in these courses connect with one another frequently to discuss their language learning process and to take deep dives into the culture and history of the languages that they are studying.

Beginning in the 2020–2021 school year, Arabic I & II students will share a Canvas space—allowing for differentiated levels of language instruction and practice within a larger community for cultural exchange and discussions. The same is true for Arabic II & III. Level I students in Arabic, Japanese, and Spanish will be in Canvas courses with only level I students.

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).

Japanese Language through 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 every two to three weeks. The ultimate goal of this course is to raise awareness and appreciation of different cultures through learning the basics of the Japanese language. The focus of this course is 60 percent on language and 40 percent on culture. This course is appropriate for beginner-level students.

Japanese Language through 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.

Multivariable Calculus
Full year; 6 credits. Department: Mathematics
Prerequisite: The equivalent of a college year of single-variable calculus, including integration techniques, such as trigonometric substitution, integration by parts, and partial fractions. The AP Calculus BC curriculum with a score of 4 or 5 on the AP Exam would be considered adequate preparation.
In this course, students learn to differentiate and integrate functions of several variables. We extend the Fundamental Theorem of Calculus to multiple dimensions and the course culminates in Green’s, Stokes’, and Gauss’ Theorems. The course opens with a unit on vectors, which introduces students to this critical component of advanced calculus. We then move on to study partial derivatives, double and triple integrals, and vector calculus in both two and three dimensions. Students are expected to develop fluency with vector and matrix operations. Understanding parametric curve as a trajectory described by a position vector is an essential concept, and this allows us to break free from one-dimensional calculus and investigate paths, velocities, and other applications of science that exist in three-dimensional space. We study derivatives in multiple dimensions and use the ideas of the gradient and partial derivatives to explore optimization problems with multiple variables as well as consider constrained optimization problems using Lagrangians. After our study of differentials in multiple dimensions, we move to integral calculus. We use line and surface integrals to calculate physical quantities especially relevant to mechanics, electricity, and magnetism, such as work and flux. We employ volume integrals for calculations of mass and moments of inertia and conclude with the major theorems (Green’s, Stokes’, Gauss’) of the course, applying each to some physical applications that commonly appear in calculus-based physics.

SUMMER COURSES

Geometry
Summer; 6 credits. Department: Mathematics
Prerequisite: Algebra I and Department Chair approval.
This intensive summer course is designed to provide an accelerated path through the traditional high school geometry curriculum. Focusing on Euclidian geometry, students examine topics relating to parallel lines, similar and congruent triangles, quadrilaterals, polygons, and circles. Students can expect to analyze lengths, areas, and volumes of two- and three-dimensional figures, and explore transformations and other manipulations. Particular attention is paid to introductory trigonometry with right triangles and the study of circles (radians, sectors, arc length, etc.). In addition, the development of a mature, logical thought process begins through a formal introduction to arguments, deductions, theorems, and proofs. Because this course covers topics that are typically presented in a yearlong course, students should expect to dedicate 15–20 hours per week during the intensive 7-week summer session.

Spanish Language through Culture I
Summer; 6 credits
Department: Modern and Classical Languages
Prerequisite: Permission from MCL Department Chair
This intensive summer course gives students with no prior exposure to Spanish the vocabulary, grammatical background, and communicative skills that they need to jump into Spanish 2 at their schools. Students master greetings and introductions, daily routines, likes and dislikes, numbers, telling time, question formation, and other fundamental communicative functions. Students learn to communicate using common regular and irregular verbs in the present tense and the immediate future with ir. Students also develop a broad-based vocabulary related to common settings including school and the classroom, home and family life, and others. The primary focus of the course is to develop novice interpersonal and presentational speaking and comprehension skills. Through synchronous and asynchronous interactions with classmates and instructors, students practice their budding language skills in a flexible and playful online environment. This course replicates what is typically a yearlong course, so students should expect to dedicate 15–20 hours per week during the 7-week summer session.
SEMMESTER 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.

Cyber Security
Fall; 3 credits. Department: Integrated Studies
Cyber criminals leverage technology and human behavior to attack our online security. This course explores the fundamentals of and vulnerabilities in the design of computers, networks, and the internet. Course content includes the basics of computer components, connectivity, virtualization, and hardening. Students learn about network design, Domain Name Services, and TCP/IP. They understand switching, routing, and access control for internet devices, and how denial of service, spoofing, and flood attacks work. Basic programming introduced in the course informs hashing strategies, while an introduction to ciphers and cryptography shows how shared-key encryption works for HTTPS and TLS traffic. Students also explore the fundamentals of data forensics and incident response protocols. The course includes analysis of current threats and best practice modelling for cyber defense, including password complexity, security, management, breach analysis, and hash cracking. Computational thinking and programming skills developed in this course help students solve a variety of cyber security issues. There is no computer science prerequisite for this course, though students with some background will certainly find avenues to flex their knowledge in this course.

Data Visualization
Fall; 3 credits. Department: Integrated Studies
Through today’s fog of overwhelming data, visualizations provide meaning. This course trains students to collect, organize, interpret, and communicate massive amounts of information. Students begin wrangling data into spreadsheets, learning the basic ways professionals translate information into comprehensible formats. They explore charts, distinguishing between effective and misleading visualizations. Employing principles from information graphics, graphic design, visual art, and cognitive science, students then create their own stunning and informative visualizations. From spreadsheets to graphics, students in this course practice the crucial skills of using data to decide, inform, and convince. There is no computer science, math, or statistics prerequisite for this course, though students with backgrounds in those areas will certainly find avenues to flex their knowledge in this course.

Graphic Design
Fall; 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 literacies. 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 or Spring; 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 we benefit from? Does our own culture’s conception of race mirror those found in other parts of the world? These are just a few of the questions that students in this course explore together as they approach the concept of race as a social construct that shapes and is shaped by societies and cultures in very real ways. Throughout the course students learn about the changing relationship between race and society across time and across cultures. Engaging with readings, films, and speakers from a variety of academic fields (history, sociology, anthropology, literature) students explore, research, reflect on, and discuss the complex set of relationships governing race and society.

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.

Fimmaking
Fall; 3 credits. Department: Fine Arts
Prerequisite: Students must have access to an HD video camera, tripod or other stabilizing equipment, and editing software such as iMovie, Premiere Pro, etc. 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 develop critical thinking skills. The course works from a set of specific exercises based on self-directed research, and culminates in 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 build an understanding of and apply skills in various aspects of architectural design. While gaining key insights into the roles of architectural analysis, materials, 3D design, and spatial awareness, students develop proficiency in architectural visual communication. We begin by learning the basic elements of architectural design to help analyze and understand architectural solutions. Through digital and physical media, students develop an understanding of the impact building materials have on design. At each stage of the course, students interact with peers from around the globe, learning and sharing how changes in materials, technology, and construction techniques lead to the evolution of contemporary architectural style and visual culture. The course culminates with a final project in which each aspiring architect has the opportunity to work toward a personal presentation for the GOA Catalyst Conference. Students present, through a variety of outcomes, an architectural intervention that they have proposed as a solution to an identified need, one emanating from or focused within their own community. Throughout the course, students refer to the design process and use journaling techniques to track, reflect, and evidence their understanding of architecture.

Creative Nonfiction
Fall; 3 credits. Department: English
Tell your own stories and the stories of the world around you! This course centers on the art of shaping real experiences into powerful narratives while growing foundational writing skills. Participants read, examine, and write diverse works of creative nonfiction including personal narratives, podcasts, opinion editorials, profile pieces, and more. Emphasizing process over product, this writing workshop provides opportunities to create in new ways. Students practice essential craft elements (e.g., voice, style, structure) while reflecting on stories from their own lives, communities, and interests. They also build a personalized library of inspiring mentor texts, consider opportunities for publication, and develop sustainable writing habits. Both in real-time video chats and online discussion spaces, students support one another intentionally. Feedback is an essential component of this course, and students gain experience in the workshop model, actively participating in a thriving, global writing community. Creative nonfiction has never been as popular as it is today; participants experience its relevance in their own lives as they collaboratively explore this dynamic genre.

Poetry Writing
Fall; 3 credits. Department: English
Poetry teaches us our humanity. Through writing weekly drafts and reading a wide range of poets, you learn more about yourself and what captures the attention of poets. Whether you are an experienced writer or an adventurous spirit willing to give poetry a try— this course helps you to increase facility with language, imagination, and the writing process. Using discussion threads, spoken word, and video conferencing, we create a trusting community of writers willing to explore authentic subjects. The weekly experience includes poetry drafts and a workshop format where you hone your skills.
in giving and receiving positive feedback. You also read a range of texts (printed and media) to become familiar with important poets working today and their influences. By the end of the course, you will have a portfolio of revised, publishable poems for a class book and international journals. Previous GOA students have published in Aerie International, Repentino, Teen Ink, Teen Vogue, and Hanging Loose, and earned both regional and national Scholastic Writing Awards.

Fiction Writing
Summer or 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.

Microeconomics
Fall or 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.

Introduction to Investments
Summer, Fall, or Spring; 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 or Spring; 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
Are you thinking and acting freely of your own accord or is what you think, feel, and do a result of influences by the people around you? Social psychology is the scientific study of how and why the actual, imagined, or implied presence of others influences our thoughts, feelings, and behavior. The principles of social psychology help explain everything from why we stop at stop signs when there is no one around to why we buy certain products, why in some situations we help others and in some we don’t, and what leads to more dramatic (and catastrophic) events such as mass suicides or extreme prejudice and discrimination. As we take up these topics and questions, students build and engage in a community of inquiry, aimed primarily at learning how to analyze human behavior through the lens of a social psychologist. Social Psychology invites students to explore, plan, investigate, experiment, and apply concepts of prejudice, persuasion, conformity, altruism, relationships and groups, and the self that bring the “social” to psychology.
The course culminates in a public exhibition of a student-designed investigation of a social psychological topic of their choice. This course uses a competency-based learning approach in which students build GOA core competencies that transcend the discipline and learn how to think like a social psychologist. Much of the course is self-paced; throughout the semester, students are assessed solely in relation to outcomes tied to the competencies.

**Introduction to Psychology**

*Summer, Fall, or 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 multifaceted 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 or 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 delve 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**

*Fall or Spring; 3 credits. Department: History*

This course focuses on psychiatric disorders such as schizophrenia, eating disorders, anxiety disorders, substance abuse, and depression. While students examine these and other disorders, they learn about the 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 & Society**

*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 20th century genocides (Armenian, the Holocaust, Cambodian, and Rwandan), analyze the role of the international community in responding to and preventing further genocide (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 of their choice.

9/11 in a Global Context
Spring or 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
Fall or 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
Fall or 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, or 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: Introduction to JAVA

**Summer or Spring; 3 credits**  
Department: Computer Science  
Prerequisite: 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 though 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.

### Computer Science II: Game Design and Development

**Spring; 3 credits. Department: Computer Science**  
Prerequisite: Computer Science I: Computational Thinking or its equivalent

In this course, students practice designing and developing games through hands-on practice. Comprised of a series of “game jams,” the course asks students to solve problems and create content, developing the design and technical skills necessary to build their own games. The first month of the course is dedicated to understanding game design through game designer Jesse Schell’s “lenses”: different ways of looking at the same problem and answering questions that provide direction and refinement of a game’s theme and structure. During 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: Python

**Spring; 3 credits. Department: Computer Science**  
Prerequisite: Computer Science I: Computational Thinking or its equivalent

In this course, students utilize the Python programming language to read, analyze, and visualize data. The course emphasizes using real-world datasets, which are often large, messy, and inconsistent. Because of the powerful data structures and clear syntax of Python, it is one of the most widely used programming languages in scientific computing. Students explore the multitude of practical applications of Python in fields like biology, engineering, and statistics.

### iOS App Design

**Spring; 3 credits. Department: Computer Science**  
Learn how to design and build apps for the iPhone and iPad and prepare to publish them in the App Store. Students work much like a small startup: collaborating as a team, sharing designs, and learning to communicate with each other throughout the course. Students learn the valuable skills of creativity, collaboration, and communication as they create something amazing, challenging, and worthwhile. Coding experience is NOT required and does not play a significant role in this course.

**Note:** For this course, it is required that students have access to a computer running the most current Mac or Windows operating system. (Mac OS X is necessary only if you plan to try your hand at publishing.) An iOS device that can run apps (iPod Touch, iPhone, or iPad) is highly recommended.

### Game Theory

**Fall or Spring; 3 credits. Department: Mathematics**  
Prerequisite: Precalculus and above, as well as a desire to do rigorous mathematics and proofs

Once thought of as the purest but least applicable part of mathematics, number theory is now by far the most commonly applied: every one of the millions of secure internet transmissions occurring each second is encrypted using ideas from number theory. This course covers the fundamentals of this classical, elegant, yet supremely relevant subject. It provides a foundation for further study 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.

**Personal Finance**  
Fall; 3 credits. Department: Mathematics  
In this course, students learn financial responsibility and social consciousness. We examine a wide array of topics including personal budgeting, credit cards and credit scores, career and earning potential, insurance, real estate, financial investment, retirement savings, charitable giving, taxes, and other items related to personal finance. Students apply their understanding of these topics by simulating real life financial circumstances and weighing the costs and benefits of their decisions. Throughout the course, students have the opportunity to learn from individuals with varying perspectives and expertise in numerous fields. By reflecting on their roles in the broader economy as both producers and consumers, students begin to consider how they can positively impact the world around them through their financial decisions.

**Bioethics**  
Fall or Spring; 3 credits. Department: Science  
Ethics is the study of what one should do as an individual and as a member of society. Bioethics refers to the subset of this field that focuses on medicine, public health, and the life sciences. In this course, students explore contemporary, pressing issues in bioethics, including the right to die, policies around vaccination and organ transplantation, competence to consent to care, human experimentation and animal research, and genetic technologies. Through reading, writing, research, and discussion, students explore the fundamental concepts and questions in bioethics, deepen their understanding of biological concepts, strengthen their critical reasoning skills, and learn to engage in respectful dialogue with people whose views may differ from their own. The course culminates with a student-driven exploration into a particular bioethical issue, recognizing the unique role that bioethics plays within the field of ethics.

**Global Health**  
Fall; 3 credits. Department: Science  
What makes people sick? What social and political factors lead to health disparities we see both within our own communities and on a global scale? What are the biggest challenges in global health and how might they be met? Using an interdisciplinary approach to address these questions, this course improves students' health literacy through an examination of the most significant public-health challenges facing today's global population. Topics addressed include the biology of infectious disease, 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. Throughout the course, students use illness as a lens through which to critically examine such social issues as poverty, gender, and race. Student work includes analytical writing, research and curating sources around particular topics, readings and discussions exploring a variety of sources, and online presentations, created both on their own and with peers.

**Medical Problem Solving I**  
Summer, Fall, or 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: Medical Problem Solving I  
Medical Problem Solving II is an extension of the problem-based approach in Medical Problem Solving I. While collaborative examination of medical case studies remain at the center of the course, MPS II approaches medical cases through the perspectives of global medicine, medical ethics, and social justice. The course examines cases not only from around the world but also in students’ local communities. Additionally, the course addresses the challenges patients face because of a lack of access to health care, often a result of systemic discrimination and inequity along with more general variability of health care resources in different parts of the world. All students in MPS II participate in the Catalyst Conference, a GOA-wide conference near the end of the semester where students from many GOA courses create and publish presentations on course-specific topics. For their projects, students use all of the lenses from the earlier parts of the course to choose and research a local topic of high interest. Further, their topics enable identifying a local medical problem, using local sources, and generating ideas for promoting change.

**Neuropsychology**  
Fall or 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.
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.