



2023 - 2024

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# Curriculum Guide

# Greenhill

— SCHOOL —

# Introduction



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### Mission Statement

In a diverse and inclusive community, Greenhill prepares and inspires students to lead authentic, purposeful lives.

### Vision Statement

We see our students joyfully reaching their full potential.

We see our school thriving as an academically excellent, diverse, inclusive, and connected community.

We see our world made more hopeful because of the Greenhill community.

### Core Values

Excellence | Integrity | Compassion | Courage

#### Students 2023-2024\*

Total Enrollment	1,375
Students of Color	54%

#### Accreditation, Memberships, & Affiliations

- NAIS — National Association of Independent Schools
- ISAS — Independent Schools Association of the Southwest
- Numerous local and regional school affiliations

#### Faculty 2023-2024

Full-time Teaching Faculty	154
Faculty of Color	33%
Advanced Degrees	57%
Average Tenure	8 years
Alumni at Greenhill	13

Please see the Faculty and Staff Directory on the Greenhill website for a detailed list of all faculty members and contact information.

\*data as of July 2023

# Calendar & Schedule

## GREENHILL SCHOOL CALENDAR 2023-2024

### AUGUST 2023

22 First day of classes

### SEPTEMBER

1 LS Conferences - no LS classes  
4 Labor Day Holiday - school closed  
11 Founders' Day Celebration  
18 MS/US Conferences - no MS/US classes  
25 School Holiday - school closed

### OCTOBER

9 Fall Break - school closed

### NOVEMBER

2-4 Fall SPC Championships (Fort Worth)  
10 PS/LS Conferences, - no PS/LS classes  
20-24 Thanksgiving Break - school closed

### DECEMBER

20 December Break begins at 11:00 am

### JANUARY 2024

3 Professional Development Day - no classes  
4 Classes resume  
12 Admission Observations - no PS classes  
15 Dr. Martin Luther King, Jr. Holiday - school closed  
22 MS Conferences - no MS classes

### FEBRUARY

8-10 Winter SPC Championships (Houston)  
9-12 Winter Break - school closed

### MARCH

1 PS/LS Conferences - no PS/LS classes  
11-15 Spring Break - school closed  
18 Professional Development Day - no classes  
29 School Holiday - school closed

### APRIL

12 ISAS Arts Festival (Austin) - no US classes  
19 US Conferences - no US classes

### MAY

2-4 Spring SPC Championships (Dallas)  
3 No US classes  
17 PS/LS Conferences - no PS/LS classes  
22 US last day of classes  
22 MS Conferences - no MS classes  
23 PS/LS/MS last day of classes  
23 No US classes  
24 MS Grade 8/US last day of school  
29 Memorial Day - school closed  
TBD Baccalaureate and Commencement

*(all dates are subject to change)*

PS = Preschool  
LS = Lower School  
MS = Middle School  
US = Upper School



## School Hours

Divisional offices are open	7:30 am – 4:00 pm
Preschool (Prekindergarten/Kindergarten)	8:00 am – 2:45 pm
Lower School (Primer–Grade 4)	8:00 am – 3:15 pm
Middle School (Grades 5–6)	8:00 am – 3:45 pm
Middle School (Grades 7–8)	8:00 am – 4:05 pm
Upper School (Grades 9–12)	8:30 am – 6:00 pm
Middle School (Grades 7 & 8) sports practices	2:45 pm – 3:55 pm
Upper School sports and after-school activities	4:15 pm – 6:15 pm
After-school care (Extended Day)	2:45 pm – 6:00 pm
Early-morning supervision for Preschool and Lower School students	7:15 am – 7:45 am
Library hours, Monday–Thursday	7:45 am – 4:30 pm
Library hours, Friday	7:45 am – 4:00 pm

# Preschool & Lower School Curriculum

## 2023-2024

### Preschool

The Preschool division is filled with adventure, creativity, investigation, and friendship. Our faculty provides a research-based approach to teaching and learning in which children learn about themselves, others, and the world around them—all in an atmosphere of love, care, and acceptance. The best learning takes place when teachers and families communicate regularly and keep student success in mind. We strongly encourage active participation from parents and family members, which plays a significant role in each child's learning and growth.

### Prekindergarten & Kindergarten

#### PREKINDERGARTEN GRADE LEVEL

Learning through play and a research-based curriculum is how we approach teaching and learning in prekindergarten each and every day! The prekindergarten year at Greenhill School is filled with wonder, discovery, and exploration. We take a balanced approach, whether it be challenging academics, interactive science opportunities, or essential social skills. Throughout the year, we focus on project-based learning opportunities that are multidisciplinary. We meet the individual needs of all of our students with authentic activities, global perspectives, and celebrations of equity and inclusion. Our masterful early childhood educators understand that we are helping to build a foundation of life skills, critical thinking, and an overall love of learning. The prekindergarten year is exciting, challenging, fun, and thoroughly enjoyed by our students, their families, and the teachers.

#### KINDERGARTEN GRADE LEVEL

Greenhill's kindergarten curriculum is based on the principle that a child's development

and learning are integrated. We strive to provide an environment that provides active and authentic experiences that foster wonder, exploration, and discovery. We provide a balanced academic learning approach with play and direct instruction. Our environment provides a variety of learning activities and materials that are concrete, real, and relevant to the lives of our young children to help encourage them to take risks and make connections. Throughout the year, we also focus on project-based learning opportunities that are multidisciplinary. Throughout these units, we integrate all curricular areas and allow the interests of the children to dictate much of the learning that takes place. We also foster independence and help to build social competence by providing ample time for play in combination with more structured independent and cooperative learning situations. We emphasize kindness, compassion, and respect. We give children guidance and support in this character development. Our primary objectives are to foster a love of learning and promote good citizenship in all of our students. By focusing on children's social, emotional, cognitive, language, and physical growth, we promote an effective developmental approach to learning.

#### Prekindergarten/Kindergarten Spanish

“¡Buenos días a todos aquí!” Prekindergarten and kindergarten Spanish introduces children to basic Spanish words and phrases by immersing students in literature, song, and games. Using a response method that takes into account the egocentricity of young children, the *maestra* provides opportunities for students to respond individually to questions and phrases so the context becomes all about each individual child. Through exploration of Hispanic traditions, children develop an appreciation of Spanish culture. With the belief that language acquisition is directly related to the frequency that language is heard, an allotment of one and a half hours per week is divided into three 30-minute sessions.

#### Prekindergarten/Kindergarten Art

Visual art is the primary medium of written idea communication for young children. Therefore, Art focuses on teaching students self-expression through the exploration of art materials. Students are encouraged to play to create new things and take risks. Play is work, and by manipulating materials with no pre-planned agenda other than exploration, students develop fine motor, cause-and-effect, and general problem-solving skills. Prekindergarten/Kindergarten Art is focused on the process of creating artwork rather than on the finished product.

#### Prekindergarten/Kindergarten Music

Through singing, dancing, and responding expressively to music, we strive to grow tuneful, beatful and artful music students. Prekindergarten and kindergarten students attend music class three times a week for 30 minutes. During these classes, children move, chant, and play games while finding their “singing voices,” exploring tone and rhythm, learning to keep a steady beat, and playing percussion instruments.

#### Prekindergarten/Kindergarten Language Arts

As early childhood educators, we believe young children first learn to read and write through authenticity, experimentation, exploration, and discovery. By incorporating the CR Success phonics program and Fountas and Pinnell's continuum of literacy, we offer a balanced literacy program to our students. Using the balanced literacy approach along with components of the Lucy Calkins Teachers College Reading and Writing Workshop in kindergarten, students are allowed to experience the freedom of making and learning through mistakes and scaffolding, as well as developing fluency with their reading and writing. Through interactive read-alouds, small groups, and guided reading groups, children are provided tools to develop critical thinking and comprehension. In prekindergarten, we also help develop phonemic awareness, speech production, and phonics through

our Jump Start to Literacy component of CR Success, which is the beginning of CR Success that aligns the components of research-based literacy instruction. Our hands-on phonics instruction is designed to teach students alphabetic knowledge through multiple, distributed instructional cycles. Students are exposed to high-quality literature involving song, hand and body cues, imagery, kinesthetic cues, and stories that our young ones are excited to embrace. In kindergarten, phonemic awareness and phonics are taught systematically in small groups through direct instruction or guided reading groups, using active and multisensory approaches, including stories and songs that create engaging and interactive lessons. Whether in a large group interactive writing, an individual book browsing opportunity, or a group conversation, students are encouraged to go deeper into the text to promote greater purpose in their reading through their writing and during speaking experiences. Prekindergartners and kindergartners engage in handwriting instruction using Handwriting Without Tears.

### **Prekindergarten/Kindergarten Social-Emotional Learning**

Students build and strengthen social-emotional competencies through the MindUP curriculum. Students learn about how their brains work and explore becoming mindfully aware of all that is going on around them. As students progress through the curriculum, self-awareness, self-management, social awareness, relationship skills, and responsible decision making are addressed in a developmentally appropriate and engaging way. The year culminates with expressing gratitude and performing acts of kindness, leading to constructive activities to take mindful action in the world and improve the lives of others.

### **Prekindergarten Social Studies**

The beginning of the year presents a time for prekindergartners to get familiar with Greenhill School and what it means to be a member of a community (the classroom). By exploring areas of the school community and its culture, prekindergartners begin to acclimate to the community and understand what it means to be a productive citizen of that community. Prekindergartners engage

in learning about various cultures and celebrations throughout the year. Themes such as family, school community, and other communities around us help provide concrete experiences as they engage in broad and important topics.

### **Prekindergarten Science**

Insects, seeds, and water—oh my! Everything in the environment is fair game for a prekindergartner's curiosity, and that curiosity is the root of prekindergarten science. Science takes the form of specific project-based learning experiments and follow-up on child-driven questions about nature and the world. Prekindergartners observe, explore, and apply previous information to their current areas of wonder. We use a student-centered approach to provide concrete experiences and differentiation between individual interests. Prekindergartners also engage in STEAM activities that include creative tinkering, exploration, and maker-based instruction.

### **Prekindergarten Math**

The Prekindergarten math curriculum encourages young children to make sense of the world around them through mathematical concepts. One of the first academic acquisitions young children often make is in the area of qualitative and quantitative thinking. The students come to us with varying degrees of concrete mathematical information. The prekindergarten Bridges and Number Corner curriculum builds on those concepts of numbers via interactive lessons, activities, and centers that develop skills of counting, comparing, matching, joining, and separating sets of objects; comparing objects by attributes such as length, weight, and capacity; matching, recognizing, comparing, and composing shapes; and recognizing patterns with proficiency and flexibility. We study how these skills are applicable in our everyday lives while incorporating mathematical vocabulary into discussions. We focus on building critical thinking skills by challenging the students to not only solve problems but also be able to explain their thought processes and reasoning.

### **Kindergarten Social Studies**

Self-confidence and social competence are the emphases of social studies in a

kindergarten classroom. Confidence to deal with social situations and group collaboration build and scaffold through a variety of play opportunities to facilitate social interactions and cement relationships. Established routines and integrated centers facilitate the development of independence and responsibility. Project-based learning helps to deepen and enrich children's understanding of the themes. Opportunities to define a personal place in the world and also learn how we are interconnected are supported through discussions about what is happening in the larger world around them.

### **Kindergarten Science**

Two global science themes drive Greenhill School's kindergarten science curriculum. The themes of growing things and color and light provide concrete experiences for kindergartners as well as provide differentiation between individual interests. Children explore these themes through literature and hands-on activities, along with specific experimentation using the scientific method. Kindergartners are also engaged in makerspace STEAM activities that include creative tinkering, exploration, and maker-based instruction. Kindergarten also uses an inhouse teaching kitchen for extended learning activities.

### **Kindergarten Math**

In kindergarten, children acquire quantitative thinking skills through exploration and discovery through the Bridges Math curriculum. Bridges blends direct instruction, structured investigation, and open exploration. It taps into the intelligence and strengths of all students by presenting material that is linguistically, visually, and kinesthetically rich as it is mathematically powerful. Manipulatives foster the young child's need for concrete exploration and are used to help establish a solid foundation for math concept development. Kindergartners explore and solidify math connections to life skills through authentic activities that emphasize problem-solving. Group and individual mini-lessons introducing math vocabulary and concepts begin the spiral usage of these tools throughout a child's Lower School education.

# Primer & Grades 1-4

## PRIMER

### Overview

The Primer classroom is a unique developmental opportunity for children after kindergarten, designed to give students a rich environment while practicing skills taught through a child-centered, hands-on approach to learning. The classroom focus is on the development of the whole child, including the social, emotional, physical, and academic components. Learning activities are planned with a great deal of emphasis on individual student development, with instruction continuously modified to meet the needs of each child.

### What makes Primer unique?

- Provides a bridge between kindergarten and first grade.
- Provides a challenging curriculum that is designed to meet the developmental needs of each child.
- Provides hands-on activities with manipulatives and developmentally appropriate materials.
- Provides flexibility of instructional time and pacing with shorter time on tasks.
- Provides additional opportunities for large muscle exercise and small motor development.
- Provides for the transition from concrete to abstract learning.

### Literacy

The Primer literacy curriculum is designed to meet the needs of each child and continue the development of each child's language skills. Reading, writing, and listening and speaking are integrated into cross-curricular activities throughout core and content areas such as math, art, music, science, social studies, and technology, thereby immersing the students in literacy activities throughout their day. The Primer literacy program builds the bridge to critical thinking, independent reading and comprehension, and writing in a variety of modes. The social studies curriculum is a journey of exploration through the multifaceted world and provides frequent

opportunities for students to apply literacy skills. As the children mature, it is our goal to help each child develop mutual respect for others. Through open communication, the children learn to solve problems while gaining a sense of responsibility and accountability for their own actions.

### Math

The math program in Primer uses a variety of real-life activities and concrete manipulatives to develop a strong conceptual basis for learning and build a mastery of basic skills. We explore strands from the full spectrum of mathematics, going beyond basic arithmetic to include number sense, algebra, measurement, geometry, data analysis, and probability. Activities are developed based on how children learn and what most captures their interest. There is an emphasis on mathematical competence and problem-solving, building higher-order and critical thinking skills. It is our goal to prepare students to enter the next level, confident in their math skills and enthusiastic about what lies ahead.

### Science

The science program in Primer builds on the child's natural curiosity about the world they live in. We provide children with direct experience using materials, events, and ideas critical to later learning. We build on students' prior experiences, backgrounds, and early ideas. Students engage in investigations and problem-solving techniques using basic science concepts. Students practice strategies involving questioning, exploration, and explanation building (hypothesis). Primer science serves as an important link between science and the developing literacy and social skills of students and utilizes strategies that integrate science with other content areas.

### Art

The Primer art program focuses on independent and collaborative student-led exploration. The student is the artist and gets to choose how best to visually represent their ideas. This promotes decision making and provides students with the opportunity to respond to their own interests. Emphasis is placed on what students learn and not what they produce. Primer students will learn

creative problem-solving, how to manipulate different materials, and how to direct their own learning.

### Music

The Primer music curriculum provides structure and order within an active, playful atmosphere that includes exploration, improvisation, movement, and hands-on learning. The twice-weekly lessons are sequential and include the following concepts: rhythm (steady beat, understanding the difference between long/short duration and fast/slow tempo), melody (high/low pitch, melodies that move up/down, matching vocal pitches), harmony (experiencing more than one musical sound at a time), form (understanding same/different phrases, phrase length), and timbre (identifying vocal and instrumental qualities of sound).

### Spanish

Primer Spanish focuses on strengthening the students' verbal skills. Through songs and literature, students learn about and appreciate Hispanic culture and heritage. In class, students are encouraged to take linguistic risks, say unfamiliar words, and sing songs in Spanish. Students love learning about how different holidays are celebrated in Spanish-speaking countries.

### Library

Primer students enjoy a variety of books: folk tales, fairy tales, and fables; wordless picture books that allow them to develop their own stories; books about first experiences, achievement, and problem solving; easy-to-read books with controlled vocabularies; and books with increasingly complex plot lines. In addition to studying the words and pictures of the book itself, librarians foster a love of reading by enriching the language and social interactions that surround reading.

### Physical Education

Primer students participate in various movement activities designed to promote motor and manipulative development, the understanding of a healthy lifestyle, and a positive self-image. Emphasis is on enjoyment, challenge, self-expression, and social interaction within movement experiences. The curriculum includes an aquatics unit accenting proper

stroke development, water safety, and self-confidence during swimming and a climbing unit designed to promote handwriting skills.

### **Social-Emotional Learning**

Students build and strengthen social-emotional competencies through the MindUP curriculum. Daily repeated practice of mindful breathing hones attentive listening and calming. Students learn about how their brains work and explore becoming mindfully aware of all that is going on around them. As they progress through the curriculum, they practice perspective-taking and optimism, learning about the importance of mindset and how it affects learning and relationships. The year culminates with expressing gratitude and performing acts of kindness, leading to constructive activities to take mindful action in the world and improve the lives of others.

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## **FIRST GRADE**

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### **Overview**

First grade marks an important time of milestones for young children. During this year, first graders are encouraged to use and build upon previously taught social skills as their relationships grow. First-grade students will experience many opportunities to develop socially, emotionally, physically, and academically. Throughout the year, students explore the overarching theme of “change.” In addition to direct instruction in reading, writing, and spelling, literacy skills are integrated into science and social studies thematic units of study. The curriculum seeks to combine literature with an emphasis on word construction and meaning, comprehension, and higher-thinking skills. But the true magic of first grade happens as children develop the ability to understand that they are independent thinkers and lifelong learners.

### **Literacy**

During Readers and Writing Workshop, literature is used as a base to model good writing, demonstrate proper grammar and mechanics, and explore content. Greenhill provides a balanced literacy approach by supplementing our literacy programs with additional quality literature. Teachers also

work with children individually or in small groups to meet individual student needs and propel the development of literacy skills and strategies. Literature is used as a base to model good writing, demonstrate proper grammar and mechanics, and explore content. Written language is encouraged through journal writing, data collection, and various content-related assignments. Spelling is taught daily using a program called CR Success; this program begins in kindergarten and continues through fourth grade. The publishing process begins in first grade with students prewriting, editing, and publishing many of their compositions. Manuscript handwriting is refined as motor skills develop. Children enter first grade with a wide spectrum of abilities, but a major goal for all students is to leave first grade choosing to read and write independently. Social studies and science topics provide regular opportunities to apply literacy and research skills to real-world topics, such as change, families, and caring for others.

### **Math**

The first-grade math program uses a cooperative learning, hands-on approach with a variety of materials, manipulatives, games, and activities to develop math concepts and problem-solving skills in all students. The core mathematics curriculum is based on the Bridges Mathematics program and is supplemented by a variety of resources to meet the needs of a range of math abilities. Students are introduced to new concepts and continue to develop concepts including numbers and numeration, operations and computation, data and chance, measurement and reference frames, geometry, patterns, functions, and algebra. These math and problem-solving skills are developed over time in a wide variety of contexts. There is a strong emphasis on developing and understanding addition and subtraction and strategies to develop mastery for solving basic facts.

### **Science**

In first grade science, students apply processes that help them understand the natural world and learn that science is exciting, dynamic, and essential! They ask questions, make observations, and analyze

information by engaging in hands-on labs in the areas of life, Earth, and physical science. Students begin by investigating and classifying developmentally appropriate science tools and using senses to describe observable properties and compare living and nonliving objects. While learning about plant and animal structures that help organisms survive and thrive, students record each of these essential “needs” in an Interactive Science Notebook (ISN). Our learning continues as students determine the movement and patterns of the sun and moon with the use of digital tools, in-class simulations, personal and in-class observations, and logging daily patterns in their ISN. Next, students begin a series of investigations on the different forms of energy, which include heat, light, and sound. They incorporate the scientific process to test thermal heat transfer, how materials behave when placed in a beam of light, and how sound waves travel through space to create different acoustics. Spring changes taking place in nature and in our science sustainability garden present the perfect opportunity to learn about the life cycle. Students use critical thinking to compare living organisms, such as a germinating seed and the monarch butterfly. First graders become innovators during an end-of-year STEM challenge incorporating the engineer design process to create a prototype with a purpose.

### **Art**

First grade art is focused on students experiencing the process of art making and beginning to think like an artist. Art products occur through creative play, decision making, and exploration of materials. While students are engaging in process art experiences, they are talking to each other and adults, wrestling with problems that arise, and solving the problems creatively. When students make decisions for themselves in the art room, they are developing their self-expression and their self-confidence. First grade artists are exposed to many different materials and styles of art making.

### **Music**

One of the primary goals in first grade music is to instill the love of music in students. Our activities include singing, rhythm recognition,

movement, instrument playing, listening, and improvisation. Students begin to read and write quarter notes, eighth notes, and quarter rests. They are also introduced to the solfège syllables sol, mi, and la. Elemental songs are introduced and accompanied by Orff instruments. They present a spring program that incorporates movement, singing, and instruments.

### **Spanish**

First grade students take Spanish classes twice a week throughout the year. Language lessons are designed to promote enthusiasm for the learning of new languages. Cultural lessons help students develop an appreciation of Latino and Spanish cultures and customs. The language program emphasizes functional skills in listening and speaking. Exposure to age-appropriate Spanish literature, songs, and games provides a multitude of learning opportunities. Building a solid foundation in the early years allows our students to construct conceptual frameworks for understanding language, culture, and diversity, enhancing their language learning potential in the Middle School years.

### **Library**

First graders learn about library procedures and practices, as well as how to best care for their books. Important literacy skills are taught such as the parts of a book and how the library collection is organized. First graders also begin to understand that the library consists of both fiction and non-fiction books, and how to differentiate between these genres. Students focus on literature skills and concepts covered in the classroom, including elements of a story, sequencing, comparing, and contrasting, drawing conclusions, and a variety of genre studies, and books that celebrate various holidays and yearly celebrations. Students use library books and begin to learn how to access our online databases to find information on their chosen topic. They learn important library skills such as how to search for books using the library's online catalog and how to then find the book on the shelves. The goal of our Lower School library is to provide a foundation for students to love literature and learning.

### **Physical Education**

First grade students participate in Physical Education daily for 45 minutes. The curriculum

is focused on various movement activities designed to promote motor and manipulative development, the understanding of a healthy lifestyle, and a positive self-image. Emphasis is on enjoyment, challenge, self-expression, and social interaction within movement experiences. The curriculum also includes an aquatics unit accenting proper stroke development, water safety, and self-confidence during swimming and a climbing unit.

### **Social-Emotional Learning**

Students build and strengthen social-emotional competencies through the MindUP curriculum. Daily repeated practice of mindful breathing hones attentive listening and calming practices. Students learn about how their brains work and explore becoming mindfully aware of all that is going on around them. As they progress through the curriculum, they practice perspective-taking and optimism, learning about the importance of mindset and how it affects learning and relationships. Students are always working on ways to build healthy relationships and problem-solve with others. The year culminates with expressing gratitude and performing acts of kindness, leading to constructive activities to take mindful action in the world and improve the lives of others.

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## **SECOND GRADE**

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### **Overview**

In second grade, students continue to practice and develop skills and strategies that promote the synthesis of academic, social, emotional, and physical maturation. The theme of "community" shines brightly in second grade. In social studies, students explore community and the ways in which we are each members of various communities. The lessons and integrated projects allow students to examine the impact that significant individuals have made in their communities and explore how they can create change in their community as well. We examine the impact significant individuals have made in their communities and learn how to be changemakers. In literacy, we strengthen reading and writing abilities through comprehensive fiction, poetry, and nonfiction units. Math builds upon students'

number sense foundation and strengthens operational skills with the largest emphasis on addition, subtraction, and place value. Students are encouraged to problem-solve from different perspectives and take risks with the understanding that mistakes are how we learn, collaborate with others, and communicate effectively. Self-contained classrooms allow for several long-term, project-based units in which students practice working independently, in small groups, and with peers from other grade-level classrooms.

### **Literacy**

The second-grade literacy program contains several different content areas: reading, writing, phonics, spelling, handwriting, and social studies. Reading and writing are taught in a workshop format to allow students to receive individualized support and challenges. During Reading and Writing Workshop, teachers work with children individually or in small groups to meet individual student needs and propel the development of literacy skills and strategies. Reading and writing are taught in four connected units to take a deep dive into genres. These units build confidence and strengthen skills. Each unit ends with a celebration and an opportunity to self-reflect. Spelling and phonics are taught daily using hands-on, interactive lessons and tools that address multiple learning styles to increase memory and improve application. In addition, students learn the cursive alphabet through weekly handwriting lessons emphasizing letter formation and connections. The social studies curriculum provides students with the opportunity to stretch and further develop their literacy skills in a real-world context through the study.

### **Math**

The second-grade math program is a rigorous and balanced curriculum. It raises expectations of the range of skills that a child can demonstrate in mathematics. The focus is on four main mathematical areas: algebraic thinking, numbers and operations, measurement and data, and geometry. Students explore and expand mathematical concepts while building a strong number sense foundation. Our goal is to introduce and expand children's understanding of the basic concepts and skills in number sense, algebra, measurement, geometry, probability, and problem-solving. Students build their

automatic recall of basic math facts, which helps them solve everyday computational problems.

### **Science**

As second graders, students grow in their ability to categorize and analyze scientific information during hands-on labs, in-class activities, and outdoor exploration. Greenhill's second grade science class capitalizes on the learner's increased metacognitive skills and enthusiasm for understanding the natural world. Students begin the year looking at everyday problems with curiosity and wonder. Then they apply scientific inquiry to formulate a hypothesis in an investigative lab to compare habitats of living organisms and record scientific findings in an Interactive Science Notebook (ISN). Seasonal changes taking place in the fall bring our learning outside to gather leaf specimens going through photosynthesis. Meanwhile, students carry out the scientific process in an experiment that simulates photosynthesis and extracts chlorophyll from a leaf in real time. Winter's colder weather may keep us indoors, but students stay engaged as they classify matter by observable properties and make changes to matter in several STEM challenges. The design process is used to create each prototype, and students draw conclusions on how different types of materials can be used for specific purposes. In the spring, students examine predictable weather patterns through hands-on learning stations. Additional spring highlights include planting a seed to collect growth patterns and learning about changemakers in the field of science that have made an impact on human-made problems affecting our planet.

### **Music & Movement**

The second-grade curriculum is active, transitioning quickly from one activity to another. Like previous grades, much of the curriculum is play-based. Students experience musical concepts first through play before they are named and mastered. During the second grade year, students increase their rhythmic vocabulary to include quarter rests, half notes, half rests, and sometimes sixteenth notes. Simple meters are experienced and later named, as are changes in tempo and time signatures are

labeled. Second graders also expand their pitch sets using solfège syllables (do, re, mi, etc.) and use corresponding hand signs to perform and improvise simple scale-tone melodies. Proper instrumental technique is practiced on unpitched percussion instruments, barred instruments (xylophones), and frame drums as students learn to create simple accompaniments to classroom singing on these instruments. Movement is also a key component of the curriculum. It helps students internalize form, character, and rhythm. In second grade, students explore how to move their bodies in different ways through self and general space. Students begin using their bodies to create shapes and explore different pathways. Classes use contradances and other folk dances to expand their vocabulary of movement which they draw on to choreograph their own sequences.

### **Art**

The second-grade art curriculum encourages students to think like artists, build skills, practice various techniques, and make connections to other subjects and the world around them. Students have opportunities to choose their own materials and subject matter but also are tasked with creating their own solutions to art challenges with set parameters. While the focus is on the creative process rather than producing a finished product, second graders are beginning to evaluate and assess their own work. Our spiraling curriculum builds upon skills students have learned in previous years, allowing them to add layers of complexity to their work in both two- and three-dimensional mediums as they grow as artists.

### **Spanish**

Second grade students take Spanish classes throughout the year. Language lessons are designed to promote enthusiasm for the learning of new languages. Students discuss the relationship between English and Spanish as they study vocabulary and word parts. Cultural lessons help students develop an appreciation of cultures and customs. The language program emphasizes functional language and rudimentary training in listening, speaking, reading, and writing, as well as cultural awareness across cultures. Themes

are often integrated with studies in the core classes. These comparative learning opportunities allow our students to construct conceptual frameworks for understanding language, culture, and diversity, enhancing their language learning potential in the Middle School years.

### **Computer Science & Engineering**

Second grade students work with various software programs to enhance their studies in the classroom. In Computer Science & Engineering class, students learn to be thinkers, designers, and problem-solvers within an innovative learning environment. Students begin to learn digital literacy skills and competencies with an emphasis on digital citizenship and how to navigate the ever-changing digital landscape. The second grade computer science & engineering curriculum is student-centered and focuses on creation vs. consumption. Technology is a tool for creating, reflecting, and better developing ideas.

### **Library**

Second graders work with genres. Students map out different fiction and nonfiction genres and examine picture books to illustrate each kind. They read aloud examples to underscore the definitions of these genres. Students explore these genres of fiction: realistic, historical, sci-fi, mystery, fantasy, and folk and fairy tales (also called traditional literature). Moving on to nonfiction books, students study biographies and other factual books from the history, science, and sports sections of the library, reinforcing understanding of the Dewey Decimal system. They play games to practice using call numbers and search and retrieval strategies. Students end the year reading *Alvin Ho by Lenore Look*, which is a multicultural novel about a boy who is afraid of everything and, more than anything else, wants to make friends.

### **Physical Education**

Second grade students participate in Physical Education daily for 45 minutes. The curriculum is focused on various movement activities designed to promote motor and manipulative development, the understanding of a healthy lifestyle, and a positive self-

image. Emphasis is on enjoyment, challenge, self-expression, and social interaction within movement experiences. The curriculum also includes an aquatics unit accenting proper stroke development, water safety, and self-confidence during swimming and a climbing unit.

### **Social-Emotional Learning**

Students build and strengthen social-emotional competencies through the MindUP curriculum. Daily repeated practice of mindful breathing hones attentive listening and calming. Students learn about how their brains work and explore becoming mindfully aware of all that is going on around them. As they progress through the curriculum, they practice perspective-taking and optimism, learning about the importance of mindset and how it affects learning and relationships. The year culminates with expressing gratitude and performing acts of kindness, leading to constructive activities to take mindful action in the world and improve the lives of others.

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## **THIRD GRADE**

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### **Overview**

The third-grade year focuses on the goal of empowering students to be in charge of their own learning as they develop their academic and social skills. Third-grade students develop independence by demonstrating active listening and follow through, keeping materials, assignments, and homework organized, managing time wisely, and practicing problem-solving. Taking risks with expression of ideas both orally and in written form or requesting assistance when needed are encouraged on a daily basis. Living and working with one's peers requires cooperation, compromise, trust, respect, compassion, problem-solving, service, and effort. Third-grade students are expected to become self-managers of personal behavior, exhibit good social interactions, develop conflict resolution skills, and perform service for others.

### **Literacy**

Writing opportunities abound in literacy class. Writing paragraphs that include a topic sentence, supporting details, and conclusion

sentences begins our year, followed by writing units that include free-verse poetry, personal narratives, fables, and biography research. Planning and organizing ideas, writing drafts, revising and editing work, and writing final drafts for celebration in class anthologies are a part of every writing unit. Spelling and grammar lessons are also incorporated into literacy class weekly. Opportunities to write freely and creatively are provided weekly as well. Cursive handwriting and keyboarding skills are developed in our curriculum.

We begin our year in Readers Workshop by building stamina and exposing students to rich collections of literature that are read with partners, in reading groups, and during independent reading time. Reading comprehension skills are taught through read-alouds and direct instruction and in focused reading groups. We also emphasize reading fluency and accuracy in our lessons. Exposing students to a diverse collection of literature is a priority. Critical thinking is achieved through literature discussions, journaling, and other shared literature activities.

### **Math**

Exploration, discovery, and explanation are crucial components for building understanding with children in the ongoing development of number sense and mathematical proficiency. The Bridges program is used as the basis of study, and many additional resources are used to supplement the program. Students have two math periods daily, a Number Corner lesson taught by their homeroom teacher every morning and a math class taught by the math specialist. Students focus intensively on the four critical areas specified by the Common Core State Standards for Mathematics in third grade: developing understanding of multiplication and division and strategies for multiplication and division within 100; developing an understanding of fractions, especially unit fractions; developing an understanding of the structure of rectangular arrays and area; and describing and analyzing two-dimensional shapes. Regardless of the particular focus of study, students are consistently asked to look at problems in different ways and to communicate their thinking through both oral and written explanations. They are often asked to "prove"

their answers and explain their reasoning in detail, ultimately adding depth and dimension to their true understanding of mathematics.

### **Science**

In third grade, students embark on a two-year educational science journey that spans through fourth grade, guided by the same teacher. During the initial year, the curriculum centers on enhancing students' comprehension of and interaction with their natural surroundings. It aims to instill an appreciation for the human impact on nature, foster a logical problem-solving approach, and incorporate the engineering design process to address real-world challenges. Examples include designing tornado shelters and engineering devices to safeguard cars against hail damage. The curriculum also explores the interconnectedness of science with various aspects of human existence.

Hands-on scientific investigations play a crucial role in this course, allowing students to actively engage in the processes of questioning, observing, predicting, measuring, testing, comparing, describing, relating class concepts to the physical world, communicating ideas, experimenting, and recognizing cause-and-effect relationships. Throughout their studies, students delve into diverse topics, such as Earth's position in the universe, balanced and unbalanced forces, weather and climate, introductory concepts of ecosystems and food chains, and adaptations. To document their scientific experiences, students maintain an extensive journal record. The curriculum covers a wide range of scientific domains, including life science, earth science, physical science, and environmental science. Additionally, ample opportunities are provided for students to enhance their technical reading skills through the exploration of nonfiction materials.

### **Social Studies**

In third grade, students begin a two-year course that continues through fourth grade, taught by the same teacher. In the first of the two years, the world opens up as they bring their increasingly sophisticated literacy skills to an exploration of the world in social studies. The multicultural curriculum connects to global themes, includes a variety of sources, and enables students to understand,

participate in, and make informed decisions about their world. Students practice civic engagement and civil discourse, as well as exploration and discovery of knowledge from the core content areas of civics, economics, geography, and history. Through this literature, students learn to think critically, evaluate characters' decisions and actions, and relate concepts to their own experiences. Our primary goal is to inspire our students to love reading, writing, and exploring cultures.

### **Art**

The third-grade art curriculum encourages students to think like artists, build skills, practice various techniques, and make connections to other subjects as well as the world around them. Students have opportunities to choose their own materials and subject matter but also are tasked with creating their own solutions to art challenges with set parameters. While the focus is on the creative process rather than producing a finished product, third graders are learning to evaluate and assess their own work. Our spiraling curriculum builds upon skills students have learned in previous years, allowing them to add layers of complexity to their work in both two- and three-dimensional mediums as they grow as artists.

### **Music & Movement**

Like previous grades, the third grade Music & Movement curriculum starts play-based. Students experience musical concepts first through age-appropriate games before they are named and mastered. However, as students develop their skills and are able to draw on musical tools, third graders begin to rely more on their own creativity to explore musical concepts. Meters are experienced and later named, as are changes in tempo. Third graders expand their pitch sets using solfège syllables (do, re, mi, etc.) and use corresponding hand signs to perform and improvise simple scale-tone melodies. As students are already familiar with proper instrument technique, third graders compose and perform more complex instrumental pieces at the xylophones. Students also begin transferring pitch relationships to the musical staff as they build their ability to visually recognize steps, skips, and leaps. Movement is also a key component of the curriculum.

It helps students internalize form, character, and rhythm. In third grade, students build on their repertoire of movement and explore new collaborative concepts, such as points of connection and relationship (beside, over, under, alone, near, far, etc.).

### **Spanish**

The third-grade language courses further student experience of Spanish language and cultures. Exposure is not only to Mexico and Spain but other related nations as well, giving the students facility to distinguishing between multiple cultures and languages. Training in both spoken and written language allows students to navigate public spaces and communicate respectfully. While continuing to work with cross-curricular, grade-level academic themes, students also build functional language capabilities. Students develop recognition of major Spanish historical figures and learn about the geography and ethnic diversity of Latinx culture.

### **Computer Science & Engineering**

Third grade students begin working in a laptop environment for the first time. The shift from tablet to laptop helps students build their understanding of how to use a device to support their daily learning. The digital citizenship curriculum further investigates age-appropriate online behaviors, and students recognize the rights and responsibilities of living and learning in an interconnected digital world. In third grade our students receive direct device care instruction, such as keyboarding, operating system best practices, and navigating online resources. In computer science and engineering integrated units, students work independently and collaboratively to articulate and set goals and reflect on the learning process itself to improve learning outcomes. This is best demonstrated through the robotics build-a-thon at the end of the year.

### **Library**

Third graders learn about library procedures and practices and how to navigate the library to find books of interest. They learn how to use the online catalog and practice locating books on the shelves. In the fall, the

Texas Bluebonnet Award Reading Program is announced, and all students are encouraged to participate. This program encourages reading for pleasure for students in grades 3-6 in hopes exposing children to excellent writers across several genres. Students must read five of the books from the list in order to be eligible to vote. Third graders are also given the option to participate in a yearly reading challenge that encourages the students to read books from a variety of genres. Together in class, we also read and discuss a variety of genres and focus on literature skills and concepts covered in the classroom. Third graders are also introduced to beginning research skills and learn how to access our library's various online resources and databases. The Lower School library's goal is to provide a foundation for students to love literature and learning.

### **Physical Education**

Third grade students participate in Physical Education daily for 45 minutes. The curriculum is focused on various movement activities designed to promote motor and manipulative development, the understanding of a healthy lifestyle, and a positive self-image. Emphasis is on enjoyment, challenge, self-expression, and social interaction within movement experiences. The curriculum also includes an aquatics unit accenting proper stroke development, water safety, and self-confidence during swimming and a climbing unit.

### **Social-Emotional Learning**

Students build and strengthen social-emotional competencies through the MindUP curriculum. Daily repeated practice of mindful breathing hones attentive listening and calming. Students learn about how their brains work and explore becoming mindfully aware of all that is going on around them. As they progress through the curriculum, they practice perspective-taking and optimism, learning about the importance of mindset and how it affects learning and relationships. The year culminates with expressing gratitude and performing acts of kindness, leading to constructive activities to take mindful action in the world and improve the lives of others.

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## FOURTH GRADE

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### Overview

The fourth-grade year focuses on building on the foundation of the earlier years in Lower School. As intellectual abilities begin to expand, students are challenged to engage in increasingly abstract and complex thinking while continuing to solidify basic skills and competencies and make them automatic. Students demonstrate increased independence, accountability, and self-management with their time, materials, and school tasks. They increase their organizational skills, build independent study habits, and engage in goal setting with their teachers. The theme of leadership is central to all aspects of fourth-grade life—in the classroom, on the playground, and in the greater community. Students explore numerous models of leadership, and each child constructs a concept of leadership that is meaningful to him or her. Students are expected to be leaders in a variety of arenas—in their family, among classmates, in the Lower School through leading assemblies and school-wide initiatives, and in civic leadership and community service.

### Literacy

In Readers and Writers Workshop, students take a scholarly approach to the study of reading and writing. The fourth-grade students are exposed to a wide variety of genres in order to discover different purposes and styles of writing. Genre studies include narrative fiction, historical fiction, persuasive essays, nonfiction, and research. Through the use of mini-lessons, individual conferences, and small groups, teachers meet individual needs and support the development of literacy skills and strategies. Students are challenged to be reflective about the habits and practices of good readers, authors, and researchers. Spelling and word study continues within the CR Success program and turns to a focus on the roots and etymology of words and word parts.

### Math

Exploration, discovery, and explanation are crucial components for building understanding with children in the ongoing

development of number sense and mathematical proficiency. The Bridges program is used as the basis of our studies, and many additional resources are used to supplement the program. Students have two math periods daily, a Number Corner lesson and a math class taught by the math specialist. Students focus intensively on the four critical areas specified by the Common Core State Standards for Mathematics in fourth grade: developing an understanding and fluency with multi-digit multiplication; developing an understanding of dividing to find quotients involving multi-digit dividends; developing an understanding of fraction equivalence, addition and subtraction of fractions with like denominators, and multiplication of fractions by whole numbers; and developing an understanding that geometric figures can be analyzed and classified based on their properties, such as having parallel sides, perpendicular sides, particular angle measures, and symmetry. Regardless of the particular focus of study, students are consistently asked to look at problems in different ways and communicate their thinking through both oral and written explanations. They are often asked to “prove” their answers and explain their reasoning in detail, ultimately adding depth and dimension to their true understanding of mathematics.

### Science

In fourth grade, students continue a two-year course that began in third grade, taught by the same teacher. The goal of fourth grade science is to foster students’ curiosity about the wonders of science. The curriculum places a strong emphasis on honing students’ investigative skills while concurrently expanding their understanding of scientific vocabulary, facts, and theories. To actively engage with the subject matter, students maintain an interactive journal that documents their science-related experiences. The units covered encompass a wide range of topics, including the Scientific Method, the Engineering Design Process, Matter and Energy, Waves, Earth’s Changing Surface, Rocks and Fossil Formation, and Animal Structures.

For each unit of study, students partake in hands-on activities where they delve into and

explore newly introduced topics. They actively investigate and experiment with the subject matter, fostering a deeper understanding of the concepts learned. Toward the end of the academic year, students delve into the fascinating realms of aerodynamics and flight physics. Through the incorporation of the engineering design process, they engage in planning, designing, creating, and testing air-pressure rockets. Throughout the course, the emphasis is placed on experimentation and practical applications. Students are encouraged to actively participate in flexible, independent science experiences that allow them to apply their knowledge in real-world scenarios.

### Social Studies

In fourth grade social studies, students continue a two-year course that began in third grade, taught by the same teacher. In the second of the two years, the students study American and Texas history. Social studies is closely tied to our focus on leadership. Students are encouraged to ask questions and reflect on the motivations, convictions, and strategies of the leaders of the past in order to make meaningful connections to our present world. In social studies class, students develop their note-taking and research skills, collaborate on group projects, and participate in meaningful discussions and debates. With the tools, knowledge, and experiential fourth grade curriculum, students move on to Middle School as active leaders.

### Art

The fourth grade art curriculum encourages students to think like artists, build skills, practice various techniques, and make connections to other subjects as well as the world around them. Students have opportunities to choose their own materials and subject matter but are also tasked with creating their own solutions to art challenges with set parameters. While the focus is on the creative process rather than producing a finished product, fourth graders are learning to evaluate and assess their own work. Our spiraling curriculum builds upon skills students have learned in previous years, allowing them to add layers of complexity to their work in both two- and three-dimensional mediums as they grow as artists.

## Music & Movement

Fourth grade represents the culmination of students' musical learning in Lower School. As their knowledge of pitch and rhythm is rounded out, greater emphasis is placed on student-generated material. Students are asked more frequently to work in small groups to choreograph short movement sequences or compose instrumental pieces to accompany their peers' movement. Recorders (sometimes introduced in third grade but otherwise always added by the fall of fourth grade) give students their first introduction to playing a wind instrument. They are also the way that the school introduces named pitches on the musical staff. All fourth graders are also invited to join the Lower School choir, which meets after school one day a week.

## Spanish

The fourth grade language courses further student experience of Spanish language and cultures. Exposure is not only to Mexico and Spain but other related nations as well, giving the students facility to distinguish between multiple cultures and languages. Training in both spoken and written language allows students to navigate public spaces and communicate respectfully. While continuing to work with cross-curricular, grade-level academic themes, students also build functional language capabilities. Students develop recognition of major Spanish historical figures and learn about the geography and ethnic diversity of Latinx culture.

## Computer Science & Engineering

Computer science and engineering constructs are embedded throughout the fourth-grade curriculum as students begin to leverage digital tools and resources to demonstrate competency in their learning goals and their journey toward digital independence. Investigations into the world of coding and robotics afford opportunities for students to learn to be critical thinkers and problem-solvers. The fourth-grade digital citizenship curriculum is centered around newly introduced collaboration and communication tools such as Microsoft Office 365 and Microsoft Outlook. Students begin to recognize the rights, responsibilities, and

opportunities of living and learning in an interconnected digital world.

## Library

Fourth graders learn about library procedures and practices and how to navigate the library to find books of interest. They learn how to use the online catalog and practice locating books on the shelves. In the fall, the Texas Bluebonnet Award Reading Program is announced, and all students are encouraged to participate. This program encourages reading for pleasure for students in grades 3-6 in hopes of exposing children to excellent writers across several genres. Students must read five of the books from the list in order to be eligible to vote. In addition to the Bluebonnet Program, fourth graders are given the option to participate in a yearly reading challenge that encourages the students to read books from a variety of genres. Together in class, students also read and discuss a variety of genres and focus on literature skills and concepts covered in the classroom. Fourth graders are also introduced to beginning research skills, such as note-taking, understanding plagiarism, and learning how to create a basic citation. Students learn how to access and use the library's various online resources and databases. The Lower School library goal is to provide a foundation for students to love literature and learning.

## Physical Education

Fourth grade students participate in Physical Education daily for 45 minutes. The curriculum is focused on various movement activities designed to promote motor and manipulative development, the understanding of a healthy lifestyle, healthy competition, and a positive self-image. Emphasis is on enjoyment, challenge, self-expression, and social interaction within movement experiences. The curriculum also includes an aquatics unit accenting proper stroke development, water safety, and self-confidence during swimming and a climbing unit.

## Social-Emotional Learning

Students build and strengthen social-emotional competencies through the MindUP curriculum. Daily repeated practice of

mindful breathing hones attentive listening and calming. Students learn about how their brains work and explore becoming mindfully aware of all that is going on around them. As they progress through the curriculum, they practice perspective-taking and optimism, learning about the importance of mindset and how it affects learning and relationships. The year culminates with expressing gratitude and performing acts of kindness, leading to constructive activities to take mindful action in the world and improve the lives of others.

# Middle School Curriculum 2023-2024

## Grades 5-8

The Middle School grades are a time of rapid developmental, intellectual, physical, and emotional growth. The Middle School program is designed to support these fundamental needs with targeted skills development, lively and challenging instruction, opportunities for choice, and strong, supportive relationships. A hallmark of the Middle School is the focus on collaborative teaching and learning, and demonstration of learning can take many forms. Faculty work cross-departmentally to build lessons and expectations that apply to all students and topics.

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### FIFTH GRADE

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#### English 5

English 5 stresses the development of narrative, expository, and descriptive writing skills, with special emphasis on paragraphing and organizing ideas. Students also learn to identify basic parts of speech and to use each one intentionally. In addition, students develop reading and thinking skills critical to understanding and appreciation of literary genres. Emphasis is on analyzing the fictional elements of setting, conflict, climax, characterization, and theme. Active reading strategies involve learning the habits of good readers. A lively free-choice reading program and partnership with the library encourage a lifetime love of reading.

#### Fifth Grade Language Carousel

This course consists of a third of the year each of Spanish, Latin, and Chinese. Through the study of culture and grammar, students develop basic language skills, hone fruitful study habits, and instill cultural awareness. Each language study culminates in a celebration of similarities and differences across all three languages. This language carousel focuses on the importance of learning languages and developing strategies that allow students to be successful no matter what language they might study in the future.

#### Math 5

Math 5 stresses problem-solving and mathematics reasoning in real-life situations. It builds on fundamental mathematical strands such as numeration and counting, operations and relations, and problem-solving. It explores more of the mathematical spectrum by investigating the basis of data gathering and analysis, probability, geometry, and algebra. Students learn to explore the “why” behind each operation.

#### Science 5

This course serves as a transition year between the initial exploration of science in the Lower School and more formal inquiries in the years that follow. Concepts studied include those from earth science, life science, environmental science, and physical science with a special focus on the local environment. Students learn how to collect, process, and analyze information and how to use scientific evidence in decision making. Collaborative and hands-on problem-solving characterizes this course.

#### History 5

This course builds profiles of classical and ancient civilizations by examining geography; basic beliefs and values; government and economic systems; and social structure, intellectual achievement, and arts and architecture. It addresses prehistory, comparing the old and new Stone Ages; the beginnings of history at Sumer; ancient civilizations in the Mideast with a focus on Egypt; Minoans; Mycenaeans; the classical Greeks; Romans, both Republic and Empire; Islam and the Medieval Arab Empire, and the first half of the Middle Ages in Europe. This includes the beginnings and development of Judaism, Christianity, and Islam. The broad themes offer students patterns for making rational judgments. Students examine myth and fact, build listening and note-taking skills, learn to read and construct maps, and develop sequences out of facts. They construct databases of information and conduct research, beginning to evaluate the validity of their sources.

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### FIFTH GRADE ELECTIVE PROGRAM

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Each fifth grader selects from either Band or Strings for a yearlong music commitment. In addition, each student will participate in a rotation of four courses throughout the year: Choir, Drama 5, Coding, and Visual Arts.

#### Visual Arts 5

In this course, students are introduced to the fundamental techniques and concepts of both two-dimensional and three-dimensional art. There is an emphasis on the elements of art and principles of design through a variety of projects that enhance student awareness of various media. Students participate in exhibitions in the fall and spring, as well as annual off-campus events.

#### Beginning Band: Brass & Woodwinds

Band classes in the fifth grade focus on establishing a solid foundation of instrumental technique and musicianship skills that culminates in participation in the sixth grade band, the seventh/eighth grade band, and the Upper School concert and jazz bands. Students may try out any of the following: trumpet, trombone, French horn, euphonium, clarinet, oboe, or flute.

#### Choir

Choir emphasizes the development of vocal technique to be directed toward the choruses in the sixth, seventh, and eighth grades culminating in participation with the seventh/eighth grade Mixed Choir and the Greenhill Singers in Upper School. The main focus of choir is on sight reading, vocal technique, and performance. The fifth grade choirs perform many times during the year.

#### Strings 5.0

Beginning Strings class is available for students who wish to begin the study of violin, viola, cello, or string bass. All prospective string beginners are encouraged to participate in the Jump Start to Strings summer program, which is a concentrated two-week term of daily individual lessons (ten 45-minute lessons total) to be scheduled at the mutual convenience of individual student families and the instructor. There is no fee for

this program, but students and families must commit to a good faith effort during the two weeks. Students are also given some basic instruction in music theory.

### **Strings 5.5**

This Intermediate Strings class is available for students who have been studying violin, viola, cello, or string bass for one year or more. Good habits of technique and of musicianship are emphasized in this class. Students play intermediate-level pieces for string orchestra and are introduced to appropriate works of chamber music. Alternative styles of string playing (fiddle, jazz, pop) are also introduced. Students are also given some basic instruction in music theory.

### **Coding**

Students explore and understand the process of computer programming through the lens of *Minecraft*, a familiar game to many. Students create using both MakeCode (a block-based coding language) and Python (a traditional text-based coding language). Students work on design and problem-solving skills while building in *Minecraft*.

### **Drama 5**

Students are introduced to practices and terms of drama that include storytelling, improvisation, acting, and performing. Students participate in acting exercises that focus on developing the ability to listen and respond truthfully as an actor, vocal support, and technique, as well as exploring improvisational exercises to build self-confidence to trust their instincts.

### **Physical Education 5**

Daily physical education provides students with various activities that contribute to students' physical, mental, and social development. The curriculum promotes safety, self-esteem, discipline, sportsmanship, and positive attitudes about physical activity. Every student is introduced to the skills and basic strategies of team and individual sports, with an emphasis on physical fitness. Activities include swimming, football, volleyball, field hockey, basketball, soccer, track, tennis, lacrosse, and softball and baseball; lifetime activities of swimming, badminton, and tennis; and a tumbling unit.

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## **SIXTH GRADE**

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### **English 6**

English 6 accentuates the appreciation and improved use of all language. Creative writing allows students to polish grammar, spelling, and punctuation skills, become better critics of language use, and develop a personal voice as a writer. Students develop specific skills that enable them to read well independently and to develop an enthusiastic and ever-broadening interest in reading. Reading nonfiction promotes critical reading skills, including finding the main idea, recalling facts, making inferences, and using words precisely. Across the Middle School, a lively free-choice reading program and partnership with the library contribute to the development of lifelong readers.

### **Math 6: Foundations and Applications**

This course utilizes whole number operations to begin mathematical problem-solving, study ways of measuring and representing data, work with computers and calculators, and gain an appreciation of mathematics through the study of its applications in everyday situations. Emphasis is on utilizing skills in whole number operations and estimation, measurements, percent, geometry, graphing, ratios, proportions, rate and distance, calculations, money and financial applications, and exponents and integers. Problem-solving techniques such as logical thinking, estimating, drawing, and diagramming are integrated throughout the progression. Students learn to explore the "why" behind each concept and operation.

### **Science 6**

This course serves as a continuation of the integrated fifth grade course, with an even greater focus on Earth Science. Units include ecology, cells, and hands-on engineering projects.

### **History 6**

This course helps students understand historical cause and effect. It begins with the end of the Medieval period in Europe and runs through the Renaissance period. Students examine the scientific revolution; inventions and art of Renaissance Europe; the Protestant Reformation; the development of

nationalism in England and Spain; the Age of Exploration; Inca, Aztec, and Mayan cultures; and a comparison of feudalism in Japan and Europe. Note-taking and map-reading skills are practiced. Learning is enhanced by creative projects, connections to our world today, and the beginning of historical analysis.

### **Chinese 6**

Mandarin Chinese initiates the general course of study that is Chinese at Greenhill. The program consists of four main components: speaking and listening comprehension, reading and writing, research skills, and history and culture. During the first year of study, students build the foundation that will serve them for years to come. This requires tenacity and patience, but it does not involve being overwhelmed. This class's approach is to create an interplay so that students can experience the all-at-onceness of the whole from early in their study, yet at the same time, the whole is broken down into comfortably manageable parts.

### **Latin 6**

This course exposes students to the culture, history, mythology, and ideals of the classical world while exploring the influence of the Latin language and Roman culture upon our modern society. Diversity is examined in the multicultural nature of the classical world. Students are introduced to the basic morphology, grammar, and syntax of the Latin language. The course is designed to develop the student's ability to read Latin through the use of leveled texts and to enhance the student's understanding of English etymologies. Students acquire a reading knowledge of Latin as they see vocabulary and grammar in context and under controlled circumstances. Reading comprehension questions in Latin and English are used to assess understanding of the texts.

### **Spanish 6**

This course stresses the importance of foreign language study while providing an opportunity to further develop the students' vocabulary, strengthen their speaking and listening skills, enhance their reading comprehension, and increase their awareness of Hispanic cultures. The course focuses on listening for comprehension and speaking

with correct pronunciation. Students acquire topical vocabulary and useful idiomatic expressions. They study basic grammatical structures with an emphasis on regular and irregular verbs and stem-changing verbs in the present tense. Furthermore, students are exposed to the various aspects of Hispanic culture, history, and geography. The class examines the issue of diversity in its exploration of Hispanic life and develops cultural understanding by enabling students to make cross-cultural comparisons.

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## SIXTH GRADE ELECTIVES PROGRAM

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Each sixth grader selects a yearlong music choice (Band, Strings, or Choir) and participates in a rotation of Exploratory Design, Visual Arts, Stage Play, and Communications in the 21st-century.

### Exploratory Design 6

Students design using Tinkercad, a digital 3D design tool that allows students to see their ideas come to life using our 3D printers. Students also create, edit, and share podcasts on topics of their choosing or design and produce how-to crafting videos. Through the different projects, students experience the design process using various real-world digital tools.

### Visual Arts 6

Students are introduced to the fundamental techniques and concepts of both two-dimensional and three-dimensional art. There is an emphasis on the elements of art and principles of design through a variety of projects that enhance student awareness of various media. Students participate in exhibitions in the fall and spring, as well as annual off-campus events.

### Boys Choir 6

Choir emphasizes the development of vocal technique to be directed toward the choruses in the sixth, seventh, and eighth grades, culminating in participation with the seventh/eighth grade Mixed Choir and the Greenhill Singers in Upper School. The main focus of choir is on sight reading, vocal technique, and performance.

### Girls Choir 6

Choir emphasizes the development of vocal technique to be directed toward the choruses in the sixth, seventh, and eighth grades, culminating in participation with the seventh/eighth grade Mixed Choir and the Greenhill Singers in Upper School. The main focus of choir is on sight reading, vocal technique, and performance.

### Brass 6

This course focuses on establishing a solid foundation of instrumental technique and musicianship skills that culminates in participation in the sixth, seventh, and eighth grade band and the Upper School concert and jazz bands.

### Woodwinds 6

This course focuses on establishing a solid foundation of instrumental technique and musicianship skills.

### Strings 6.0

Beginning Strings class is available for students who wish to begin the study of violin, viola, cello, or string bass. All prospective string beginners are encouraged to participate in the Jump Start to Strings summer program, which is a concentrated two-week term of daily individual lessons (ten 45-minute lessons total) to be scheduled at the mutual convenience of individual student families and the instructor. There is no fee for this program, but students and families must commit to a good faith effort during the two weeks. Students are also given some basic instruction in music theory.

### Strings 6.5

Intermediate Strings class is available for students who have been studying violin, viola, cello, or string bass for one year or more. Good habits of technique and musicianship are emphasized in this class. Students play intermediate-level pieces for string orchestra and are introduced to appropriate works of chamber music. Alternative styles of string playing (fiddle, jazz, pop) are also introduced. Students are also given some basic instruction in music theory.

### Stage Play

Students move to the stage and continue to develop skills of acting and movement that

build on the skills introduced by the Drama 5 program.

### Communication in the 21st-Century

This class provides speech and debate skills that are applicable across all areas of school life. In addition, it serves as an introduction to debate classes offered in seventh and eighth grades.

### Physical Education 6

Daily physical education provides students with various activities that aid students' physical, mental, and social development. The curriculum promotes safety, self-esteem, discipline, sportsmanship, and positive attitudes about physical activity. Every student is introduced to the skills and basic strategies of team and individual sports, with an emphasis on physical fitness. Activities include swimming, football, volleyball, field hockey, basketball, soccer, track, tennis, lacrosse, and softball and baseball; lifetime activities of swimming, badminton, and tennis; and a tumbling unit.

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## SEVENTH GRADE

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### English 7

English 7 fosters a love of reading, an understanding of various writing styles, and an appreciation of good literature. Students recognize and understand abstract themes with special emphasis on an adolescent's point of view. Short stories and novels are analyzed for plot, character, point of view, voice, historical context, and other literary elements. In addition, seventh grade writers experiment with various poetic and prose styles. Students translate their literary insights into well-constructed critical pieces. Traditional and structural grammar is studied within the context of writing. Continual emphasis is on diverse sentence construction and correct mechanics. Across the Middle School, a lively free-choice reading program and partnership with the library contribute to the development of lifelong readers.

### Math 7: Foundations & Applications

This course is designed to facilitate the transition to algebra and abstract thinking. The goal is to train the students' minds to think more conceptually. Operations with

whole numbers, decimals, and fractions are reviewed but are presented from an algebraic perspective—solving equations. Other major topics include graphing on the coordinate system and problem-solving with an emphasis on the recognition and utilization of patterns. The textbook is supplemented extensively to introduce students to a greater range of mathematical topics and problem-solving techniques. Calculators and projects facilitate the opportunity to explore topics as well.

### **Algebra 7**

This course includes the study of numbers and sets, properties of operations, real numbers, equations and inequalities, word problems using equations to solve, factoring polynomials, operations with rational and radical expressions, solving rational and radical expressions, systems of linear equations and inequalities, irrational numbers, and solving and graphing quadratic equations.

### **Science 7**

This course uses an issue-based approach to life science to help students understand scientific ideas and processes. The topics covered in the yearlong course include scientific method and experimental design; structure and function of the human body with an emphasis on systems; cells; bacteria, viruses, and protists; infectious disease transmission; and Mendelian and modern human genetics. Daily work is based largely upon hands-on laboratories, projects, simulations, group discussions, and role play. The curriculum provides students with a solid foundation for conducting laboratory research and improves scientific reading and writing.

### **History 7**

This course focuses on American history, stretching from the Colonial Era into the Industrial Age. Along this path, students also jump to more recent times, such as the Civil Rights Movement and current events, in order to draw parallels between the past and present. The course stimulates students to understand history not simply for the details but also to appreciate the accomplishments, decisions, and ethical implications of the events and actions of the past. The students cover topics such as the Revolutionary War, United States geography, the Constitution,

the challenge of building a new government, westward expansion, the Native American experience, slavery, and the rise of big business. The course aims for students to think critically about history, engage in respectful discussions regarding different views, and dig deeper into topics to support their ideas. Students write a mix of creative historical works, current event responses, and at least one research paper. Some highlights from the year include Harkness discussions, town hall meetings, an innovation research project, and other cooperative learning activities. By the end of the course, students have both a deeper understanding of content and a moral appreciation of history that helps them connect history to their daily interactions and experiences in today's American society.

### **Chinese 7**

This course has four main components: speaking and listening comprehension, reading and writing, research skills, and history and culture, a course of study that fits squarely within the general goal of the Greenhill Chinese program. The seventh grade year ensures developmentally appropriate engagement with the many aspects of the Chinese language, literature, and culture. Its goal is to lay the groundwork for ongoing success at any level and in any type of Chinese study.

### **Latin 7**

This course exposes students to the culture, history, mythology, and ideals of the classical world while exploring the influence of the Latin language and Roman culture upon our modern society. Diversity is examined in the multicultural nature of the classical world. This course introduces students to the basic morphology, grammar, and syntax of the Latin language. The course is designed to develop the student's ability to read Latin through the use of graded texts and to enhance the student's understanding of English etymologies. Students acquire a reading knowledge of Latin as they see vocabulary and grammar in context and under controlled circumstances. Reading comprehension questions in Latin and English are used to assess understanding of the texts.

### **Spanish 7**

This course employs varied strategies to develop in students a love and a passion for learning Spanish in lively and interesting ways. Students learn to communicate in the language, become more familiar with countries where Spanish is spoken, understand different traditions of Hispanic culture, and increase their desire to explore the Spanish-speaking world. Students participate in a variety of daily oral paired activities that include role-play skits and scenarios, as well as class discussions, dialogues, interviews, and games. They read a variety of short stories and authentic texts, watch video clips and do listening activities, and write simple paragraphs. Students also engage in creative projects with the language and culture that include artistic, digital, and culinary endeavors.

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## **EIGHTH GRADE**

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### **English 8**

English 8 students improve reading comprehension and higher-order thinking by engaging with a number of compelling texts. Emphasis is on literary techniques and the writing choices made by each author. Students are asked to develop opinions supported by the texts and to write critically using effective thesis statements and evidence provided by the authors. The course includes a free-choice outside reading program, as well as frequent collaborative projects. Eighth grade writing instruction stresses the development of creative, expository, and analytical writing skills through familiarity with the writing process: outlining, drafting, editing, and revising.

### **Intro to Algebra**

This course provides opportunities to achieve proficiency in number theory (divisibility rules, greatest common factor, and least common multiple). Beginning algebra is stressed with emphasis on evaluating and simplifying expressions and using the order of operations. Students also learn to solve multistep linear equations, graph linear equations, and use skills involving ratio, percent and proportions, and the Pythagorean Theorem. The final third of the

course stresses geometry (spatial concepts, area and perimeter of polygons, and surface area and volume of solids).

### **Algebra 8 and Honors Algebra 8**

These courses include the study of numbers and sets, properties of operations, real numbers, equations and inequalities, word problems using equations to solve, factoring polynomials, operations with rational and radical expressions, solving rational and radical expressions, systems of linear equations and inequalities, irrational numbers, and solving and graphing quadratic equations.

### **Honors Geometry 8**

This Upper School-level course is open only to those who have completed Honors Algebra as seventh graders.

### **Science 8**

Eighth grade science is a physical science course that addresses concepts such as force and motion, energy, and chemistry. Students utilize an exploratory investigative approach to identify and analyze conceptual questions, culminating in an understanding of a variety of scientific principles. This student-driven discovery process is enhanced by collaborative and guided lab work.

### **History 8**

This course introduces non-Western history, with China as the focal point and additional case studies from the history of both India and Africa. The course explores themes that include geography, ancient civilizations, emerging empires, the impact of imperialism, and the growth of nationalism. Students refine note-taking skills, develop analytical thinking skills, and enhance reading and writing proficiency. Research skills are emphasized. Students gain experience in researching techniques, choosing and narrowing a topic, writing a thesis statement, taking notes, organizing an outline, and writing, proofreading, and revising.

### **Chinese 8**

This course furthers student engagement with speaking and listening comprehension, reading and writing, research skills, and history and culture. The foundation laid in seventh grade is elaborated upon and extended.

### **Latin 8**

This course continues the study of the culture, history, mythology, and ideals of the classical world while exploring the influence of the Latin language and Roman culture upon our modern society. Diversity is examined in the multicultural nature of the classical world. In this course, students continue to work on the basic morphology, grammar, and syntax of the Latin language. The course is designed to develop the student's ability to read Latin through the use of leveled texts and to enhance the student's understanding of English etymologies. Students acquire a reading knowledge of Latin as they see vocabulary and grammar in context and under controlled circumstances. Reading comprehension questions in Latin and English are used to assess understanding of the texts.

### **Spanish 8**

This course is centered on language acquisition skills enhanced by digital resources as well as role-play through skits and scenarios, class discussions, dialogues, interviews, and games. It also incorporates literary and artistic features of culture along with basic historical and geographical information.

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## **SEVENTH AND EIGHTH GRADE ELECTIVES**

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*Please note: Not all electives are offered each semester. Each seventh and eighth grade student is enrolled in two electives per semester. Electives can be yearlong or semester-long in duration.*

### **Intro to Acting**

Students are introduced to theater terminology and script reading and play performance-style improvisation games, with an emphasis on character development and comedic timing. Students must take Intro to Acting prior to One Act Play to achieve skill sets and a familiarity with the program's expectations.

### **Intro to Drums/Percussion**

This semester-long course is designed for the beginner-to-intermediate drummer who wants to have fun and learn different percussion instruments.

### **Choir Ensemble (Yearlong class)**

The Middle School Choir Ensemble is comprised of seventh and eighth grade

students. Musical selections range from standard choir repertoire of classical, holiday and pop music. Students will have opportunities to audition for solos if desired.

### **Concert Band (Yearlong course)**

This instrumental ensemble is comprised of intermediate-to-advanced players of woodwind, brass, and percussion instruments. The band learns pop music and standard concert band repertoire. The band performs once per trimester. Students may also participate in All-Region Band Auditions and the Solo/Ensemble Contest.

### **Creative Writing**

Creative Writing provides a distinct artistic and creative outlet for students wishing to pursue writing as an art form. The course will include elements of play and script writing, poetry, short stories, and memoirs. Students will have writing exercises to help enhance their creativity while also being allowed to explore unique and personal writing topics with more freedom and thought.

### **Debate I**

This class gives students the opportunity to explore different formats of academic debate and practice the process numerous times through debates against classmates. Students will learn basic tenets of the structure of an effective argument, efficient research techniques, tips on the presentation of arguments, and successful ways to respond to arguments.

### **Debate II**

This class is for students seriously considering debate as an option in Upper School. Students will engage in an examination of competitive debate and focus on issues such as topic analysis, delivery, organization, and research. The focus will be on both policy debate and Lincoln Douglas debate formats in class.

### **Advanced Debate**

This course helps students experience all dimensions of competitive debate. Building on a foundation established in prior Debate courses, the class emphasizes participation in formal debates and will require participation in at least one tournament (4-5 tournament opportunities each semester). The class reviews the basics and introduces advanced

forms of argumentation, research, evidence comparison, cost-benefit analysis, note-taking, audience adaptation, and best practices in contemporary debate theory. Students will focus on either Lincoln Douglas Debate, Policy Debate, or World Schools Debate. While debate is competitive in nature, students will never be graded on wins or losses. Grades will be earned based on research, participation, argument development, and collaborative work done to create and prepare cases to excel competitively in extra/cocurricular tournaments.

### **Digital Media**

Students will bring creativity to life using different digital media tools as they plan, create, edit, and showcase work to the community. Students will analyze podcasts and learn how to create animated shows using different tools like stop-motion animation, Scratch, and other tools.

### **Evergreen Middle School**

This introductory class will expose students to the basics of journalism and writing for *The Evergreen*. Students will learn how to define news; how to gather and organize information; how to write news and feature "leads"; and how to write complete news stories, features and profiles. The basics of news photography and design will be discussed, along with journalism ethics and bias. Students will write for the online edition of the *Evergreen* as they develop skills needed for Introduction to Journalism in Upper School.

### **Figure Drawing I & II**

Students in the figure drawing studio will learn to draw the human form and develop proper proportions for their figures. Students will gain a better understanding of how to utilize Gesture and Contour Line drawing to develop their Figure Drawings. Students will use a variety of mediums like charcoal, soft pastels, graphite, and ink to produce their pieces. As the semester progresses, students will learn about Color Theory and Abstraction.

### **Graphic Design**

The purpose of this course is to give students a core understanding of how graphic design impacts us every day and how to master the

basics of good graphic design. This course explores graphic communication through the understanding of the elements and principles of design, such as color theory, composition, and emotional font selection. Students in the course will learn about the following disciplines: advertising, graphic design, web design, and illustration. Students will also learn how to use industry tools such as Adobe Photoshop and Adobe Illustrator to bring their designs to life with product designs and vinyl work.

### **Guitar/Keyboard Music**

This is essentially two different classes that meet at the same time. Students work in small groups as the instructor rotates from group to group, listening and offering some instruction. Keyboard players play piano duets and, at times, accompany instrumentalists. Working in small groups gives them the opportunity to enjoy playing chamber music and to learn from each other as well as from teacher instruction.

### **Jewelry**

This class will teach how to make earrings, bracelets, necklaces, and more. Students use preconstructed materials/beads to create several different pieces that are unique and beautiful.

### **Middle School Improv 1**

Students learn basic elements of improvisational comedy and discover how spontaneity can make improv an enjoyable experience for all. Students will learn how to utilize suggestions from the audience in a brief scene or skit, called short-form improv. They are introduced to the methods involved in developing a scene, a variety of character-building activities, and games and exercises for developing improv skills. Students will leave this course with a better appreciation for the diversity of ideas expressed by their peers and a better sense of what a contributing member of a team can help to create. Materials needed are an open mind and a good sense of humor.

### **Middle School Improv 2**

This course takes the concepts and techniques introduced in Improv 1 and applies them to a variety of more advanced

individual and small-group games and exercises. Emphasis will be placed on developing a well-structured cohesive storyline, realistic conflicts, (somewhat) believable resolutions, creating unique characters, using appropriate physicality, improving comedic timing, and maintaining a consistently high level of performance energy. Students will work together to develop and share ideas to reach a common goal while improving their stage presence and confidence level. Student progress culminates with the production of a small student-directed performance. Prerequisite: Improv 1/ approval of instructor.

### **Musical Theater**

This course is designed for those students interested in the study of the musical performer's tools: singing, dancing, and acting. Study will include show research and script analysis, song interpretation, proper musical theater vocal technique, and stylized dance technique, all to develop characterization and create a unified performance both dramatically and musically.

### **One Act Play**

Students prepare and perform a one-act play for a community performance. More in-depth analysis of character and plot is expected, and greater emphasis is placed on performance. Prerequisites: Intro to Acting or approval of instructor.

### **Online Entrepreneur: Becoming a Content Creator**

Students will learn the skills needed to create weekly podcasts and videos for platforms such as Wonderly, YouTube, and others. These skills will include research, preparation, recording, editing, and publishing. Software tools such as OBS (Open Broadcast Software) Studio, Adobe Premiere Pro, and Adobe After Effects will be taught to allow the class to create engaging video content. Students will also learn from professionals in the industry about what it takes to get started in the field.

### **Photography (Beginning)**

Beginning photography provides instruction using iPods or iPhones to shoot assignments, begin to digitally retouch using Snapseed software, and learn how to do final

retouches in Adobe Photoshop. Proper lighting, composition, focus, and design will be accomplished through a variety of assignments.

### **Photography (Advanced)**

This course is an experimental exploration of the photography medium. Students will work more independently in the darkroom and perform assignments that will give insight into technical problem-solving. Participants will create digital negatives and work with advanced darkroom printing techniques, black-and-white toning methods and unique light experiments. Prerequisite: Beginning Photography

### **3D Modeling & Printing**

In this course, students will learn how to 3D model using Onshape, an industry-grade software. Students will learn how to model whatever they select from mechanical parts and toys to fashion and jewelry. Once students have modeled their creations, they will learn how to 3D print and laser-cut them in various materials. Skills learned in this class can be used in product design courses and will be applicable to other 3D software, such as 3D animation.

### **Prototyping**

Most inventions and products start from a simple prototype. Using Arduino, students will begin to understand electronics and programming. The entire design process will be explored, from hand drafting to the actual building of the prototype. Students will keep a design notebook throughout the class to catalog their progress.

### **Robotics for the Real World**

Students will experiment with designing and building their own robots using LEGO EV3 Mindstorms within the context of a FIRST LEGO League competition to ultimately get to solve real-world problems. The class will learn how to build, program, and engineer an autonomous robot using the LEGO EV3 Mindstorms kit. Using a variety of sensors, motors, and creativity, students will work on a team to build a robot that can navigate a set of real-world challenges, such as moving resources on a distant planet and exploring its difficult terrain. By the end of the course, the class will have developed important industry-

focused skills such as problem-solving, mechanical design, and programming.

### **Sculpture & Ceramics**

Students will investigate different sculpture techniques and materials, such as cardboard and paper-mache, and will explore various decoration methods. They will learn attachment techniques for wood and small metals, subtractive sculpture by carving plaster, casting methods using rubber molds and epoxy resin, and some glass-fusing techniques. Students will also learn various methods of working with clay. Beginners will learn hand-building, techniques including coil, soft slab, stiff slab, and finishing techniques. They will also explore figurative sculpture with clay. Students who have already taken Ceramics (primarily eighth graders) may begin to work on the potter's wheel and learn how to measure glaze materials and assist in making glazes.

### **Sinfonia (Yearlong course)**

This ensemble, made up of Middle School strings players, rehearses, and performs chamber music and appropriate orchestral works from the standard repertoire.

### **Technical Theater I**

This course presents students with a broad overview of the backstage areas in the theater, including set design and building, lighting, sound, makeup, and costumes. Students participate in class projects, learning worksheets, and hands-on work.

### **Technical Theater II**

Students continue to expand their backstage knowledge and skills through more concentrated projects in specific areas. Projects vary each semester and are based on areas of class interest. Technical Theater II students work on technical needs for Middle School acting productions. Prerequisite: Technical Theater I.

### **Ukulele!**

Ukulele! is for anyone who has or hasn't played the ukulele. Students will learn strumming patterns and easy chords and play a wide variety of songs. There is no prerequisite for Ukulele! There will be a limited number of ukuleles for loan if needed.

### **Video Production**

MSVP students write, produce, shoot, and edit a film all on their own as a large group. They use the same materials that the Advanced Video Production (AVP) students use to make the films that have made Greenhill one of the most decorated film production schools in the nation. No film experience is necessary, just the desire to be part of a filmmaking team.

### **Web Design**

In order to design web interfaces, students will learn the basics of how the web works and how to build within it. Students will be introduced to the fundamental building blocks of how websites and apps are developed. The course will touch on both the creative design and functional elements of websites while students learn how to design and develop their own websites with HTML, CSS, and JavaScript.

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## MIDDLE SCHOOL ATHLETICS

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In seventh and eighth grades, students may join athletic teams for interscholastic competition. Across the three sports seasons, students may choose from:

- Baseball
- Basketball (boys and girls)
- Cross Country (boys and girls)
- Field Hockey
- Football
- Golf (boys and girls)
- Lacrosse (boys and girls)
- Soccer (boys and girls)
- Softball
- Swimming (boys and girls)
- Tennis (boys and girls)
- Track and Field (boys and girls)
- Volleyball (boys and girls)

### **Physical Education in the High Performance Center 7/8**

Students select either physical education classes or the opportunity to join a competitive athletic team. These programs are offered simultaneously during the school day, with competitions after school. Physical education includes tennis, swimming activities, badminton, team handball, floor hockey, ultimate frisbee, strength and conditioning, dance, and activities that emphasize fitness and competition. The emphasis is on fostering healthy attitudes toward physical fitness, developing a positive self-concept, encouraging desirable social interactions, and building good sportsmanship.

# Upper School Curriculum 2023-2024

## Upper School Curriculum Contents

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## Introduction

This section is intended to provide an overview of Upper School courses and graduation requirements for the 2023-2024 academic year. For students who enroll, the requirements for graduation in the box on page 23 should serve as a guide in making course selections. These requirements ensure an 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 shaping 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, one of which can include a fine arts course, a PE course, or participation 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

### Department

#### COMMUNITY SERVICE

- 18 hours in grades 9 & 10
- 18 hours in grades 11 & 12 (Class of 2024)
- 24 hours in grades 11 & 12 (Classes of 2025, 2026, and 2027)

#### DESIGN & INNOVATION

- 1 semester of Design & Innovation

#### ENGLISH

- Full year of 1010 English (9th)
- Full year of 1020 English (10th)
- 1 semester of 1730 Narrative Nonfiction (11th)
- Juniors and seniors must complete an English elective every semester of 11th and 12th grade. In 11th grade, students must complete 1730 Narrative Nonfiction as one of their electives.

#### FINE ARTS

- 4 semesters of Fine Arts classes

#### HISTORY AND SOCIAL SCIENCE

- Full year of 4010 Global History
- Full year of 4020 U.S. History
- 2 semesters during 11th & 12th grades; at least 1 semester must be a Government course

#### MATHEMATICS

- 6 consecutive semesters starting in 9th grade

#### MODERN AND CLASSICAL LANGUAGES

- 4 consecutive semesters starting in 9th grade
- Students must demonstrate competency through Level III of one language

#### PHYSICAL EDUCATION/ATHLETICS

- 2 semesters of Physical Education or 1 semester and 1 season of Team Sport or 2 Team Sports (9th); Foundations of PE course is required if you are not in 2 Team Sports in both 9th grade and 10th grade
- 2 semesters of Physical Education or 1 semester and 1 season of Team Sport (10th)
- 1 semester of Physical Education or 1 season of Team Sport (11th)
- 1 semester of Physical Education or 1 season of Team Sport (12th)

#### SCIENCE

- Full year of Physics (9th)
- Full year of Chemistry (10th)
- Full year of Biology (11th)

#### WELLNESS

- Completed in group and class settings

## Cross-Listed Courses

Literature of Human Rights	U.S. English (1330)	History (4220)
Chemistry of Photography	Fine Arts (6140)	Science (5340)
Dance Technique	Fine Arts (6445)	PE (8510)
Theater: Musical Production	Fine Arts (6450)	PE (8560)
Greenhill Dance Company	Fine Arts (6440)	PE (8570)
Design of Immersive & Interactive Art	Fine Arts (6005)	Design & Innovation (9610)

## NCAA Eligibility

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

Courses that are NOT NCAA-approved include Design & Innovation classes, Advanced Tutorials in English, Writing Tutorial, Reading Tutorial, Tutorials in History/Social Studies, Advanced Tutorials in History/Social Studies, Personal Finance, Advanced Tutorial in Mathematics, Advanced Tutorials in Modern and Classical Language, Chemistry of Photography, and Advanced Tutorials in Science. The Literature of Human Rights course may only count for English credit for NCAA eligibility purposes. The History of Human Rights course may only count for History/Social Sciences credit. Many Global Online Academy courses are approved by the NCAA. Please confirm approval status with the College Counseling office or the Global Online Academy Site Director.

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## 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 three-credit course, and a full-year course is a six-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 a minimum of six 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. Simply fulfilling graduation requirements doesn't necessarily mean one has met the academic expectations of some colleges' admission processes.

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. The more selective the college, the greater the expectation that students will challenge themselves within the context of Greenhill's academic offerings.

By all means, pursue your academic and co-curricular interests, but remember that 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 Advanced Placement (AP) courses is permitted per student per year. With the exception of AP Government, AP 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 AP courses are listed with an accompanying "AP" to distinguish them from the other advanced courses offered in the curriculum. Prerequisites for enrollment in an AP 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 that 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 12) and the rationale;
- The name of the mentor

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

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## Community Service

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

As students identify and select their community projects, they begin to see themselves as leaders and resources in the

community. By serving their community, students are using critical thinking and problem-solving skills in new and challenging ways and ultimately changing their views of themselves and the world they live in.

The school's service aligns with the school's mission and vision because we see our world more hopeful because of the Greenhill community.

*Note: Please see the Upper School Community Service box at right.*

### Upper School Community Service

The community service guidelines have been updated for the 2023-24 school year. Please note these guidelines are subject to change for the 2024-25 school year.

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## Design & Innovation

*The Design & Innovation department and program's goal is to provide students with an opportunity to learn how to become innovators as it has been defined by industry. The definition of innovation is the overlap of human need, technical feasibility, and business viability (or self-sustainability).*

*From this definition, the Design & Innovation program has been designed to teach students how to:*

1. *Identify relevant problems*
2. *Solve problems technically*
3. *Make their solutions profitable or self-sustaining*

*Innovation is about story, design, the human experience, and entrepreneurship, not just about technology, robots, and engineering.*

*If you see yourself as a highly technical person, please join us to explore this more deeply. You will learn about how impactful it can be to discover what problems people really need solved and how to solve them in elegantly simple and beautiful ways that can be productized.*

*If you see yourself as someone nontechnical, please join us to tell your story, design your dream, and see how easy it can be to make your ideas physically come to life. Come experience how this newfound knowledge will inspire your next dream.*

### **Introduction to Engineering I (9110)**

1st or 2nd semester; 3 credits

This course serves as an interactive way for students to get exposed to a variety of engineering processes while creating a fun project. Within the course, students will be introduced to the Arduino microcontroller platform, learn some basic programming, learn about different types of sensors and actuators, and explore 3D modeling, 3D printing, 2D mechanical design, and 2D CNC processes, such as laser cutting. Your project is of your choosing. Examples of past projects include innovative clock designs, an audible system to help guide the blind, IoT-enabled light-up "heart messaging" devices, and more. The first half of the semester will be dedicated to learning skills, while the second half will be dedicated to completing your project. Each class will culminate in a gallery showing of student work.

### Design & Innovation Graduation Requirement

All students are required to complete one semester of an offering under the Design & Innovation program to satisfy their graduation requirements. Courses are offered in both semester and yearlong variations. Although one semester is required, two semesters of credit will be given for yearlong courses. Courses may be taken multiple times with progressive rubrics.

## Digital Game Design (9130)

1st or 2nd semester; 3 credits

This course introduces the basics of game design using an object-oriented language. The basics of game strategy are discussed as students explore what makes a game successful. Students will work with a variety of programming languages and tools to develop the story and functionality of their own interactive games. Advanced students will have an opportunity to learn and use Unity, a cross-platform game engine, in their work if they choose. The course introduces foundational concepts of computer science in a fun and engaging approach. Students have an opportunity to develop their own games as well as work collaboratively as programming teams. This course is for anyone who would like to dip their toes into the world of computer science.

## Automation & Robotics (9510)

Full year; 6 credits

Prerequisite: Departmental approval

Students taking this course will be able to choose between a real-world automation/robotics project or Greenhill's FIRST Tech Challenge competition robot team(s). Automation and robotic challenges may include building an automated food assembly machine, using machine vision to sort objects, teaching a robotic arm to perform a task, or other types of projects. In both cases, students should expect to collaborate with others and learn new technologies processes/procedures to successfully complete automated projects. This course will bring together electronics, materials, and software to solve real problems.

## Design Thinking to Open Entrepreneurship (9310)

Full year; 6 credits

Have you ever had an idea for a product or service or thought to yourself, "There has to be a better way"? Or maybe you wonder, "How did they think of that?" or "Why would anyone think of that?" If so, this is the course for you. In this course, students will experience and learn the entire process of developing a solution, from identifying the right problem to solve to building functional products to creating a business plan and pitch deck to raise money from venture capitalists. Who knows, you might make the next big kitchen gadget, or you might develop

something to help those in need. This is your time to do something special; your time to make your mark. During the course, students will learn industry-proven processes such as ethnographic research, design thinking, prototyping to learn, and Lean Startup methodologies. Students will learn how to determine the size of their market and how much money is needed for success. By the end of the course, you will have a solution that is market ready.

## App Development for Everyone (9320)

1st or 2nd semester; 3 credits

Have you ever wanted to design and build your own iOS or Android app but didn't know where to start or thought that the coding would be too hard? Well, this course is for you! Through this course, you will learn how to use various prototyping tools to wireframe ideas to test functionality and user experience (UX) and finalize an app that you can publish on Google Play and the Apple App Store! We will teach students digital prototyping methods and how to design for and analyze the effectiveness of various user experiences, learn graphic design fundamentals and how to code the functionality of an app.

## UX Design & Exploration (9330)

1st or 2nd semester; 3 credits

UX Design & Exploration will teach students how to explore, tell the stories of, and design human experiences. Why is this important? Because these experiences drive consumer choice. Think about the experience of a Chick-fil-A drive-through vs. a McDonald's drive-through, standing in line for a ride at Disney World vs. Six Flags, or visiting an Apple Store vs. a Best Buy. These experiences have dramatic effects on consumer choice and a business's success. Within this course, students will learn the skills to assess and design user experiences through methodologies such as journey mapping, the five E's model, persona development, and others. Students will then learn how to build, prototype, and test user experiences that they develop.

## Advanced Computer Science (9400)

Full year; 6 credits

Prerequisite: Departmental approval

Using computer science, students will tackle real-world problems for real external

clients. During this course, students will learn and use professional processes and procedures that allow the teams to successfully deliver their solutions to their client by the end of the year. Students should expect to work in groups within a collaborative environment where the focus will be on learning how professional code development is accomplished. Problems that students will work on will come from various sources inside and outside of the Greenhill community.

## Design of Immersive & Interactive Art (9610 DI or 6005 FA)

Full year; 6 credits

Students may enroll in this course for either Design & Innovation or Fine Arts credit

In partnership with the department of visual arts and the department of innovation, instructors will lead students through a course where they will explore and develop interactive art. Design of Immersive & Interactive Art students will learn how to integrate art with technology to design and create unique experiences. These experiences may be embodied in an immersive 2D/3D art installation, robotics, games, or augmented performances using a variety of media and materials. Students' culminating piece will be a fully functioning and installed piece of art. Patrons don't just look at the visual aesthetic but are able to interact with the art. The work that is developed should recognize the presence of an individual, understand at least at a basic level their engagement with the piece, and must respond intentionally and intelligently to the patron.

## Advanced Topics Tutorial (9920)

1st or 2nd semester; 3 credits

Prerequisite: Departmental approval

This class allows students who have prior Design & Innovation experience, are self-starters, and have scheduling conflicts to explore a variety of advanced topics related to Design & Innovation. Students can explore independent work that builds on prior projects or new initiatives. Students in this graded course will have very high expectations for self-governance and project management. Student goals will be agreed upon at the beginning of each course and will only be adjusted under unique circumstances.

# 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. Students in grades 11 and 12 must take and pass an English elective every semester. The only required course is Narrative Nonfiction, which is offered the second semester of 11th grade. 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 a 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.

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

### 11th grade required:

2nd semester... Narrative Nonfiction: Finding Your Voice (1730)

### 11th/12th grade electives: Juniors and seniors must complete an English elective every semester.

1st semester	2nd semester
Modern Fiction (1110)	Modern Fiction (1110)
Reading and Writing Short Fiction (1120)	Sublime Darkness: Gothic Literature and High Romanticism (1130)
Sublime Darkness: Gothic Literature and High Romanticism (1130)	Literature and Detective Fiction (1190)
Frontier Literature and American Identity (1140)	Literature of the American Wild (1210)
Global Literature (1150)	Literature of Human Rights in the U.S. (1330)
Literature and Detective Fiction (1190)	Race & Subjectivity in Literature (1350)
Literature of the Black Atlantic (1340)	Literature and Philosophy (1420)
Literature of World Religions (1410)	Social Class in Literature: Class on Class (1555)
Literature and Philosophy (1420)	Narrative Nonfiction: Finding Your Voice (1730)
Multicultural Literature: Survey of Modern Poetry (1530)	
Women's Literature (1620)	
Nature and Uses of Language (1720)	

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## NINTH GRADE

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### **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 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.

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## TENTH GRADE

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### **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 builds upon skills developed in Ninth Grade English so that students may become stronger readers, writers, and thinkers. Students examine U.S.-based literature to consider how literature responds to and shapes identity, oppression, culture and belonging, and power and voice. 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.

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## ELEVENTH GRADE

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*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 voices. 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.

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## ELEVENTH & TWELFTH GRADE ELECTIVES

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*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 years.*

### **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. The assessments reflect both ends of this spectrum, ranging from an analytical essay to a fully realized short story. Student groups 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 have included Flannery O'Connor, James Joyce, Gabriel García Márquez, Helena Maria Viramontes, Ralph Ellison, Edgar Allan Poe, Bernard Malamud, Amy Tan, Alice Walker, and Stephen King, among many 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, and 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 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 the present day, we examine the way mythology, and specifically the mythology associated with the American frontier, "symbolizes...

society's ideology and dramatizes its moral consciousness" (Slotkin, 1992). The class is a seminar course that uses daily discussion of the material covered to help students arrive at a more nuanced understanding of the collective narratives (with attendant symbols and linguistic commonplaces) 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 literature asks students to explore the power of the literary imagination as we consider how people make sense of their world. The course supports the mission of creating cross-cultural dialogues. Students will have the opportunity to do independent reading projects.

### **Literature and Detective Fiction (1190)**

1st or 2nd 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 sociocultural 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 analyzing how nature and environmental issues have been

represented in literary narratives. Students will analyze texts that illustrate environmental concerns and examine the various ways literature treats the subject of nature to develop a deeper understanding of how they shape our attitudes toward the environment. These texts depict varying senses of what the world around us is, how it works, why it is the way it is, and what all that means for us as human beings. The readings, discussions, and writing assignments will help students develop the analytical skills appropriate to interpreting literary texts, formulating and sustaining critical arguments in writing, understanding the stakes of specific attitudes toward the natural world, and understand how environmental issues are linked to other social and cultural concerns.

### **Literature of Human Rights in the U.S. (1330 English or 4220 History)**

2nd semester; 3 credits

"With Liberty and Justice for All," eh? Not for everyone! Using primary source documents, plays, graphic novels, short stories, essays, poems, movies, and oral history interviews, we explore the legacy of human rights challenges in the history of the United States and the continuing struggles of Americans today to live up to the founding credos. We may be the "City on the Hill," and our human rights heroes are many, but the American track record on social justice is not pristine. The course will include study in at least two of the following areas: U.S. Policy of Ethnic Cleansing/Genocide/Culturicide against Native Americans in Texas, The Civil Rights Movement of the 1950 and 1960s, The Contemporary LGBTQ Revolution, and A Case Study of Miscarriages of Justice in Dallas, TX.

### **Literature of the Black Atlantic (1340)**

1st 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 and 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.

### **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. Importantly one of these is 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 prevent us from understanding the consequences of systemic oppression on individuals, our social fabric, and our cultural, economic, political, and educational institutions. Students in this course develop tools of self-compassion and loving kindness that can help us live with and heal from the hurts and the trauma that systemic oppression has caused.

### **Literature of World Religions (1410)**

1st semester; 3 credits

Even in a supposedly secular scientific age, religions remain a dominant force in most societies. Faith traditions obviously address some deep human needs. While they vary in their theologies, rituals, and commandments, religions endure and address the same profoundly human questions: What is ultimate reality? 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.

### Literature and Philosophy (1420)

1st or 2nd semester; 3 credits

This course pairs philosophy—the concepts of knowledge, truth, personal identity, ethics, existentialism, fate, determinism, and free will—with literature. After an introduction to a philosophical concept, students examine a work of literature using philosophical theories to guide the discussion. Students determine if characters make decisions based upon knowledge or a belief, if they apply and maintain a consistent ethical standard, if personal identity is a product of the mind or the body, and if existence is fated or fashioned by free will. In both the philosophy and literature, readings range from the classics to contemporary selections and probe current cultural epistemology or whose voice carries the weight of “one who knows” and whose does not.

### 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.

### Social Class in Literature: Class on Class (1555)

2nd semester; 3 credits

Social Class in Literature explores elements of the expansive 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,” socioeconomic status too often goes unexamined. Yet the questions it raises remain central to the American identity and vital to our unfolding story. Through

critical analysis and personal reflection, the course delves into that narrative and seeks to heighten awareness of how socioeconomic status affects individual and collective identities, perceptions, interactions, experiences, and outcomes. In examining how writers have addressed these issues over the years, students read a variety of literary and critical pieces and consider other artistic mediums such as plays, films, songs, and television shows. As part of the organic and collaborative nature of the course, students teach a topic of their choosing, and there is often a service-learning opportunity.

### Women’s Literature (1620)

1st semester; 3 credits

This course focuses on writings by women in a wide variety of literary genres, including poetry, fiction, and 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.

### Nature and Uses of Language (1720)

1st 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, and 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 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.

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

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## ADDITIONAL PASS/FAIL COURSES

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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 semester.

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## NOT OFFERED IN 2023-2024

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Coming of Age in America (1160)

Literature of Cosmic Horror and the Supernatural (1170)

Tragedy through the Ages (1180)

Blended Nation: Voices of Contemporary America (1320)

Literature of Latin America (1360)

Studies in Poetry (1510)

Creative Writing (1710)

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## 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 multidimensional and teach important life skills through art skills.

Fine Arts at Greenhill provide students with an opportunity to celebrate their uniqueness and to strive for opportunities for collaboration.

Some visual art classes incorporate science, while plays written and produced by students often deal with important social issues. Likewise, video projects 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.

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### STUDIO ARTS

#### Design of Immersive & Interactive Art (6005 FA or 9610 DI)

Full year; 6 credits

Students may enroll in this course for either Design & Innovation or Fine Arts credit.

In partnership with the department of visual arts and department of innovation, instructors will lead students through a course where they will explore and develop interactive art. Design of Immersive & Interactive Art students will learn how to integrate art with technology to design and create unique experiences. These experiences may be embodied in an immersive 2D/3D art installation, robotics, games, or augmented performances using a variety of media and materials. Students' culminating piece will be a fully functioning and installed piece of art. Patrons don't just look at the visual aesthetic but are able to interact with the art. The work that is developed should recognize the presence of an individ-

ual, understand at least at a basic level their engagement with the piece, and must respond intentionally and intelligently to the patron.

#### Drawing I (6010)

1st or 2nd semester; 3 credits

This is an introductory course that gives students a foundation in both technical and conceptual subject matter. Instruction is given on skill building, understanding vocabulary as it relates to drawing, and experimentation with materials through creative problem-solving. Sketchbook assignments will be used to reinforce skills and concepts as students navigate class assignments.

Observational and conceptual assignments with various surfaces, techniques, and mediums will be explored. Learning how to create visual narratives is a component of the course so students can begin to find their voice as an artist.

#### 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. 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 allows for experimentation and exploration of materials and painting media, painting methodology, brush techniques, and basic color theory. Students can explore water-based and oil-based media and mixed media while working on observational and conceptual assignments. Students will receive a background in art history that includes important movements and artists aiding 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 nontraditional 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

This is an introductory course to explore ceramic processes involved with pottery and sculpture. This class will introduce students to building with clay based on contemporary and historical influences. Emphasis will be placed on the elements and principles of design, such as line, shape, texture, and color. Students will start with hand-building techniques and pinch, coil, and slabs and then be introduced to the craft of wheel-thrown pottery. Students will be able to work with clay through all its states, from wet clay to finished fired ceramics.

#### Ceramics II (6260)

1st semester; 3 credits

Prerequisite: Ceramics I

Students continue to advance their hand-building and/or wheel-throwing skills. This course is designed for students with previous clay experience. Assignments will be given at the beginning of the semester, working toward independent projects based on the student's skill level, interest, and instructor approval. Students will develop their own style of working and experiment with advanced wheel/hand-building and glazing techniques.

#### Advanced Ceramics (6270)

1st semester; 3 credits

Prerequisite: Ceramics I & Ceramics II

This course refines students' hand-building and throwing skills. Students build upon al-

ready mastered skills in order to create multipiece works that can be either functional or sculptural. Students should be working with a theme and discovering their voices. Students can choose between high-temperature stoneware and low-fire clay bodies and glazing techniques. Students will explore contemporary and historical references as the basis for projects. Working with the instructor, students will map out their own project goals.

### **Sculpture I (6220)**

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, wax, and found objects.

### **Sculpture II (6230)**

2nd semester; 3 credits

Prerequisite: Sculpture I

Assignments will be given at the beginning of the semester, working toward independent projects based on the student's skill level, interest, and instructor approval. Students work on assignments with paper, cardboard, wood, clay, glass, wax, and found objects. Students are encouraged to begin to find their voices sculpturally.

### **Advanced Sculpture (6280)**

2nd semester, 3 credits

Prerequisite: Sculpture I & II or Ceramics I & II

This course refines students' sculpting skills. Students build on mastered experience to create multipiece works that can be functional or sculptural. Students should be working with a theme and discovering their voice. Students can choose to work with paper, cardboard, wood, clay, glass, plaster, wax, found objects, or clay. Students will explore contemporary and historical references as the basis for projects. Working with the instructor, students will map out their own project goals.

### **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 focuses 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.

### **Design I (6050)**

1st semester; 3 credits

This course explores the basic elements of design, including line, color, shape, form, value, space, and texture, in connection with both abstract and applied design. Students will gain knowledge and experience working with concepts of positive/negative form, typography, size and scale, repetition, symmetry, and basic color theory before moving into more applied design assignments. These may include logo design, posters, and signage. Students have the option to work in both hand-rendered and digital art collage for assignments.

### **Design II (6080)**

1st semester; 3 credits

Prerequisite: Design I or Instructor approval

This course continues to explore the basic elements of design in fine art and print design. Students have the opportunity to use the skills and knowledge gained in Design I and, using creative problem-solving, focus on prompt-based assignments. For the second half of the semester, students will create a sequential series or final large work for exhibition, which could include book art, installation art, mixed media, digital art, or printmaking.

### **Digital Art (6090)**

2nd semester; 3 credits

Digital Art is an exciting and creative class designed to introduce the innovative world of digital media and graphic design. In this semester-long course, gain a comprehensive introduction to the latest in digital art techniques, utilizing various software programs such as Adobe Photoshop and Adobe Illustrator. Instead of paints and pencils, students will use their own photography or found images for digital manipulation and drawing! They'll become familiar with concepts around visual communication, learn about elements and principles of design, and have opportu-

nities to animate their creations—all while establishing their foundation in digital art. For those of you wondering if this could be the perfect class for you—if you're interested in creating beautiful art from a different perspective or eager to see what graphic design has to offer—the answer is yes! Come explore and get ready for lots of fun!

### **Photography I (6110)**

1st or 2nd semester or Summer on the Hill; 3 credits

Class size is limited to 13 students.

Prerequisite: Students must provide their own digital 35mm camera (DSLR or mirrorless) with full manual controls.

There is a fee for class-related supplies.

This is a beginning-level course for the novice photographer and is a hybrid of analog and digital darkrooms. A series of projects introduces students to a basic understanding of Adobe Photoshop, the generation of digital negatives for darkroom and experimental process use, camera capabilities, and how to utilize composition, form, and light. Students learn how to photograph using manual settings and how to improve their visual perception through individual assignments. Color theory and color correction are introduced. Weekly critiques are conducted to enforce syntax and process learning. Selected prints are matted for display, student exhibitions, and local contests.

### **Photography II (6120)**

1st or 2nd 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 Adobe Photoshop and further integration of the darkroom. 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. Issues-based photographic projects are explored throughout the course in the form of a written thesis called an Artist Statement. This course may be repeated for credit.

### **Chemistry of Photography (6140 FA or 5340 SCI)**

Not offered in 2023-2024

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 a science discipline (chemistry). Students simultaneously explore several photographic techniques and the chemical explanations behind those techniques. Students who have completed this course are able to reflect and speak on the artistic meaning of their images and explain, on a chemical level, the processes and techniques used to achieve the final works of art. Experiments and imagery are produced with black-and-white developer techniques, toning techniques, Sabattier effects, and 19th-century printing techniques. A final portfolio is produced along with a final project assessed on artistic and chemical understanding.

### Honors Photography (6150)

Full year; 6 credits

Prerequisites: Photography I and II and either another semester of Photography II OR Chemistry of Photography OR Abstract & Experimental Photography. 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 an artist-statement (thesis) and supporting the proposal with an exhibition-quality portfolio, a custom-printed book, and an online account detailing the process of artistic intent. An abundance of 19th-, 20th-, and 21st-century technologies are utilized and integrated. These include historical and alternative print-making, 20th century silver gelatin, instant Polaroid techniques, Mordançage, Sabattier, and further explorations of new digital mediums (19th through 21st century integration). Alternative aspects of book art and collaborative work are highly encouraged. Students will collaborate with campus-wide projects and prepare their work for submission to student exhibitions, contests, publications, and professional gallery and online opportunities.

### Video Production (6510)

1st or 2nd semester; 3 credits

Class size limited to 20 students.

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 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 a total of two times in Upper School. Students can take Video Production: SOTH all four summers for credit.

### Advanced Video Production (6560)

Full Year; 6 credits

Class size limited to 20 students.

Prerequisite: US Video Production and Instructor approval

Advanced Video Production (AVP) is a year-long 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, and 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 Upper School.

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## THEATER

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### Theater 101 (6310)

1st semester; 3 credits

This survey course is an exploration of everything theater and is designed to introduce the student to all the exciting hands-on aspects of theater onstage and backstage. This course introduces 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 and wound makeup, writing and performing a personal monologue, set building, stage combat and 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

Class size is limited to 12 students

A hands-on course based on the process and techniques used in creating and manipulating scenery, properties, costumes, light, and sound to enhance a theatrical event. Workshop demonstrations and hands-on experience are featured and offer the student a project-based learning environment. This class can be repeated and tailored to the individual concentration and skill level of each student.

### Technical Theater: Stage Design (6350)

1st or 2nd semester; 3 credits

Prerequisite: Theater 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. As an advanced theater course, there are out-of-class expectations and commitments.

### Acting I (6330)

1st or 2nd semester; 3 credits

This engaging course is for the beginning actor or those with acting experience solely in Middle School. The class focuses on developing the actor's confidence and performance skill set in a low-risk, high-success environment with theater games, exercises, vocal work, stage combat, and character and 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 (6335)

2nd semester; 3 credits

Prerequisite: Acting I or Instructor approval. This course may not be offered every year.

This advanced course is for the more experienced actor and is strongly recommended for the student who may be exploring an acting

or film focus in college. The course concentrates on scene work in different acting styles for the stage and screen. Actors analyze scripts, develop movement and characters, and increase their improvisational acting skills. Works include texts written for the stage, film, and television. Scene work is often video recorded for review and critique. This course culminates in a final showcase to be presented to an invited audience.

### **Introduction to Writing for Stage and Film (6360)**

1st semester; 3 credits

This course is designed to help all aspiring playwrights and screenwriters dive into the world of theatrical and cinematic storytelling! Students will learn practical writing techniques, the use of physical space in their writing, build believable and dynamic characters through dialogue, and develop plot structure with an emphasis on action and conflict. Students will have the opportunity to put what they've learned into practice right away, with assignments that range from short playwrighting all the way up to a ten-minute play and a screenplay suitable for video production. When it's all over, we'll cap things off with readings of each student's work for real-life feedback in an intimate setting.

### **Student Directing: Directing and Acting (6370)**

2nd semester; 3 credits

Prerequisite: Acting I and/or Theater Company or Instructor approval

This is a hands-on, fun, challenging, and extremely exciting course for both student actors and student directors! Formal applications of interested student directors are due in the fall. Students will learn about developing a rehearsal schedule, casting a show, directing actors, and producing for the theater. Interested student actors are encouraged to enroll! Actors will participate in an audition process with the selected student directors, then continue with the rehearsal process, and finally perform in a one-act play directed and produced by a student director.

### **Theater Company (6380)**

2nd semester, 3 credits

Prerequisite: Instructor approval

Come explore the exciting world of immersive theater with us! This groundbreaking course combines student actors and technical theater students to create a traveling performance that will take you off-site from Green-

hill. Together, we'll develop our production while learning how to tackle unique challenges associated with street and nontraditional theater—such as creative space arrangements, staging techniques, construction tips for sets and costumes, plus stage management insights. If this sounds like your kind of adventure, be sure to audition—prior participation in Acting 1 or Theater 101 is encouraged but not required.

### **Introduction to Improvisation (6340)**

1st or 2nd semester; 3 credits

Unlock your creative potential in a classroom environment! Improvisation is the art of acting without a script and writing on your feet. In this semester-long course, students will focus on having fun, being spontaneous, and getting out of their own way while making choices and jumping in with the first thing that comes to mind. Beginning with fun games and exercises, students will learn the skills at the heart of all improvisation: spontaneity, group support and agreement, being authentic on stage, and creating a sense of playfulness. In the second half of the course, students will build upon these skills, learning to tell stories on their feet and create fun and engaging characters. This class will culminate in a showcase of short-form improv performance games for a small audience.

### **Tutorials in Advanced Drama (6930)**

1st or 2nd 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 Upper School.

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## **THEATER PRODUCTIONS**

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### **Theater: Musical Production (6450 FA or 8560 PE)**

1st Semester; 3 credits (FA = Graded; PE = Pass/Fail)

Students may enroll in this course for either Fine Arts or Physical Education credit.

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 an emphasis on character development, technical proficiency (correct posture, alignment,

breath), and performance quality (focus, style, and musicality). Auditions generally take place during the first week of the first semester.

This course culminates in a performance weekend where students are showcased to the Greenhill community and beyond. Later in the year, the production travels to the ISAS Fine Arts Festival.

### **Theater: Technical Practicum (6460)**

1st semester; 3 credits

Prerequisite: Instructor approval

Tech Crew assists in the creation of sets, props, costumes, light, and sound throughout the term during the production cycle of theater 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 Theater or Rose Hall. As an advanced theater course, there are out-of-class expectations and commitments

### **Theater: Play Production (6470)**

2nd semester; 3 credits

Students may enroll in this course for Fine Arts credit. It is designed for students interested in developing and showcasing their performance skills performing in a nonmusical 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 Fine Arts Festival.

### **Theater: Technical Practicum (6480)**

2nd semester; 3 credits

Prerequisite: Instructor Approval

Similar to the fall production, Tech Crew assists in creating sets, props, costumes, light, and sound throughout the term during the production cycle of theater 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 Theater or Rose Hall. As an advanced theater course, there are out-of-class expectations and commitments

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## SPEECH AND DEBATE

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### 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. You will have the opportunity to practice each type of debate in class and are highly encouraged to sign up for and compete in at least one tournament.

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. Most students in this class are ninth graders, but any student who chooses to explore debate could enroll in the class.

### Intermediate Debate (6720)

1st or 2nd semester; 3 credits

Prerequisite: Introduction to Debate or Director of Debate 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 and enhancing the most-effective delivery techniques to persuade audiences and judges in interscholastic competitions. Students who complete Introduction to Debate and/or have the written permission of the debate staff may take this course. Students in this class will have the option to focus on any of the formats of debate in which Greenhill competes. Students

in Intermediate Debate are required to attend a minimum of three interscholastic competitions per semester.

### Advanced Debate: Policy (6740)

1st or 2nd semester; 3 credits

Prerequisite: Intermediate Debate or Director of Debate 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.

### Advanced Debate: World Schools (6750)

1st or 2nd semester; 3 credits

Prerequisite: Intermediate Debate or Director of Debate approval

This course examines the practice of contemporary World Schools Debate by engaging in a study of the topics related to 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.

### Advanced Debate: Lincoln Douglas (6770)

1st or 2nd semester; 3 credits

Prerequisite: Intermediate Debate or Director of Debate approval

This course is intended for students active in competing at high levels of debate—it will cover advanced concepts in Lincoln Douglas debate, including moral and political philosophy, critical theory, public policy, and content knowledge relating to the five Lincoln-Douglas topics that are debated each school year. The course may be repeated for credit. The minimum participation requirement for successful completion of this course is four tournaments per semester.

### 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 Upper School.

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## MUSIC

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### 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.

### Songwriting (6420)

2nd semester; 3 credits

Students of all music experience levels will find challenges and rewards in this unique course. Those enrolled in Songwriting will be immersed in a unique and exciting learning experience. Combining lectures with workshop classes, students will explore the many components of song, such as lyrics, melody, delivery, harmony, rhythm, form, texture, and timbre. They will learn to use these elements to compose and record original material and gain insight into the music industry by attending live concerts and reviewing performances. This is an introduction to songwriting that broadens creativity and understanding of the art of songwriting.

### Greenhill Concert Band (6430)

Full year; 6 credits

The Greenhill Concert Band is a full instrumentation band that performs a variety of music throughout the school year. This non-auditioned ensemble focuses on musicianship and ensemble playing. Students have the opportunity to participate in ATSSB and TPSMEA contests, such as all-region, all-state, and solo and ensemble contest. Members of the Greenhill Concert Band fill various ensembles such as the Greenhill Drumline, Jazz Band, Jazz Combo, Pep Band, and chamber groups.

### Greenhill Chamber Orchestra (6420)

Full year; 6 credits

Prerequisite: Audition/approval from Instructor

The Greenhill Chamber Orchestra rehearses music from a wide range of styles with special emphasis on standard repertoire for orchestra. In addition, students are placed in

trios or quartets to pursue chamber music, which forms a vital part of the curriculum. Students are expected to progress in skill and musicianship through their participation. Daily practice is expected. 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.

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## **DANCE**

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### **Dance Technique (6445 FA or 8510 PE)**

1st semester; 3 credits (FA = Graded; PE = Pass/Fail)

Students may enroll in this course for either Fine Arts or Physical Education credit.

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. The class strives to increase coordination, strength, flexibility, and a greater understanding and appreciation for the art of dance. Dance technique classes meet after school.

### **Greenhill Dance Company (6440 FA or 8570 PE)**

Full year; 6 credits -OR- 1st or 2nd semester; 3 credits (FA = Graded; PE = Pass/Fail)

Students are encouraged to enroll in this course as a full-year member but may enroll in a single semester. Credit can be received for either Fine Arts or Physical Education and may change enrollment each semester depending on credit needs.

This is the Greenhill 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, and 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 the ISAS Fine Arts Festival.

### **Dance for Athletes (6450)**

2nd semester; 3 credits

This new Fine Arts class is a fantastic way to enhance your athletic performance. Designed for athletes who want to enhance their athletic and physical performance through techniques used in dance, the class will focus on agility, flexibility, balance, and endurance so you can perform at your best physically. No experience required—this beginner's program will help students improve movement skills needed when performing the demanding tasks required in sports and fitness, with a bonus: it is fun, too. Athletes should plan by wearing loose-fitting clothing. A large portion of the class will be devoted to stretching and conditioning, emphasizing proper placement and technique within a dance class structure. No public performance is required.

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## **PUBLICATIONS**

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### **Montage Literary Magazine: Publication Creation (6670)**

2nd semester; 3 credits

This course takes you through the process by which a literary magazine gets made. The class compiles and transforms written and visual art 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 considerations, color, and typography. The course also includes design theory, basic layout, and technical Adobe InDesign and Adobe Photoshop skills.

### **Cavalcade Yearbook (6650)**

Full year; 6 credits

Cavalcade is a full-year course that teaches students about all the essential elements that go into producing a publication from conception to finished product. Students work in teams for each section of the book and create layouts centered on the ideas, graphics, typography, and design that the editor(s) in chief have created and discussed. Areas of concentration include team building, creating an effective theme, writing for publication, the interviewing process, typography and graphic design, effective caption writing,

email etiquette, and photography. Instruction of Adobe InDesign and Adobe Photoshop is a huge component of the course, as these programs are used for the layout and design of the publication. Students can apply for future leadership positions at the end of the year. These are decided by the editor(s) after the interviewing process is completed.

Students receive Fine Arts credit for the full-year course. No Fine Arts credit is awarded for one semester of participation.

### **Introduction to Journalism (6610)**

Full year; 6 credits

This course prepares students to join the staff that produces the school newspaper, *The Evergreen*, and the digital news platform, *Evergreen Online*. Students learn the elements of journalism, focusing on the fundamentals of news gathering and writing. They analyze the structure, sourcing, arrangement of facts, and use of direct quotes in newspaper and magazine stories and learn to write short news stories and more complex articles, including in-depth features, profiles, and sports stories. They also learn the fundamentals of effective page design and how art and text work together to communicate meaning. As students learn how to responsibly inform and represent the Greenhill community, they demonstrate comprehension of the goals and ethics of a campus newspaper and digital news site. They also consider which stories are best suited for print versus online platforms.

### **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 print *Evergreen* or *Evergreen Online* staff. No Fine Arts credit awarded for one semester of participation.

This course is designed for students interested in deepening their involvement with the print *Evergreen* or *Evergreen Online* staff. In addition to planning, writing, and editing articles and creating podcasts and video segments, students assume more editorial responsibilities, including story selection, evaluation and feedback, headline and photo caption writing, and participation in staff editorial and policy decisions. They also deepen their knowledge of effective page design and how art and text work together to communicate meaning and then apply that knowledge in their work on the newspaper or digital news platform. 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 that 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 with a focus on non-Western cultures before diving into the history of the United States and its role in the world. The 11th and 12th grade electives encourage students to broaden their understanding of world history, social sciences, global cultures, and pressing international issues. All Upper School students must take a government course and are given two options to satisfy this requirement: *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, and these skills are refined and advanced in the various upper-division 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.

## History/Social Science Courses

### Yearlong Courses

Global History (4010)

United States History (4020)

AP European History (4640)

### 1st Semester Courses

The Cold War: 1945–1991 (4240)

War at Home: The WWII Homefront (4245)

Understanding September 11 (4270)

Women's History (4280)

History of World Religions (4330)

International Relations (4465)

Military History (4490)

LGBTQ History (4510)

Economics and Society (4610)

Senior Seminar: History of American Idealism: City on the Hill (4850)

### 2nd Semester Courses

Government in Action (4110)

AP Government (4120)

Independence in the Non-Western World (4210)

History of Human Rights in the U.S. (4220)

World War I and the Modern World (4235)

Women's History (4280)

Latin America in the 20th Century (4390)

Globalization, Identity, and U.S. Food Cultures (4425)

Economics and Society (4610)

and subjects? What interactions occurred between rival empires? Do empires exist in the modern world? These questions will be explored through a variety of textual analyses and discussions utilizing primary and secondary sources. The course will conclude with a research component that will form the foundation for success in the social sciences.

## TENTH GRADE

### United States History (4020)

Full year; 6 credits

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

## ELECTIVES

Juniors and seniors are encouraged to take at least two semesters of 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)

2nd semester or Summer on the Hill; 3 credits

The ultimate objective of this course is to help students become better-informed citizens re-

## NINTH GRADE

### Global History (4010)

Full year; 6 credits

Global History surveys the evolution of empires from the ancient world through the 20th-century by assessing and addressing key questions based on political, economic, social, religious, and artistic themes. How are empires defined and formed? What are the characteristics of a golden age? What factors contribute to the decline and fall of empires? What are the power dynamics between rulers

garding 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 the government's role allow students to gain insight into American politics and to assess how the 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. Students may not take both government courses without departmental approval.

### **Advanced Placement Government (4120)**

2nd 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 a real interest in the study of politics and government. A grade of B or better in Global History and U.S. History is recommended.

The AP Government course is designed to give students a critical perspective on government and politics in the United States. This one-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 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.

### **Independence in the Non-Western World (4210)**

2nd semester, 3 credits

The revolution starts now. This course will cover 20th-century post-WWII independence struggles across the globe. Students will 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 the challenges that each country faces today. In addition to learning about an important chapter in the history 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. (1330 English or 4220 History)**

2nd semester; 3 credits

"With Liberty and Justice for All," eh? Not for everyone! Using primary source documents, plays, graphic novels, short stories, essays, poems, movies, and oral history interviews, we explore the legacy of human rights challenges in the history of the United States and the continuing struggles of Americans today to live up to the founding credos. We may be the "City on the Hill," and our human rights heroes are many, but the American track record on social justice is not pristine. The course will include study in at least two of the following areas: U.S. Policy of Ethnic Cleansing/Genocide/Culturicide against Native Americans in Texas, The Civil Rights Movement of the 1950 and 1960s, The Contemporary LGBTQ Revolution, and A Case Study of Miscarriages of Justice in Dallas, TX.

### **WWI and the Modern World (4235)**

2nd semester; 3 credits

The assassin's bullets that sprayed Archduke Franz Ferdinand's car not only killed the Archduke and his wife but also brought an era to its end. World War I birthed the modern world. The war spanned continents and forced troops from across the globe to face one another in a conflict of unprecedented bloodshed. This class will explore WWI from multiple angles: geopolitics, military strategy, art and literature, technology, and psychology. We will trace how this conflict's ripple effects changed existing world systems. We will try to answer questions, such as How did imperialism cause WWI? Why did trench warfare dominate the Western Front? Why do people fixate on the Western Front and ignore the global reach of WWI? How did WWI impact soldiers and the home front? And why did this war create an outpouring of

fiction and poetry? This course will crisscross the globe from Gallipoli to Verdun and from Tokyo to Mexico City and will explore warfare from U-boats under the ocean to airplane dogfights.

### **The Cold War: Global History and Politics from 1945 to 1991 (4240)**

1st semester; 3 credits

This course examines the geopolitical, economic, and ideological struggle that materialized 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.

### **War at Home: The WWII Homefront (4245)**

Not offered in 2023-2024

*Did Rosie rivet? How did Donald Duck fight Nazis? What role did Dr. Seuss play in guiding the war effort?* This course explores the experience of World War II on the American home front. Students explore demographics and a rapidly changing industrial nation, paying special attention to race, gender, pop culture, and propaganda. The course also looks at several controversies: the American reaction to news of the Holocaust, the decision to build and drop nuclear weapons, and the place of the war in popular imagination. The class culminates in a research project creating a museum exhibit to teach about the impact and lasting legacy of this conflict on American life.

### **Understanding September 11 (4270)**

1st 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 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 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. We use the lens of intersectionality to guide our historical work. While we focus primarily on women in American history, we also try to examine women and the birth of feminism in a global context.

### **History of World Religions (4330)**

1st 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, and analyzing and annotating primary sources, secondary sources, and maps.

### **Latin America in the 20th Century (4390)**

2nd semester; 3 credits

In this course, we will study modern Latin American history from independence to the present. We will begin the semester by briefly

studying the colonial background; we will conclude by exploring the main challenges Latin Americans have experienced in the 21st-century. The topics that we will cover include the independence wars, nation-building, revolutions, migrations, and foreign relations. In addition to reading and analyzing primary sources, we will read diverse works written by historians and other scholars. At the end of the semester, you will understand the different approaches and methods historians have used to study Latin America.

### **Globalization, Identity, and U.S. Food Cultures (4425)**

2nd semester; 3 credits

Globalization, Identity, and U.S. Food Cultures explores food in modern American history since the Columbian Exchange as a story of industrialization and globalization. Lectures, readings, and discussions emphasize the historical dimensions of—and debates about—the role that Indigenous Americans, African slaves and Blacks, women, and immigrants have played in the development of American identity and food culture in the 21st-century. Most significantly, this course emphasizes how food not only has been used as a political and economic tool but has also been used as a way for many Americans to find inclusion and acceptance into mainstream society. Students hone their historical thinking skills by researching appropriate and relevant primary and secondary sources, investigating historical events, constructing thesis-driven essays, and utilizing historically significant sensory experiences to connect with the past.

### **International Relations (4465)**

1st semester; 3 credits

*Are China and the U.S. on a collision course for war? Can the Israelis and Palestinians find a two-state solution in the Holy Land? Can the Paris climate accord help to cool a warming planet? Do powerful nations have a responsibility to assist vulnerable populations in faraway lands?* These questions dominate global headlines and our daily news feeds. In this course, we go beyond the soundbites and menacing headlines to explore the context, causes, and consequences of the most pressing global issues. Grounding our understandings in the leading IR theories, we assess real-world problems, including the

complex interplay of war and peace, conflict and cooperation, and security and human rights. Working with classmates and leaning on the expertise of guest speakers, students also identify and model ways to mediate and resolve some of the most pressing global conflicts.

### **Military History (4490)**

1st semester; 3 credits

Military History provides a global survey of human conflict from ancient times through the present. This course, while examining traditional concepts of strategy and tactics, also delves into the social and cultural history of war-making. The chronological focus for the first part of the course spans from the Greco-Persian Wars to the Gunpowder Revolution. The second half examines the important developments that occurred from the gunpowder age through the World Wars. Thematic topics include, but are not limited to military professionalism armies and empire building, war-making and the nation-state, cultural perceptions of war, the experience of battle and the common soldier, the role of technology in conflict, modern war, limited war, total war, and asymmetric warfare.

### **LGBTQ History (4510)**

1st semester; 3 credits

This course will analyze the social, cultural, and political history of queer genders and sexualities, primarily in the United States, during the 20th-century. Students will examine major LGBTQ+ figures in history, such as Harvey Milk, Bayard Rustin, Barbara Gittings, Harry Hay, Marsha P. Johnson, Sylvia Rivera, and others. Major topics include the shifts in social and political policing of “normal” sexuality and gender, the emphasis on normative sexuality, specifically heterosexuality, and the impact that the First and Second World Wars, the Cold War, urbanization, and the social revolutions of the 1960s and 1970s had on the community. Major themes include the emergence of homosexuality and heterosexuality as categories of identity; the development of diverse lesbian and gay subcultures and their representation in popular culture; the sources of antigay hostility; generational change and everyday life; AIDS; and gay, anti-gay, feminist, and queer movements.

### **Economics and Society (4610)**

1st or 2nd semester; 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.

### **AP European History (4640)**

Full year; 6 credits

Prerequisites: Completion of GX 9 and US 10 with a minimum grade of B+; students should not take multiple AP History classes at the same time

What role did the Black Death play in the development of the Renaissance? How did sugar change European politics? How did political consolidation affect the art world? What role did technology and scientific innovation play in shaping global communications? This class seeks to answer these questions and more as it covers European History from 1450 to the present. Students will develop historical arguments and make connections across time and place. The course will prepare students to take the AP Exam in May. The class is open to both juniors and seniors, but students will not be able to take AP European History and AP Government concurrently.

### **Senior Seminar: History of American Idealism: City on a Hill (4850)**

1st semester; 3 credits

Note: Seniors only; enrollment is limited to approximately twelve students. Interested students need to submit a 1-2-page statement of interest to Mr. Yaffe.

From John Winthrop and Ronald Reagan to Mother Jones and Fannie Lou Hamer, opinions about America have frequently been divided. Some Americans have often imagined themselves as a chosen people, a righteous empire, and a city upon a hill. When and why have individuals, organizations, and institutions held up the country as a shining city upon a hill? At the same time, who has challenged that idealism and why, viewing the country as more of a tale of two cities? The senior seminar examines how Winthrop's seventeenth-century call to establish a city upon a hill has shaped American ideas regarding politics, economics, race and gender, and relations with other countries. Students will explore moments in American history when the nation has wrestled with its identity. Using primary documents from multiple perspectives over three hundred years, as well as documentary films, students will come to develop their own sense of the nation, too.

### **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 and the Head of Upper School.

# Mathematics

The Greenhill School mathematics curriculum is designed to furnish Upper School students 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 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 honor 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, except for the GOA Geometry class in the Summer 1 Term.

## 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, and inequalities of the aforementioned group. Students acquire the necessary manipulative skills of algebra along with an understanding of the 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 an 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 algebra concepts and manipulations by stressing the “how” and “why” of mathematics. Topics include equations and inequalities, verbal problems, factoring, fractions, functions and graphs, polynomials, systems of equations and basic work in trigonometry, including triangle trigonometry with applications, and circular function definitions of sine and cosine.

## Advanced Algebra II (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, graphs 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 and 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 func-

tions. 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, trigonometrics, and 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.

### **Advanced Placement Statistics (2520)**

Full year; 6 credits

Prerequisite: Rising 11th grade students must have completed Advanced Algebra II or the Honors equivalent; rising 12th grade students must have completed Advanced Precalculus or the Honors equivalent.

Note: The AP Examination in AP Statistics is required.

The purpose of the AP Statistics course is to introduce students to the major concepts and tools for collecting, displaying, 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. AP Statistics is a one-year course that is writing-oriented (communica-

tion of results and explanations of processes are emphasized) and calculator-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.

### **Statistics (2530)**

Full year; 6 credits

Prerequisite: Algebra II or the Honors equivalent

The purpose of this course is to introduce students to major statistical concepts, such as data displaying, data collection, data analysis, linear regression, probability, statistical inference, and confidence intervals. There will be more hands-on data collection and discovery through repeated trials than the AP course. In addition, this course would have more projects and fewer traditional assessments than the AP Statistics course.

### **Personal Finance (2810)**

1st or 2nd semester; 3 credits

Corequisite: 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 in 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, bonds, CDs, and 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)**

3 credits

Prerequisite: Instructor permission

Not offered 2023-2024

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, the 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.

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## Modern and Classical Languages

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

*The requirement for graduation in the Modern and Classical Languages Department is twofold: first, students must be enrolled in a language course during their 9th and 10th grade years; second, students must complete Level III of one language. In order to advance to the next level, students must earn a minimum yearlong course grade of C-. Yearlong courses are the structure of our foundational levels I-III, and 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 values 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 student's communicative proficiency in the basic skills of 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 an AP-level course 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 honors courses. Assessments include traditional written exercises, oral presentations, 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, 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 an AP-level course. 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; may be taken concurrently with 3180. This course requires considerable competency in Spanish.

This course seeks to strengthen a student's proficiency in Spanish through the study of various social, cultural, and political developments in Mexico from the 16th-century to the present day. Beginning with pre-Columbian cultures, we will see how the Spanish Conquest of Latin America established what we consider today to be most of the Spanish-speaking world. We will then progress through the fight for independence and the struggles encountered as Mexico established itself as a sovereign nation. 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; 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. The 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 study of language, literature, and culture at the same level and depth as an AP course. The course objective is to introduce students to the formal study of a representative body of texts from Peninsular Spanish, Latin American, and U.S. Latino literature (in Spanish). The course provides opportunities to develop greater proficiency in the Spanish language while developing the necessary skills and vocabulary to analyze, discuss, and write about different genres of literature. The course aims to help the student progress beyond reading comprehension to read with historical, cultural, and literary sensitivity to empower critical thinking and spontaneous discussion.

### **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. 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. The goal of this course, which utilizes Standards-based Grading, 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. The goal of this course, which utilizes Standards-based Grading, 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. 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, demonstrate a grasp of grammatical structures and vocabulary, and 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 written in Latin at the fingertips of the instructor, students in this course delve into thematically related units. The goal of the course, which utilizes Standards-based Grading, 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 of 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 portion of the course, 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. Later, 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)**

Not offered in 2023-2024

Chinese I is an introductory-level course for students who have very little or no background in Chinese. Students will develop an appreciation of the Chinese culture, its language, and its people through field trips, videos, and online authentic resources. The primary focus is the development of language skills: listening, speaking, reading, and writing. Activities include games, skits, communicative activities, and songs. Students completing Chinese I will have the ability to engage in limited, freestyle conversations. The expected outcome of this course is performing at the ACTFL novice mid-proficiency level.

### **Chinese II (3420)**

Full year; 6 credits

Prerequisite: Chinese 3410 with a minimum yearlong course grade of C-, Middle School Chinese 8, or placement by exam

Chinese II continues to expand cultural awareness of the Chinese world and to develop global cultural competency through cultural comparisons and small research projects. Expansion of high-frequency vocabulary and grammar structures continues. The goal of Chinese II is to enhance the proficiency of language skills to prepare students for Chinese III. By the end of the course, students are expected to perform at the ACTFL proficiency level of novice high to intermediate low.

### **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 students can communicate within a variety of everyday contexts as well as interact with Chinese culture through increased demand for textual literacy.

### **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 the successful completion of Chinese IV, students 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 in 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 of the Greenhill Chinese Program. The goal of this course is to provide highly qualified students with rich and varied opportunities to further their proficiency in listening, speaking, reading, and writing Modern Standard Mandarin Chinese. This, in turn, positions them for success on the AP Chinese Exam. Students enrolled in this class experience maximal exposure to myriad aspects of Chinese culture integrated into the process of communicating in and learning through Mandarin. Students practice using Chinese to comprehend and analyze issues that are pertinent to their life and community. Chinese is both the target language and the language of instruction, and assessments are regular and varied.

## Advanced Tutorials in Modern & Classical Languages (3310)

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

Prerequisite: Level III and approval of the Department Chair

One-semester tutorials are available to advanced students who are looking to pursue studies beyond, or in addition to, prescribed courses in the Modern and Classical Languages Department. Topics are to be jointly proposed in writing by the student and instructor and must be approved by the Department Chair and Head of Upper School.

## Advanced Tutorials in Modern & Classical Languages (3320)

1st or 2nd semester; 3 credits (Graded)

Prerequisite: Level III and approval of the Department Chair

One-semester tutorials are available to advanced students who are looking to pursue studies beyond prescribed courses, not to shadow courses offered due to a scheduling conflict, in the Modern and Classical Languages Department. In order to be considered as a graded tutorial, clear expectations, syllabi, and rubrics must be presented for consideration. Topics are to be jointly proposed in writing by the student and instructor and must be approved by the Department Chair and Head of Upper School.

## Physical Education

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

*As stated in the requirements for graduation, students must complete six credits (two courses/sports) of physical education in both the 9th and 10th grade years. In both the 11th and 12th grades, students must complete three credits (one course/sport) of physical education each year. These credits may be earned through physical education courses or through participation on any Greenhill Interscholastic Athletics Team. Students may take only one physical education course per semester (unless prior approval has been granted by the 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 two seasons in 9th grade and two seasons in 10th grade will receive this foundational information through*

*their work with our sports performance staff during those seasons. Students not completing their physical education requirement by participating on a Greenhill Athletics team for two seasons in 9th grade and two seasons in 10th will be required to take Foundations of Lifetime Fitness. 9th/10th grade students may take Yoga, Group Fitness, or Musical Production prior to taking Foundations of Lifetime Fitness as long as Foundations of Lifetime Fitness is taken during the next semester in that school year.*

*Required Devices: All Upper School students must acquire an approved fitness tracking device if they participate in Physical Education classes and/or on Greenhill sports teams. Specifics about approved devices will be provided by the sports performance staff prior to the school year.*

## Foundations of Lifetime Fitness (8010)

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

Note: Students participating in a sport and Foundations of Lifetime Fitness in the same semester will be required to complete the classroom portion of this course concurrently with their sport. This may often apply to a student in a winter sport. Physical activity labs will be adjusted since the students are also involved in an in-season sport.

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.

## Workout Challenge (8030)

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

Prerequisite: Foundations of Lifetime Fitness or 4 seasons of Greenhill Athletics (two in 9th grade and two in 10th grade)

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 sports performance staff. This course builds upon skills learned in Foundations of Lifetime Fitness. Workouts include elements of cardio, strength, core, and flexibility training.

## Yoga (8040)

After School; 1st or 2nd semester; 3 credits (Pass/Fail)  
Class size is limited based on class location.

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. The class focuses on breathing practices, physical postures, and flowing sequences that bring body and mind into alignment.

## Independent Program Design (8050)

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

Prerequisite: Instructor approval/placement exam, a minimum of Foundations of Lifetime Fitness or four seasons of Greenhill Athletics (two in 9th grade and two in 10th grade)

This course is designed for self-motivated students who have the foundational knowledge through physical education courses to begin to create and implement a personal fitness plan. Students are responsible for establishing SMART goals and developing strategies of achievement on their own time, with assisted instruction by the sports performance staff. These programs are to be completed 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. This course requires multiple orientation sessions prior to beginning the individualized program.

Additional notes: Students must have off-campus gym accessibility and access to fitness tracking gear/equipment (software, hardware).

## Dance Technique (8510 PE or 6445 FA)

1st semester; 3 credits (PE = Pass/Fail; FA = Graded)

Students may enroll in this course for either Physical Education or Fine Arts credit.

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 of 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 after school.

## Theater: Musical Production (8560 PE or 6450 FA)

1st semester; 3 credits (PE = Pass/Fail; FA = Graded)

Students may enroll in this course for either Physical Education or Fine Arts credit.

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 an emphasis on character development, technical proficiency (correct posture, alignment, breath), and performance quality (focus, style, and musicality). Auditions generally take place during the first week of the first semester.

This course culminates in a performance weekend where students are showcased to the Greenhill community and beyond. Later in the year, the production travels to the ISAS Fine Arts Festival.

## Greenhill Dance Company (8570 PE or 6440 FA)

Full year; 6 credits (PE = Pass/Fail; FA = Graded)

Students are encouraged to enroll in this course as a full-year member but may enroll in a single semester. Credit can be received for either Fine Arts or Physical Education and may change enrollment each semester depending on credit needs.

This is the Greenhill 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, and 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.

## Backpacking and Camping (8610)

After School/1st or 2nd semester; 3 credits (Pass/Fail)

Prerequisite: Foundations of Lifetime Fitness, or four seasons of Greenhill Athletics (two in 9th grade and two in 10th grade)

This course develops skills, enhances fitness, and raises students' awareness of the environment outside of their doors. Through various activities, including navigation exercises, orienteering races, and backpacking trips,

students learn to access outdoor recreational areas safely and responsibly. After-school hiking trips to Dallas-area parks and nature preserves help build strength and endurance, while class instruction focuses on the necessary skills to create a home away from home in the wilderness. This course requires attendance at two weekend backpacking trips (Friday-Sunday). The school will furnish most necessary equipment for class time and trips, but students must bring a sleeping pad and sleeping bag.

## Athletics Tutorials (8900)

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

Prerequisite: Foundations of Lifetime Fitness, or four seasons of Greenhill Athletics (two in 9th grade and two in 10th grade)

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 sports team. A full list of criteria is listed on the online tutorial application.

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## INTERSCHOLASTIC ATHLETICS

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### Greenhill Interscholastic Athletics Teams

Fall, Winter, or Spring; 3 credits (Pass/Fail)

Greenhill School places a high degree of importance on the educational value of our interscholastic athletics programs.

Each semester, 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 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

Fall, Winter, Spring; 3 credits (Pass/Fail)

Prerequisite: Must receive prior approval from the Head Athletic Trainer, Foundations of Lifetime Fitness, or four seasons of Greenhill Athletics (two in 9th grade and two in 10th grade)

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.

## Full-time Team Managers

Fall, Winter, or Spring; 3 credits (Pass/Fail)

Prerequisite: Prior approval from the Director of Athletics, Foundations of Lifetime Fitness, or four seasons of Greenhill Athletics (two in 9th grade and two in 10th grade)

Note: Each team will have a preapproved number of slots for managers each season. Students accepted as team managers will register for the sport and are added to the team roster.

The purpose of the team manager program is to provide support for the school's interscholastic sports teams. The program is designed to give students valuable work experience by being a part of an interscholastic athletic team. A team manager's duties include completing post-game write-ups, assisting with practices, sports nutrition pickup, management of home contests, travel to away contests, scorekeeping, stat-keeping, videotaping, and various other administrative duties. Team managers must invest an amount of time comparable to the athletes. In order for a team manager to receive PE credit, they must participate in all team activities, including practices and competitions, and complete a required number of sports performance training sessions.

## 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

# Science

## Minimum requirements for Science courses:

**9th Grade:** Physics

**10th Grade:** Chemistry

**11th Grade:** Biology

## LAB SCIENCES

### Biology (5210)

Full year; 6 credits

Prerequisite: 9th Grade Physics, 10th Grade Chemistry

Biology serves to continue a student's growing sophistication in modern sciences by building upon core concepts presented in Greenhill's 9th grade and 10th grade 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. 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.

### Chemistry (5310)

Full year; 6 credits Prerequisite: 9th Grade Physics

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 several Upper School courses, at our online partner school, the Global Online Academy, and in many progressive independent institutions across the nation.

### 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 and 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 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.

## 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 of 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 the application of efforts on novel projects involving the expression, isolation, and characterization of proteins.

### Biotechnology Lab Techniques (5240)

2nd 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 to 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 bioremediation. 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 SCI or 6140 FA)**

Not offered in 2023-2024

Prerequisites: Basic Photography and 10th Grade 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 a 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 wet plate 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.

### **Physics II: Astronomy (5435)**

2nd semester; 3 credits

Prerequisite: 9th Grade Physics

This is a descriptive survey course studying our struggle to comprehend the universe.

It begins with an extension of the 9th grade Physics 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: Biophysics (5455)**

1st semester; 3 credits

Prerequisite: 9th Grade Physics

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),

and single molecule biophysics (examining intact cells in their environment in 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 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 this 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.

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## **ADVANCED PLACEMENT ELECTIVE COURSES**

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### **Advanced Placement Biology (5290)**

Full year; 6 credits

Prerequisites: Chemistry and departmental approval

This is a rigorous one-year college-level biology program culminating in the AP Examination. Coursework 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, 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 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 sciences major in college.

### **Advanced Placement Physics C (5490)**

Full year; 6 credits

Prerequisites: AP Calculus AB or BC (may be concurrent) and department 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 at a mathematical level that requires the use of calculus. Computational techniques using programming will be included to explore thermal and harmonic systems. 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, 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.

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## Summer on the Hill

*(courses for credit)*

*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 will open in February 2023 at [www.greenhill.org/summer](http://www.greenhill.org/summer). Inquiries, questions, and clarifications may be sent to Vicki Van Liew in the Summer on the Hill Office (x5490).*

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

Note: Courses, schedules, and costs shown in this section are offered during summer 2023.

### **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 the government's role allow students to gain insight into American politics and assess how the 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.

### **Video Production: SOTH**

For credit: Course 6520; Grades 9-12; Weeks 2-3

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

This course is a different but equally engaging filmmaking experience from the semester Video Production class; similar in that students divide into groups to produce small finished films during the class, very different because this is the only time of the year that film students get to use all of the MPAC, it is also the only time where they have the option to work alongside AVP students, the only time that AVP alums return to help as counselors for the class, giving hands-on help and advice as you produce your films, the only time film students from other schools can work together on your films. It is also the only time you can really dedicate your mind to filmmaking for a solid two weeks. This is a singular filmmaking experience and a lot of fun. Video Production: SOTH can be taken all four US summers for credit.

### **Photography II**

For credit: Course 6120 or for enrichment; Grades 9-12; Weeks 3-5

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 Adobe 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. Issues-based photographic projects are explored throughout the course in the form of a written thesis called an Artist Statement. This course may be repeated for credit.

### **Abstract and Experimental Photography**

For credit: Course 6135; Grades 9-12; weeks 3-5

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

Prerequisite: Photo I, or for instructor's approval, see Mr. Lopez.

There is a fee for class-related supplies.

Join Mr. Lopez as we delve deeper into the meaning and redefinition of the process of photography. Utilizing traditional and contemporary techniques, this course will explore the relationship between silver, light, metal, glass, and paper, and we'll endeavor to create images using untraditional and experimental ways. Students will create wet cyanotypes, chemigrams, solargraphs, alternative silver emulsion toning methods, experimental Polaroid techniques, and pinhole imagery. Finally, students will explore the highly experimental process, Mordançage—a process that melts the gelatin of the black-and-white print. We will take a field trip to photograph in downtown Dallas to generate images for the class. Images will be submitted to future exhibitions and contests.

# Global Online Academy

Greenhill is a member of a global consortium of independent schools that are 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. Junior and senior students receive priority enrollment. Sophomore students can be nominated by an advisor but are not guaranteed enrollment. GOA courses are not open to freshmen. Tuition is \$550 per semester and \$1,100 for a yearlong course. Summer tuition ranges from \$750 to \$1,000. As an added benefit to students during the school year, Greenhill covers 50% of the tuition. Summer courses are exempt from this benefit.

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. Students may also choose to enroll in one GOA course per summer. 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.
- Create flexibility in your schedule and explore the world of online learning.
- The class you want at Greenhill is full, and GOA offers a similar course.
- Connect with students from across the country and around the world.

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, which are largely asynchronous and are NOT self-paced.

Students should expect to commit a minimum of five to seven hours a week (or more) to a single GOA class during the year, and 10 to 15 hours a week (or more) during the summer. Summer courses designed to replace a yearlong high school course will require a minimum of 15 to 20 hours a week.

GOA courses must be part of a student's daily schedule and cannot exceed Greenhill's definition of a full schedule of seven academic classes and one after-school course/activity.

Including GOA, a student may not exceed eight course/activity enrollments on a semester transcript. Students must 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 three credits for each semester class taken.

## Global Online Academy

### Design & Innovation

All courses labeled Design & Innovation count toward the graduation requirements.

### Fine Arts

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

### English

Courses labeled English count toward English electives.

### History

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 & 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.

## Global Online Academy Academic Calendar 2023-2024

### SUMMER 2023 DATES

Summer 1: June 15-August 2, 2023

Summer 2: Greenhill Students are not eligible to enroll in Summer 2, as final reports are made available after the academic year has started. All transcripts must be submitted to Greenhill by the end of Summer 1.

These seven-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. Course tuition ranges from \$750 to \$1,000.

Abnormal Psychology	Cyber Security	Introduction to Psychology
Academic English Accelerator*	Digital Photography	Investing I
Architecture	Fiction Writing	Medical Problem Solving I
Business Problem Solving	Genocide & Human Rights	Microeconomics
Computer Science I: Computational Thinking	Geometry	Personal Finance
Computer Science II: Analyzing Data with Python	Health & Fitness	Precalculus*
Computer Science II: JAVA	How to Argue Well	Race & Society
Creative Fiction	International Relations	Religion & Society
	Introduction to Legal Thinking	Spanish Language Through Culture I

\*Courses not eligible for Greenhill credit and may be taken for remediation purposes only.

Semester 1 dates: August 30-December 15, 2023

Semester 2 dates: January 10-April 26, 2024

Full-year dates: August 30-April 26, 2024

Important note: Students should be aware of both Greenhill and GOA add/drop deadlines. GOA deadlines outline potential financial penalties.

### SEMESTER 1

August 21, 2023	Semester 1 and yearlong course welcome pages published for students
August 12-August 30	Synchronous teacher/student pre-course conversations. These are important (ungraded) initial conversations between teachers and students.
August 30	Semester 1 and yearlong courses open
September 8 (6 pm CDT)	Last day to ADD a GOA course (and last day to DROP with no financial penalty)
September 15 (6 pm CDT)	Last day to DROP a GOA course
October 20	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 8	Course Catalog for 2024-2025 is published, along with 2024-2025 Academic Calendar
December 15	Semester 1 ends (end of Grading Period 2)
December 22	Semester 1 Grade Reports distributed

### SEMESTER 2

December 8, 2023	Semester 2 course welcome pages published for students
January 2-10, 2024	Synchronous teacher/student conversations for Semester 2 courses. These are important (ungraded) initial conversations between teachers and students.
January 10	Semester 2 courses open (yearlong courses resume)
January 19 (6 pm CST)	Last day to ADD a Semester 2 GOA course (and last day to DROP with no financial penalty)
January 26 (6 pm CST)	Last day to DROP a Semester 2 GOA course
March 1	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.
April 1 (6 pm CDT)	Enrollment opens
April 26	Semester 2 ends; end of Grading Periods 2 (semester) and 4 (yearlong)
May 3	Grade Reports distributed

## SUMMER COURSES EQUIVALENT TO YEARLONG COURSES

### MATHEMATICS

#### Geometry

Summer; 6 credits

Department: Mathematics

Prerequisite: Algebra I and Department Chair approval. With Department Chair approval and Advisor and GOA Site Director approval, this summer course may be taken as an equivalent to a yearlong Geometry course. Students must pass with a B- or above in order to receive credit for this course and advance to Algebra II.

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 seven-week summer session.

#### Precalculus

Summer; 0 credits.

Department: N/A. This course is not eligible for credit and may only be used for remediation purposes.

Prerequisite: Algebra 2 or its equivalent.

In this intensive summer course, students deepen and apply their understanding of mathematics in order to be prepared for higher-level courses. The emphasis is on understanding functions, including transformations, domain/range, and visual representations. In addition, students deepen their understanding of the concept of equivalence through numerical, graphical, and algebraic representations. This includes developing fluency with algebraic manipulation. Much of the work involves problem-solving and the application of previous and current skills to new situations. Projects include opportunities to apply topics such as polynomials, matrices, trigonometry,

and sequences and series to real-world scenarios. Students analyze situations, create models, develop solutions to problems, and then reflect on this work. The course culminates in a project that provides students a chance to explore a situation and bring to bear the skills they have learned to analyze it and present their understanding of the situation. This course is intended for students who are looking to accelerate through a precalculus course, and, as such, concepts and topics are presented quickly, allowing for time to apply the skills to novel situations. This course replicates what is typically a yearlong course, so students should expect to dedicate 15–20 hours per week during the seven-week summer session.

### MODERN AND CLASSICAL LANGUAGES

*Students must obtain MCL Department Chair approval and Advisor and GOA Site Director approval. This course may be used as a remedial course for students needing to retake an introductory Spanish course before beginning freshman year.*

#### 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 II at their schools. This course replicates what is typically a yearlong course, so students should expect to dedicate 15–20 hours per week during the seven-week summer session. Please note that this course is not recommended for those wanting a light introductory course to get a taste of Spanish before deciding if they want to study it further, nor for those wanting to get a jump-start on a Spanish I course during the academic year. In this intensive course, students will master greetings and introductions, question formation, describing daily routines, expressing likes and dislikes, describing familiar people and places, and other fundamental communicative functions. Students learn to communicate using common regular and irregular verbs in the present tense and the immediate future. 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 interacting with classmates and instructors, students practice their budding language skills in a self-paced online environment. Video calls in pairs or small groups occur one to two times a week and are a required course component. They are comparable to the practical lab component of a science course because students speak Spanish with each other and the instructor while immediately observing and reacting to the results of their efforts to communicate.

### YEARLONG COURSES

#### MODERN AND CLASSICAL LANGUAGES

*Students must complete the 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.*

*GOA's World Language courses seek to awaken student interest in language and culture through an approach that is at once rigorous and modern. Our summer Spanish course is an intensive seven-week version of what most schools teach in Spanish I courses. 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. 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 and non-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.*

*Japanese II and Japanese III 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 and Arabic 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, and 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 are 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 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 an 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 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 the GOA Catalyst Conference.

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## MATHEMATICS

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

### 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 a 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.

## SEMESTER COURSES

### Academic English Accelerator

Summer, Fall, or Spring; 0 credits

Department: N/A

This program helps students in grades 9 to 12 improve their academic English. Students bring work from their other courses to language coaching sessions. There, with peers and instructors, they improve their written and oral communication. They submit drafts of writing assignments and record rehearsals of presentations. They set goals and receive feedback and coaching on their English expression. This program adapts to meet students' needs and goals but is intended for students nearing English proficiency. When students enroll, GOA will request student scores on any standardized proficiency assessment. This determines if the program is the right fit for the student. Most students in this program score at least B1 or B2 on the Common European Framework or 4 on the WIDA scale. They are often attending or planning to attend English-only high schools or universities. Students may enroll in this program during the Summer, Semester 1, Semester 2, or any combination of the three. In the summer, students in this program must take another GOA course. In semesters 1 and 2, we recommend students in this program take another GOA course, but we do not require it. This course is not graded.

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## INTEGRATED STUDIES

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

### Arts Entrepreneurship

Spring; 3 credits

Department: Integrated Studies

In this course, aspiring visual artists, designers, filmmakers, musicians, and other creatives learn how to find success in the dynamic fields of their choosing. Students learn about art careers and organizations by attending virtual events and interviewing art practitioners, entrepreneurs, and administrators. Beyond exploring trajectories for improving their crafts, students build skills in networking and personal branding

while examining case studies of a variety of artistic ventures—some highly successful and some with teachable flaws. Using real-world examples of professional and emerging creative and art organizations, students gain a better understanding of the passion and dedication it takes to have a successful creative career.

### Business Problem Solving

Summer, Fall, or Spring; 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, and 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.

### Health & Fitness

Fall or Summer; 3 credits

Department: Integrated Studies

Approval for PE credit requires Department Chair, Athletic Director, and GOA Site Director approval and will only be considered for special circumstances.

In this course, students take a comprehensive look at multiple factors that influence our bodies over a lifetime to maintain an active and healthy lifestyle. Students gain physical literacy by identifying, applying, analyzing, and evaluating components of the FITT Principle (Frequency, Intensity, Time, and Type), principles of training, phases of movement, and athletic performance.

Students set personal improvement goals for both fitness and movement skills utilizing baseline testing and performance analysis. Each week, students complete a variety of

physical exercises to target specific areas of fitness and movement to assist in achieving their goals. Reflection and feedback will inform students regarding their improvement.

The course culminates in a student-led project where students explore, synthesize, and implement an exercise or sport-specific topic that directly impacts their lives. Topics of exploration include but are not limited to nutrition in sports, exercise psychology or mental health in sports, sports exploration for the lifetime, exercise science or sports-specific performance and biomechanics, careers in sports, and community-based improvement design and implementation.

### How to Argue Well

Summer; 3 credits

Department: Integrated Studies

This course, which teaches critical thinking skills through argument mapping, offers students the opportunity to make a significant intellectual leap and improve not only their performance in school but also their ability to engage in productive arguments. When your teachers push you to “be more specific” or ask, “Where is your evidence?” or say you need more “analysis,” they are highlighting your need to improve your critical thinking skills. Research has measured argument mapping as being a more effective learning tool than a semester at college when it comes to developing these skills, and it is this skill set that best predicts one’s performance in school and one’s performance on standardized tests, as well. Further, bad arguments are what give arguments a bad name. We live in a world of polarized communications where name-calling, emotion, and blurred lines between fact and fiction result in arguments based on extreme opinions that eclipse reason. The problem is not that we are arguing; the problem is that we do not know how to engage in arguments using logic and reasoning. These skills—the bedrock of critical thinking—give people the ability to argue thoughtfully and effectively. Good arguments are illuminating, generative, and compelling. This course will teach students how to master and deploy critical thinking skills to think independently; improve academic performance across disciplines; create, assess, and engage thoughtfully in arguments; and successfully forge community in the process.

### Introduction to Artificial Intelligence

Spring; 3 credits

Department: Integrated Studies

Aspects of artificial intelligence (AI) permeate our lives, and its algorithms power your favorite apps. How much do you really know about how AI works or how it is changing the world around us? This course will explore the history of research into artificial general intelligence and the subsequent focus on the subfields of narrow AI: neural networks, machine learning and expert systems, deep learning, natural language processing, and machine vision and facial recognition. Students will learn how AI training datasets cause bias and focus on the ethics and principles of responsible AI: fairness, transparency and explainability, human-centeredness, and privacy and security.

### Introduction to Blockchain & Cryptocurrency

Spring; 3 credits

Department: Integrated Studies

Much attention has been brought to the cryptocurrency space by the meteoric rise in the valuation of bitcoin and other cryptocurrencies. More recently, meme tokens have also grabbed the spotlight. When thinking about cryptocurrency, there is much more to consider than just market capitalization or coins named after canines. Introduction to Blockchain & Cryptocurrency is an entry-level course for anyone excited by the space. This course explores how we arrived at the place we are now and what the current and possible applications of crypto are. We’ll explore how markets in crypto operate, where they’ve received practical application, and where the space may head in the future through the lenses of creators, consumers, and governments. In addition, we will take a deeper look at blockchain, the underlying technology that powers cryptocurrencies, and its many far-reaching implications for the future of government, business, the arts, and more.

Each lens represents a different way to view the complex and interrelated causes and outcomes of the changing crypto landscape. Using a variety of technologies and activities, students work individually and with peers to evaluate each lens. Students then analyze and explore how these technologies may

shape and disrupt the future not only of the crypto space but of many current and future industries.

### Introduction to Branding & Marketing

Fall or Spring; 3 credits

Department: Integrated Studies

In our increasingly digitalized world, we are bombarded by ads every day and presented with an immeasurable amount of content across all media platforms. It has become increasingly difficult for brands to break through the noise and capture the attention of their intended audience. In this course, students learn what it takes to build an effective brand that can authentically connect with consumers and create long-term brand equity. The course starts with introducing what a brand is and goes on to explore how different branding elements, such as visual identity, advertising strategy, content marketing, as well as the intangible elements of the customer journey, come together to create a unique brand experience. By applying marketing theories, interviewing experts, and analyzing modern case studies, students will develop and strengthen their competencies as brand strategists. Students will also examine how responding to important ethical, social, and environmental issues can impact the brand’s success. The course culminates in a final project where students collaborate to design an impactful brand campaign for a mission-driven company, organization, or initiative.

### Introduction to Legal Thinking

Summer, 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

Summer, Fall, or Spring; 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.

## FINE ARTS

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

### Architecture

Summer, Fall, or 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.

### Digital Photography

Summer or Spring; 3 credits  
Department: Fine Arts  
Note: Students must have daily access to a DSLR camera.

In an era where everyone has become a photographer obsessed with documenting most aspects of life, we swim in a sea of images, whether posted on Instagram, Facebook, Snapchat, Pinterest, or another digital medium. Yet what does taking a powerful and persuasive photo with a 35mm digital single lens reflex (DSLR) camera

require? Digital Photography explores this question in a variety of ways, beginning with the technical aspects of using and taking advantage of a powerful camera, then moving to a host of creative questions and opportunities. Technical topics such as aperture, shutter, white balance, and resolution get ample coverage in the first half of the course, yet each is pursued with the goal of enabling students to leverage the possibilities that come with manual image capture. Once confident about technical basics, students apply their skills when pursuing creative questions such as how to understand and use light, how to consider composition, and how to take compelling portraits. Throughout the course, students tackle projects that enable sharing their local and diverse settings, ideally creating global perspectives through doing so. Additionally, students interact with each other often through critique sessions and collaborative exploration of the work of many noteworthy professional photographers whose images serve to inspire and suggest the diverse ways that photography tells visual stories.

### Filmmaking

Fall; 3 credits  
Department: Fine Arts  
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.

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## ENGLISH

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*Courses labeled English count toward English electives.*

### **Creative Nonfiction**

Summer or 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.

### **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.

## HISTORY

*Courses labeled History and Social Science count toward history electives.*

### **Abnormal Psychology**

Summer, Fall, or Spring; 3 credits

Department: History

This course provides students with a general introduction to the field of abnormal psychology from a Western perspective while exploring the cultural assumptions within the field. Students examine the biopsychosocial aspects of what we consider abnormal while developing an understanding of the stigma often associated with psychological disorders. Through book study, videos, article reviews, and discussions, students consider how our increasingly global world influences mental health in diverse settings. In learning about the different areas of Western abnormal psychology, students study the symptoms, diagnoses, and responses to several specific disorders such as anxiety, depression, eating disorders, or schizophrenia. Students develop an understanding of how challenging it can be to define "normal" as they begin to empathize with those struggling with mental distress. Throughout the course, students are encouraged to attend to their own mental well-being. The course culminates in an independent project where students showcase their learning with the goal of making an impact in their local communities.

### **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, Immanuel 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.

### **Capitalism: Past, Present, & Future**

Spring; 3 credits

Department: History

In some circles, capitalism has been blamed for most of society's ills. In others, it has been credited with the grandest achievements in human history. In this course, students examine advocates from both circles, looking closely at the components of capitalism—and other systems of economic and social control—to decide what they think. As students build their own philosophies around capitalism, they work collaboratively and independently on case studies, exploring examples of capitalism around the world and in the world around us. Throughout the course, students immerse themselves in the history of various forms of capitalism, learning the specific components of capitalism. Students investigate how capitalism has impacted social, political, and economic systems around the world. The final project requires students to pull from historical and modern case studies to present a coherent portfolio of their thinking. Students also create a proposal for articulating shifts as we look to the future of capitalism.

### **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 Spring 2019 as they present their individual projects to spark change in local communities through well-informed activism.

### **Developmental Psychology**

Fall or Spring; 3 credits  
Department: History

Over a few short years, most human beings grow from infants who are not even able to hold up their heads to become walking, talking, and thinking people who are able to communicate using language, understand complexities, solve problems, and engage in moral reasoning. This course is an introduction to the fascinating study of human growth and development, focusing on the significant changes that occur physically, emotionally, cognitively, and socially from birth through adolescence. Students consider the big questions of heredity versus environment, stability versus change, and continuity versus discrete stages of change as they investigate language acquisition, sensorimotor development, thinking and learning, and personality and emotions. Through readings, observations, case studies, and application activities, students examine development from the perspectives of major theorists in the field from both Western and non-Western traditions.

### **Entrepreneurship in a Global Context**

Fall or 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 startup. Units of study include the 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 road map to building and developing their own team startup, a process that requires hypothesis testing, customer research conducted in hometown markets, product design, product iterations, and entrepreneur interviews. An online startup 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.

### **International Relations**

Summer, 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 the 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.

### **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 the 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 the 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.

### **Investing I**

Summer, Fall, or Spring: 3 credits

Department: History

This course is a prerequisite to Investing II at GOA.

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.

### **Investing II**

Spring: 3 credits

Department: History

Prerequisite: Investing I

In this course, students expand their knowledge of practices that define smart investment. They explore concepts in finance and apply them to investment decisions in four primary contexts: fixed-income investments, foreign exchange and crypto, commodities, and real estate. After an introduction to theories about behavioral finance, students simulate scenarios in which they must make decisions to add to their portfolio of equities.

In the first unit, they learn how fixed-income assets like bonds fit into a larger portfolio to hedge risk in their portfolios. In the second unit, students examine forex trading and the cryptocurrency markets, a riskier and more volatile investment vehicle. In the third unit, students examine how commodities can be a part of a larger portfolio but also how commodity prices might affect the larger economy. Finally, in the fourth unit, students learn about the array of strategies in real estate investing.

### **Macroeconomics**

Fall or Spring: 3 credits

Department: History

Macroeconomics is the study of economic units as a whole rather than of their individual components. The aggregate unit is usually a national economy, and that is our focus in this course. Students learn to better understand how to measure national economic activity with concepts like the gross domestic product, unemployment, and inflation and the strengths and weaknesses of these statistics. Students then study theoretical methods of influencing national economic activity with monetary and fiscal policy and learn about some of the controversy surrounding these policy tools. The advantages and disadvantages of international trade and of methods of setting exchange rates are also introduced. The course includes an individual student investigation of a national economy other than their home country. Students identify their economic findings and present resolutions in their final report.

### **Microeconomics**

Summer or Fall: 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.

### **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 dive into what positive psychology research tells us about the formula for a meaningful life, the ingredients of fulfilling relationships, and changes that occur in the brain when inspired by music, visual art, physical activity, and more. We seek out and lean on knowledge from positive psychology research and experts, such as Martin Seligman's Well Being Theory, Mihaly Csikszentmihalyi's idea of flow, and Angela Lee Duckworth's concept of grit. In exploring such theories and concepts, students imagine and create real-world measurements using themselves and willing peers and family members as research subjects. As part of the learning studio format of the course, students also imagine, research, design, and create projects that they share with a larger community. Throughout the development of these projects, they collaborate with each other and seek ways to make their work experiential and hands-on. Students leave the class with not only some answers to the question of what makes life meaningful, happy, and fulfilling but also the inspiration to continue responding to this question for many years to come.

### **Prisons and the Criminal Justice Systems**

Fall or Spring: 3 credits

Department: History

How do societies balance individual freedoms with security? How do definitions of "crime" and "punishment" shift across jurisdictions and time periods? How do recent protests and discussions about racial biases and systemic racism inform our understanding of criminal law and its applications? Although the United States has been frequently cited as having the highest "mass incarceration" rate, other countries in the world have also been criticized for injustices in their criminal justice systems. 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 systems while grappling with mass incarceration as a legal, ethical, and practical issue. To understand current views on crime and criminal punishments and to examine proposed systemic reforms, we immerse ourselves in the different forms of rhetoric and media that brought the U.S. and other nations to our present. We read and analyze jury arguments, courtroom motions, news op-eds, judicial decisions, recent cases, and other forms of public persuasion that shape the outcomes of criminal defendants. The final project requires students to advocate for a major reform to a criminal justice system in a city, state, or country. Having developed research skills, students apply them to build an effective argument that includes a real-world solution.

### Religion & Society

Summer or Spring: 3 credits  
Department: History

Religion is one of the most salient forces in contemporary society but is also one of the most misunderstood. What exactly is religion? How does religious identity inform the ways humans understand themselves and the world around them? How can increased levels of religious literacy help us become more effective civic agents in the world today? Students in this course will conduct several deep dives into specific case studies in order to understand how religious identity intersects with various systems of power, including race, gender, class, sexual orientation, and ethnicity. By engaging with material from a variety of academic fields (history, sociology, anthropology, psychology), students will grapple with the complex ways in which society and religious identity relate to one another.

### 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, and 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, groups and the self that brings 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.

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## DESIGN & INNOVATION

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*All courses labeled Design & Innovation count toward the graduation requirement.*

### Computer Science I: Computational Thinking

Summer, Fall, or Spring: 3 credits  
Department: Design & Innovation

Computational Thinking centers on solving problems, designing systems, and understanding human behavior. It has applications not only in computer science, but also in 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: Design & Innovation  
Prerequisite: Computer Science I: Computational Thinking;  
Department Chair approval required

This course teaches students how to write programs in the JAVA programming language. JAVA is the backbone of many web applications, especially e-commerce and government sites. It is also the foundational code of the Android operating system and many tools of the financial sector. Students learn the major syntactical elements of the JAVA language through objected-oriented design. The emphasis in the course is on creating intelligent systems through 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: Design & Innovation  
Prerequisite: Computer Science I: Computational Thinking or its equivalent; Department Chair approval required

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: Design & Innovation

Prerequisite: Computer Science I: Computational Thinking or its equivalent; Department Chair approval required

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.

### Cyber Security

Summer, Fall, or Spring; 3 credits

Department: Design & Innovation

Department Chair approval required

Cybercriminals 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 keys encryption works for HTTPS and TLS traffic. Students also explore the fundamentals of data forensics and incident response protocols. The course includes an analysis of current threats and best practice modeling 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: Design & Innovation

Department Chair approval required

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 or Spring; 3 credits

Department: Design & Innovation

Department Chair approval required

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.

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## MATHEMATICS

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

### Game Theory

Fall or Spring; 3 credits.

Department: Mathematics

Do you play games? Do you ever wonder if you're using the "right" strategy? What makes one strategy better than another? In this course, we explore a branch of mathematics known as game theory, which answers these questions and many more. Game theory has many applications as we face dilemmas and conflicts every day, most of which we can treat as mathematical games! We consider significant global events from fields like diplomacy, political science, anthropology, philosophy, economics, and popular culture. Specific topics we discuss include two-person zero-sum games, two-person non-zero-sum games, sequential games, multiplayer games, linear optimization, and voting and power theory.

### Linear Algebra

Fall or Spring; 3 credits

Department: Mathematics

Prerequisite: Geometry and Algebra 2 or equivalents

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

## Number Theory

Fall; 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 fundamental ideas can be applied to the huge numbers needed for modern applications.

## Personal Finance

Summer, Fall, or Spring; 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.

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## SCIENCE

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*Courses labeled Science count toward elective science.*

### 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 the 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.

### Introduction to Organic Chemistry I

Fall; 3 credits

Department: Science

The purpose of the course is to teach organic chemistry content and to prepare students for organic chemistry at the collegiate level. This course dives into mechanisms and reaction types that make up all living things on this planet, carbon chemistry. From a content perspective, this course introduces the magnificent world of complex molecules and their properties, reactions, and applications. Understanding the properties and appreciating the incredible organic world we live in is the key to understanding how to address some of the most challenging problems that we face today and in the future. This course also helps students build their problem-solving and pattern-recognition skills so that when students take organic chemistry at the collegiate level, they will be prepared to "speak" the language. At the collegiate level, introductory organic chemistry is oftentimes a challenging course for many students entering pre-health programs of study or science majors getting their prereqs taken care of. Organic Chemistry I focuses on the "language of organic chemistry." Students learn to predict electron movement for organic reactions. They focus on molecular structure (i.e., bond angles, shapes, polarity, and resonance), basic nomenclature, and prediction of electron movement. This course is the first in a two-part series. Organic Chemistry I is offered in Semester 1, and Organic Chemistry II is offered in Semester 2. While it is possible to take only this first course, we recommend signing up for both semester courses.

## Introduction to Organic Chemistry II

Spring; 3 credits

Department: Science

Prerequisite: Introduction to Organic Chemistry I

In this course, students continue to explore the incredible world of carbon chemistry. Students add to their language skills and learn about additional functional groups and classes of organic molecules. They build on our understanding of reaction types and how to predict what can be made from certain precursors. The purpose of Introduction to Organic Chemistry II is to foster an appreciation for the incredible organic world we live in. Students develop an understanding of how we can use this knowledge of the structure of molecules to address some of the most challenging problems that we face today and in the future. Some example questions that students may explore: What are some things that need to be considered when creating materials that can cause lasting issues for the health of aquatic and human life upon disposal? How can we manufacture new materials that can have applications to improve and extend life through medical technologies? How can we create better, more sustainable energy sources that lead us away from our fossil fuel dependency? What characteristics will new synthetic materials need so that they don't need to be replaced as often (to create less waste, etc.)? Students continue to hone their understanding of nomenclature, work with reaction types with a focus on polymerization and material science, and receive an introduction to spectroscopy. Introduction to Organic Chemistry II focuses on the important building and structures of organic molecules. Students learn to appreciate the interconnection and complexity of the organic world.

## 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

Fall or 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 remains at the center of the course, Medical Problem-Solving 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 Medical Problem-Solving 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

Neuropsychology is the exploration of the neurological basis of behavior. Within this course, students learn about basic brain anatomy and function as well as cognitive and behavioral disorders from a neurobiological perspective. They do an in-depth analysis of neural communication with an emphasis on how environmental factors such as smartphones affect nervous

system function, their own behaviors, and the behaviors of those around them. Students also have the opportunity to choose topics in neuropsychology to explore independently including Alzheimer's disease, addiction, neuroplasticity, and chronic traumatic encephalopathy, and share their understanding with their peers in a variety of formats. The course concludes with a study of both contemporary and historic neuropsychological case studies and their applications to everyday life.

# Coming to Greenhill

## Driving Directions to Campus

### MAIN ENTRANCE

#### For Interviews, Testing, and Group Observations

##### From the Dallas Tollway (North/South):

- Exit Spring Valley Road
- West on Spring Valley Road
- Continue West on Spring Valley Road, crossing Midway Road
- Greenhill School Main Entrance is on the right
- Proceed to Visitor Parking Lot

##### From 635,LBJ (East/West):

- Exit Midway Road
- North on Midway Road to Spring Valley Road
- West on Spring Valley Road
- Greenhill School Main Entrance is on the right
- Proceed to Visitor Parking Lot

### NORTH ENTRANCE

#### For Admission Previews and Tours

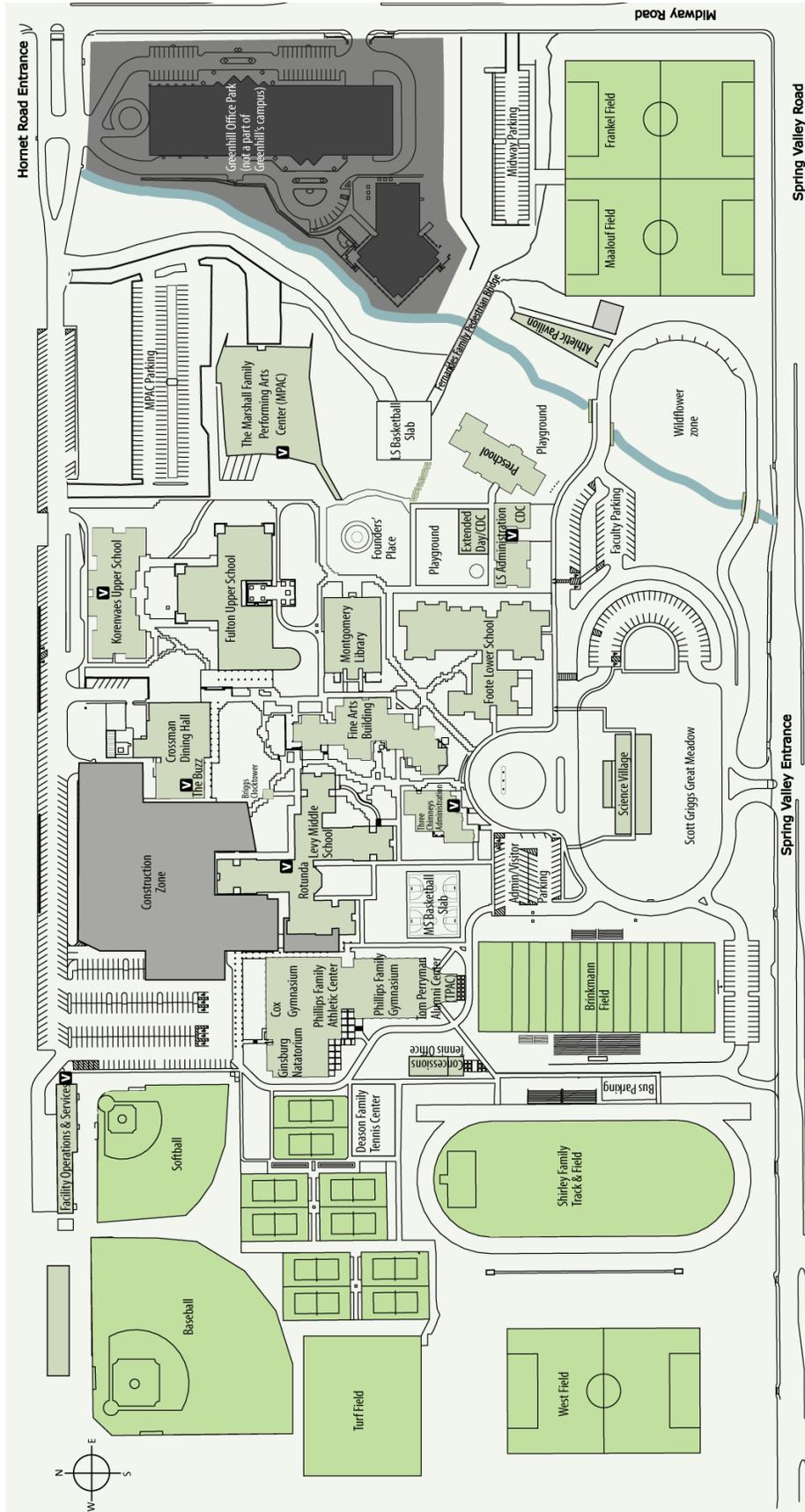
##### From the Dallas Tollway (North/South):

- Exit Spring Valley Road
- West on Spring Valley Road
- Right on Midway Road
- Left on Hornet Road into Greenhill School
- Proceed to Parking Lot

##### From 635,LBJ (East/West):

- Exit Midway Road
- North on Midway Road
- Continue North on Midway Road, crossing Spring Valley Road
- Left on Hornet Road into Greenhill School
- Proceed to Parking Lot

**NORTH ENTRANCE**



**MAIN ENTRANCE**

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.

# Greenhill

— S C H O O L —

4141 SPRING VALLEY ROAD | ADDISON, TX 75001 | 972-628-5400

[WWW.GREENHILL.ORG](http://WWW.GREENHILL.ORG)