



UPPER SCHOOL

CURRICULUM GUIDE



QUISQUE PRO OMNIBUS

“Each for All”

MISSION STATEMENT

GFA engages students as partners in an innovative, inclusive, and globally minded community to prepare them for lives of purpose.

PHILOSOPHY

PARTNERS

Our students collaborate with teachers to develop their voices to effect change, to become lifelong learners who take ownership of their educations, and to have an instinct for self-reflection that builds character and drives improvement.

INNOVATIVE

Building on a demanding curriculum, our faculty seeks innovative and effective methods to help students cultivate the skills and habits of mind necessary to excel.

INCLUSIVE

GFA strives to create a diverse community that values the identities, perspectives, and experiences of all its members.

GLOBALLY MINDED

We empower our students to discover their place in the world and help them to become globally competent citizens engaged in building a sustainable future.

CORE VALUES

PASSION • INTEGRITY • EMPATHY • CURIOSITY • EXCELLENCE

TABLE OF CONTENTS

INQUIRY AT GFA	2
GENERAL INFORMATION	
GRADUATION REQUIREMENTS	3
CREDITS	3
COURSE OFFERINGS	4
COMPUTER SCIENCE, ENGINEERING & DESIGN	4
ENGLISH	6
HISTORY & GLOBAL STUDIES	9
MATHEMATICS	15
PERFORMING ARTS	18
SCIENCE	21
VISUAL ARTS	25
WORLD LANGUAGES	26
GLOBAL ONLINE ACADEMY	31
MAY TERM	32

INQUIRY AT GFA

INQUIRIES

Inquiries deepen a student's understanding of a given subject or facilitate the development of a skill beyond what is possible in the rest of the curriculum.

Students will typically

- partner with a faculty mentor alongside a small cohort of peers to write substantial research papers,
- explore a topic in greater depth than in traditional courses, and/or
- learn a new skill or gain knowledge about a topic that is not covered in the curriculum.

Students may enroll in only one inquiry per department each year. Inquiries are 0.5 credit and generally open to 11th- and 12th-grade students; they vary in level depending on the nature of the work. Inquiries are not prerequisites for Advanced Inquiries.

ADVANCED INQUIRIES

Advanced Inquiries, available to 12th-graders, are designated as the highest level of academic rigor at GFA. They generate the highest level of understanding, demand the greatest skill, and offer the most latitude for students to exercise their agency and follow their curiosity about their chosen subject of study.

In these courses, students will

- identify a problem and ask their own questions,
- chart their own paths of inquiry,
- present their work to a real audience, and
- deliver an original piece of work.

Students may enroll in only one Advanced Inquiry.

Students interested in completing an Advanced Inquiry will be invited to workshop their ideas with faculty early in the spring semester of 11th grade, in advance of submitting a request for the appropriate Advanced Inquiry course through the course counseling process.

GRADUATION & CREDIT REQUIREMENTS

ENGLISH: 4 CREDITS

English 9, 10, electives in 11th grade, and electives or Advanced Inquiry in 12th grade

HISTORY & GLOBAL STUDIES: 2 CREDITS

World History and United States History

MATHEMATICS: 3 CREDITS

Algebra 1, Geometry, and Algebra 2

Students must be enrolled in a full-year mathematics course through 11th grade.

SCIENCE: 2 CREDITS

Biology and Chemistry

VISUAL AND PERFORMING ARTS: 1 CREDIT

WORLD LANGUAGES: 3 CREDITS

Three years in World Languages courses

MAY TERM: 1 COURSE PER YEAR

Students enrolled for the spring semester are required to complete May Term.

This requirement was waived for the 2020-2021 school years.

ATHLETICS

9th- and 10th-grade students are required to participate in the athletic program all three seasons, with two of the three on a team.

11th-grade students are required to participate in two seasons, one on a team.

12th-grade students are required to participate in two seasons.

Participation in the fall and spring theatre production satisfies the requirement for two seasons, one on a team.

CREDITS

9th and 10th Grades: In each semester, students take a minimum of 5 full-credit courses and a maximum of 6.5 (or 7 if .5 credit or more is a performing or visual arts course below the 600-level).

11th and 12th Grades: In each semester, students take a minimum of 5 full-credit courses and a maximum of 6.5--or 7 if students are enrolled in Choir, Orchestra, or Wind Ensemble. These may include no more than 5 credits in English, Science, Math, History, and World Languages, with the exception of Inquiries and Advanced Inquiries.

Course Enrollments & Cancellations

In order to maximize our ability to meet students' interests, GFA may at times not offer a course that is listed in the catalog or change the term in which it is offered, subject to student enrollment and staffing constraints. At the beginning of each semester, an add/drop period allows for changes to course loads, subject to availability; see *The Handbook* for details.

COURSE LEVELS

The first digit corresponds to the overall level of the course. Where a course is offered at different levels of rigor, the second digit indicates the track of the course: 100 is the lower track of 150, 200 is the lower track of 250, etc.

100-200

Introductory courses typically taken prior to or in 9th grade.

300-500

Intermediate courses

600

Advanced courses; courses typically taken in the first year of college.

700

Advanced courses typically taken after the first year of college.

800

Reserved for Advanced Inquiries.

COURSE

COMPUTER SCIENCE, ENGINEERING, AND DESIGN

250 INTRODUCTION TO COMPUTATIONAL THINKING

In this beginning-level course, students will learn basic programming concepts using tools that create graphics from computer code. At the same time, students will learn to think critically about the technology that surrounds us and shapes our daily lives, discovering the foundations of computational thinking and diving into units on data and the internet. (.5 credit; 1st semester or 2nd semester)

450 INTERMEDIATE COMPUTER SCIENCE

This lab-based course will emphasize the development of coding skills so students can engage more deeply with computer science. Students will explore the fundamentals of programming and complete hands-on assignments that apply their knowledge to topics such as image processing, data analysis, and simulations. (.5 credit; 1st semester or 2nd semester)

450 INTERMEDIATE ENGINEERING

This class focuses on the process an engineer goes through to understand, design, and execute a project. Students will explore the fundamentals of both the engineering process and the design thinking process, gaining skills in makerspace tools including the saw, 3D printer, vinyl cutter, and laser cutter. Through a hands-on approach, students will engage in collaborative project design, troubleshooting, and scientific testing. By engaging with real-world problems, students will come away with an ability to empathize with and design for clients. (.5 credit; 2nd semester)

550 ARCHITECTURE

This course will introduce students to the history of architecture and the fundamentals of architectural design. Through sketching, model making, and hand drawings, students will explore aesthetic and structural concepts and how they relate to the contemporary built environment. A variety of media--watercolor, pastels, pens--will be used as drawing tools. (.5 credit; 1st semester)

OFFERINGS

650 ADVANCED COMPUTER SCIENCE

Students will study program design and implementation, algorithm analysis, standard data structures, and object-oriented programming design. The course emphasizes programming methodology with an emphasis on problem-solving and algorithm development. Prerequisites: Intermediate Computer Science or departmental permission. (1 credit; full year)

650 DESIGN THINKING FOR ENGINEERS

In this course, students will learn how to systematically observe clients in order to uncover user needs and generate ideas for original products. Each unit will introduce students to emerging prototyping skills, including sonic design, 3-D imaging, laser cutting, animatronics, and wearable circuits. The course will focus on an iterative process and culminate in a presentation where students share images of their work, narrating the pivots they made to improve their designs over time. (.5 credit; 1st semester)

650 ROBOTICS

The theme of this course is movement. Students will build and design small and large robots that are able to perform tasks like a human would. They will study autonomous movement through the use of sensors and camera data. Students will also learn how engineers collect and assess data from sensors to improve machine accuracy. The course will involve designing enclosures and parts for robots to give an artistic sparkle to student machines. Prerequisites: Intermediate Engineering, or Advanced Computer Science, or departmental permission. (.5 credit; 2nd semester)

750 DATA STRUCTURES

Are you interested in how computers store and retrieve data efficiently? Have you ever wondered how a computer stores information about a game board, a dictionary, or a network? Do you sometimes ask yourself, "How does that video game make a decision about moving my virtual opponent?" This data structures class will engage with these questions. In this course, you will learn how to implement, analyze, and use fundamental data structures such as matrices, stacks, queues, hash tables, and binary trees. Open to 11th and 12th graders;

prerequisites: Advanced Computer Science or departmental permission. (.5 credit; 1st semester)

750 GAME DESIGN AND DEVELOPMENT

In this course, students will design and program a game. The class begins with an exploration of current theories in game design, including game mechanics, user interfaces, and implementation. Students will apply their understanding of these concepts and their experience in computer science to construct an original, polished game. Open to 11th and 12th graders; prerequisites: Advanced Computer Science or departmental permission. (.5 credit; 2nd semester)

INQUIRY IN COMPUTER SCIENCE, ENGINEERING, AND DESIGN



850 ADVANCED INQUIRY: COMPUTER SCIENCE AND ENGINEERING

This course is the culminating experience in the CSED department. Students will use techniques for rapidly prototyping and evaluating alternative designs to solve a real-world problem. Throughout the course, they will build on feedback from stakeholders, like classmates, clients, and users. Some students will build their prototype with a skill they developed in a previous course, and other students will teach themselves a new skill with support from the instructor, an outside expert, or an online course. Open to 12th-graders; prerequisites: one credit of courses in CSED (1 credit; full year)

ENGLISH**250 ENGLISH 9**

Focusing on great literature in a variety of genres — including classic and contemporary fiction, creative non-fiction, poetry, and drama — students will learn to listen more carefully, empathetically, and insightfully to the voices of others and to develop their own powerful and inimitable voices. In partnership with the teacher, they will create a learning community that supports a diversity of thought, perspective, experience, and background; that recognizes such diversity as a source of strength; and that honors different voices and identities. In class, they will develop the habits of passionate and precise reading, discussing, and writing, with a special emphasis on the twin arts of close reading and Harkness discussion. Guided by the understanding that (as Saul Bellow noted) “a writer is a reader moved to emulation,” students will write creative pieces inspired by the literature they read; in their critical writing, they will often seek to understand, explain, and celebrate a text that they love. There will be opportunities for them to read and write about what matters most to them. Throughout, the course will focus on the process of reading and writing, and the primary mode of assessment — a portfolio of work chosen and curated by the student — will value not only the quality of the work but also the art of revision and the habit of self-reflection. (1 credit; full year)

450 ENGLISH 10

Building on the foundations they’ve laid in English 9, students in this course will continue to practice the essential arts of attentive and curious reading, writing, thinking, discussion, and revision. Students will write in genres they have learned before as well as ones that might be new to them, each time learning the shape and moves of the genre

by reading exemplary pieces in the form and then writing pieces of their own inspired and informed by these exemplars; they will read widely in a variety of forms, listening carefully to what powerful writers have to say, striving both to think along with these writers and respond to them from their own points of view. Along the way, students will be invited to reflect on what forms of writing and kinds of writers they are responding to most powerfully at this point in their lives so that they can make good choices about what they will study next year. Each semester, students will submit a portfolio of critical, reflective, and creative writing as their culminating assessment. (1 credit; full year)

650 SEMESTER ELECTIVES

11th-graders take two semester-long courses: one reading course in the fall and one craft course in the spring. Seniors either do the same or apply for a year-long Advanced Inquiry in Creative Writing or Literary Studies. (Each semester course is .5 credit)

1ST SEMESTER READING ELECTIVES

A reading elective is an experience focused on reading widely and deeply in a particular form of literature. In these courses, students will learn better how to read curiously, passionately, and well in the particular form they have chosen to study. In making this choice, we want students to ponder what kind of reading will best meet their intellectual needs by giving them the right balance of enjoyment and challenge. As they do that, they are encouraged to reflect on their reading life so far and ask themselves: what kind of literature have I read some of that I’d like to read more of? Or: what kind of literature have I not read much of but am hungry to explore?

In addition to and in concert with their reading, students will explore and respond to what they have read in discussion and in writing.

- **Reading Poetry:** In this course, students will do a deep dive into Emily Dickinson’s poetry, life, and letters.
- **Reading Fiction:** In this course, students will read novels and stories by the 20th-century American novelist Toni Morrison.
- **Reading Fiction:** In this course, students will read novels and stories written by and inspired by the 19th-century English writer Jane Austen.

- **Reading Short Fiction:** In this course, students will read an array of marvelous short fiction; texts may include Tolstoy's *The Death of Ivan Ilyich*, Dickens' *A Christmas Carol*, Franz Kafka's *The Metamorphosis*, Gabriel Garcia Marquez's *Chronicle of a Death Foretold*, or Claire Keegan's *Foster*, and tales by Chekhov, O'Connor, Cheever, Salinger, Carver, Trevor, Morrison, Munro, Wolff, Moore, Murakami, Jones, Jin, Lahiri, Diaz, and Saunders.
- **Reading Drama:** In this course, students will read, hear, and see a selection of Shakespeare's plays, with a special emphasis on performance that will include screening film versions and attending live productions.
- **Reading Journalism and Criticism:** In this course, students will read the work of journalist and critic George Orwell and then read widely in contemporary journalism and criticism in a variety of forms and venues.

2ND SEMESTER CRAFT ELECTIVES

A craft elective is an experience focused on learning the techniques, forms, and principles—the what, how, and why—of a particular form of literary writing. In making this choice, we want students to think about what kind of writing will best meet their intellectual needs by giving them the right amount of enjoyment and chal-

lenge. As they do so, we encourage them to reflect on their writing life so far and ask themselves: what kind of writing have I done a bit of that I'd like to do more of? Or: what kind of writing have I not done much of but am hungry to try?

In these courses, students will read a wide variety of mentor texts in their chosen form, write their own original pieces in that form, and engage in workshops with their peers about their work.

- **Craft of Poetry:** In this course, students will write original poetry in a variety of forms and styles, guided by great models, both contemporary and classic, and seeking always to develop their distinctive voices and visions.
- **Craft of Fiction:** In this course, students will study the form of the short story, develop habits that nurture creativity, and practice the craft of writing stories of their own.
- **Craft of Dramatic Script Writing:** In this course, students will develop a broad and complex understanding of dramatic writing with a focus on plays and their own writing.
- **Craft of Journalism and Cultural Criticism:** In this course, students will learn the craft of deconstructing texts of different kinds—both written and visualto



explore, expose, and highlight the messages and structures embedded within literature, mainstream media, and pop culture.

- **Craft of Satire:** In this course students will learn the craft of deploying humor, irony, and exaggeration to expose the foibles and foolishness of people's beliefs, conduct, and institutions.
- **Craft of Creative Nonfiction:** In this course, students will learn the craft of perceiving and communicating the truth—of the essayist's experience, or of other people, or of events in the world—using all the techniques and power of literary storytelling.

INQUIRY IN ENGLISH

550 READING INQUIRY

This course is for students who want to find time and space to read more than they currently do, in an environment that will provide the support and accountability for them to do so. In this inquiry, students will chart out an exciting and ambitious course of independent reading in consultation with a teacher and then read the books they've planned to read. Students should expect to record and interact with the moments that have meant

most to them from their reading in a journaling practice and to be in regular and engaged conversation with their teacher and peers about their reading. Open to 10th-12th graders (.5 credit; full year)

550 READING INQUIRY: THE 19TH CENTURY NOVEL

This course is for students who want to find time and space to explore the 19th Century Novel, in an environment that will provide the support and accountability for them to do so. Students should expect to record and interact with the moments that have meant most to them from their reading in a journaling practice and to be in regular and engaged conversation with their teacher and peers about their reading. Open to 10th-12th graders (.5 credit; full year)

850 ADVANCED INQUIRY: LITERARY STUDIES

Students will identify an area of study that they want to pursue — be that a particular author, time period, cultural moment or movement, genre, or style — and then engage in a research and writing process of roughly four stages. They will (1) craft an inquiry by reading extensively in their chosen primary text field and doing original thinking and close readings in writing; (2) explore a relevant field of scholarly secondary sources to develop and put that original thinking in conversation with the field; (3) craft a more elaborated scholarly essay in conversation with these sources; (4) share their research and insights with a real audience in some relevant venue. Students will announce interest in the spring of their 11th-grade year and will craft, in conversation with their advisors, a reading list of primary texts for the summer after 11th grade. Students may work on a long-form research-analysis paper; a series of shorter, research-analysis papers; and/or a research-analysis portfolio. Students can expect to read extensively about their chosen field and then to meet with their teacher to discuss how to best apply their knowledge. The final products will be due in the spring of their senior year and may take one of several forms. Students may showcase their research at an event modeled after the World Perspectives Symposium; they may present their research to the GFA English Department in the manner of a research symposium or defense; they may transform their scholarly research piece(s) into another written genre, such as a literary essay or retrospective review like those that appear in the *New Yorker* or the *New York Review of Books*, and either submit it for publication or share it with the GFA community in some way; or they may meet with other GFA English classes to apply and share their knowledge. Successful candidates for



admission will have demonstrated curiosity and passion for the discipline and proficiency in written argument and in analytical interpretation based in close reading. Once enrolled, students will be required to do substantial reading of primary texts during the summer between 11th and 12th grades. Open to 12th-graders; departmental permission required. (1 credit; full year)

850 ADVANCED INQUIRY: CREATIVE WRITING

Charting their own creative journeys, students in this advanced, yearlong workshop will build on the writing skills and strategies they have learned, read widely and deeply in their chosen genre, produce a substantial body of original work, publish it in a fitting format, and present it to a real audience. Individually, students will craft their collections of stories, poems, or essays, or their novel or novella. Collectively, they'll constitute a tight-knit writing community, a workshop devoted to the giving and receiving of useful feedback. The class will include group readings on craft and process, and students will undertake a significant individual reading project, apprenticing themselves to a master of the genre. They'll be expected to share drafts and reflections regularly, to give and get feedback constantly, and to revise fearlessly. Their final project will include, in addition to their creative work, a critical piece about the work of the writer they have studied, an introduction to the work of a peer, and a reflection on their own development as a writer. Students will then create a physical book with a fitting title and design to showcase their work; they will also read selections to an audience. Successful candidates for admission will have demonstrated interest, independence, and proficiency in the necessary skills. The Advanced Inquiry is for the student who, conversant with the basics, is ready to pursue ambitious and original creative work. Once enrolled, students will be expected to do required summer reading in the genre. Open to 12th-graders; departmental permission required. (1 credit; full year)

HISTORY & GLOBAL STUDIES

250 WORLD HISTORY: THE HUMAN JOURNEY

Who are we? How did we get here, and where are we going? This required course, typically taken in 9th grade, examines the complexity of humans throughout history: from our origins in early human evolution to the intricacies and paradoxes of modern societies. As we consider the social, cultural, and biological facets of the human story, this course will tackle big questions of justice,

hierarchy, progress, and power. Units will include both secondary and primary source readings, several research opportunities, and projects. The goal is to immerse students in the study of history while developing close reading, analytical writing, and critical thinking skills. Throughout the course, students will examine how context and narrative can shape our understanding of history itself. (1 credit; full year)

450 UNITED STATES HISTORY

This required course, typically taken in 10th grade, is both a thematic and research-intensive exploration of American identities from 1491–present. Beginning with indigenous communities of North America, students will explore Spanish, French, Dutch, and eventually English inroads on the eve of the American Revolution. The origin stories of early America allow students a deep dive into the choices and compromises made by the framers of the Constitution, as well as, for example, examining how issues concerning citizenship, race, and personhood intersected with the lived experience of individuals and communities. The first semester ends with a research and critical inquiry project. The spring allows for an examination of historical memory and historical myth following Reconstruction, and the economic, political, and social developments that contribute to the age of mass politics. Throughout the course, we will debate, analyze art and film, and explore United States history through current events. The course features a research paper to prepare students for more advanced research work in the future. Prerequisite: World History. (1 credit; full year)

SEMESTER 1 ELECTIVES

Offered to Juniors and Seniors. Prerequisites: World History and US History

650 ARTISTIC ROOTS OF CHINESE HISTORY

China has always been a major player in the Eastern Hemisphere and its political and cultural influences cannot be underestimated. Even when it came into contact with Western Civilization, China staunchly maintained its cultural roots -- or so it seems on the surface. This class explores not only Chinese history via its many artistic mediums, including bronzes, paintings, and statues, but also calligraphy, architecture, and films. Students will learn more about why China was and still is a major world power, why its cultural roots are so important in understanding Chinese history and the Chinese people, and how China has really changed from contact with the West. Is art just a reflection of its culture, or is it a tool

used by both the government and the artists to convey a message that goes beyond aesthetics? (.5 credit; 1st semester)

650 ART FROM THE RENAISSANCE TO NEOCLASSICISM

This course explores the important stylistic developments in the 15th–18th centuries. The course begins with an in-depth analysis of Renaissance art, exploring such topics as humanism, classicism, and naturalism. From Caravaggio to Velazquez, the Baroque style will provide a window into the soul of the creative process. Similarly, the Rococo style will shed light on the coming collapse of the Old Regime. The class concludes by examining the development of the Neoclassical style and its influence on the French Revolution. (.5 credit; 1st semester)

650 CITIES

The United Nations projects that by 2050, 68% of the world's population will live in urban areas, a development that raises important questions about our shared future and calls for a reimagining of how we live. This course asks students to critically examine their surroundings as well as their relationships and responsibilities to one another in a world that is becoming increasingly urban. Cities are social, cultural, economic, political, technological, and environmental products; they are also drivers of incredible change in these domains. Students in this class unpack the histories and imagine the futures of cities--what economic historian Ed Glaeser calls humanity's "greatest invention"--by studying where one intersects with urbanism, urbanization, and the built environment. (.5 credit; 1st semester)

650 COMPARATIVE RELIGIONS IN A GLOBAL CONTEXT

Students in this course compare world religions to gain a deeper understanding both of the diversity of perspectives on spirituality and of their rising importance in a globalized world. Students explore human beliefs, learn to engage in meaningful dialogue about them, and develop empathy for spiritual practices and worldviews that differ from their own. They examine the meanings of the word "religion" and gain foundational knowledge of five primary world religions, as well as survey current religious practices around the world. The course ends with a capstone project in which students engage with a religious community of their choosing and develop a micro-ethnography based on their observations, interviews, and personal reflection. (.5 credit; 1st semester)

650 DIGITAL CULTURE AND MODERN POWER

"In the technical realm, we repeatedly enter into a series of social contracts, the terms of which are revealed only after the signing,"—Langdon Winner. Fintech, Influencers, Cyberwarfare, and the reach of BigTech: This course examines the role of technology and its intersection with economic, political, and social power structures after the advent of the internet and social media. Students will engage their own experience with technology to build a critical theory of how the tools we use as individuals and polities are their own "form of life" with intended and unintended consequences, good and bad. Attention will be given to the ways our networked economy and communication systems engage users, both as media consumers and citizens, into new relationships with soft and hard power. Our archive will draw from film, print media, and the vast web. Independent research will allow students to explore a topic of their choice. (.5 credit; 1st semester)

650 INTERNATIONAL RELATIONS

This course introduces students to major paradigms in international relations. We explore the different schools of thought and philosophies that have developed in the field and look at their predictably divergent assessments of and answers to the main problems in the international arena. We look at a series of questions central to the study of International Relations: issues such as war and peace in the modern state system, the growth of the global economy, the role of international law and supranational institutions, and the challenges posed by nuclear proliferation and terrorism. Students explore the complexity of current affairs through case studies, simulations of international crises, and in-depth analysis of global issues. Throughout the course, discussion is grounded in real-world problems, with the primary emphasis on current global issues and their historical background, as well as on concepts and theories. (.5 credit; 1st semester or 2nd semester)

650 THE MODERN MIDDLE EAST

This course builds students' understanding of the historical and geopolitical significance of the region known as the Middle East. The very term "Middle East" has evolved over time to describe a geographic region ranging from North Africa to Western Asia. In this course, students investigate the historical processes and cultural factors that underpin how we define The Middle East. Students explore the historical origins of the religious, cultural, and political divides that can still be seen today. Some topics that this course will address are the Sunni



Shia Divide, the history of foreign interference, and the rise of Arab Nationalism. The course will also explore contemporary events in the Middle East and what they mean for the United States and the rest of the world. (.5 credit, 1st semester)

650 TOPICS IN MODERN UNITED STATES HISTORY

This course introduces students to major themes in United States history in the late nineteenth and early twentieth century. The course is organized chronologically but with an emphasis on three interrelated developments: the continuous social and economic transformations wrought by industrialization and urbanization; the contested development of US political institutions and state capacities to meet the challenges of a modern capitalist and democratic society; and struggles over lines of inclusion, identity, and citizenship that remade US culture and politics. Students will also explore the country's changing role in the world, as it grew from a regional power to a global colossus over the course of the century with an emphasis on the ways in which this shifting global role helped to shape US politics, society, and culture at home. (.5 credit; 1st Semester)

650 REVOLUTIONS IN EARLY MODERN EUROPE: 1450–1815

“The French Revolution was as much the progenitor of modern totalitarianism as of modern democracy,” — Charles Coulston Gillespie (2004). This fast-paced course examines the religious and political ruptures and fissures that riddle European History into the early nineteenth century. Beginning with the Renaissance and Reformation upending the ideas and institutions of medieval Christendom, special attention will be given to the art historical works of each period, as well as the role of absolutism and constitutional monarchy in creating modern nation-states. The course culminates with an examination of the lasting questions posed by the legacies of the French and Industrial Revolutions for Europe today. How equal is equal? Has the French Revolution ended? Is technology a form of life? This course provides partial preparation for the AP European History Exam. (.5 credit; 1st semester)

SEMESTER 2 ELECTIVES

Offered to Juniors and Seniors. Prerequisites: World History and US History

650 ART FROM NEOCLASSICISM TO MODERN ART

This course begins with an examination of the Neo-classical style of art and its interest in the mythological themes of antiquity. From there, students will explore the Romantic style and its obsession with the sublime. A study of the significant styles of the latter half of the 19th century (Realism, Impressionism, and Post- Impressionism) provides students with an opportunity to consider the following questions: Do artists have a responsibility to improve society? In what ways did the bourgeoisie determine the composition and content of art? What is Modernity? The second half of the course will focus on the important stylistic trends of the 20th century. As such, students will consider the growing popularity of abstract art. What is Cubism? What is its significance? Students also pursue an understanding of the psychological dimensions of Surrealism. The course concludes with an in-depth study of America's contribution to the world of modern art. Works of Abstract Expressionism, Pop Art, and Photorealism will all be featured in discussions. (.5 credit; 2nd semester)

650 ASIAN AMERICAN HISTORY

According to the 2020 US Census, there are 21 different types of Asians in the United States today. Not all of the groups listed are associated with a specific country. When considering Asian Americans in the United States, one tends to focus on just a few groups and events, such as the Chinese railroad workers and the Japanese Internment Camps. Yet, Asian American history is much more than just these two events and groups of people. Asian Americans have been relegated to the sidelines of American history, yet they are also a part of it, sometimes a major part. This class will explore the reasons behind this phenomenon and some major players that shaped how Asian Americans are viewed. Media plays a large part in the Asian American experience, and we will explore how Hollywood and social media have contributed to and continue to influence modern views of what being Asian in America means. (.5 credit; 2nd semester)

650 GENOCIDE & HUMAN RIGHTS

This course examines the concepts of Genocide and Human Rights from a humanistic and social scientific perspective. This course will examine several of the major genocides of the 20th century, analyze the role of the international community in responding to and preventing further genocides, and examine current human rights crises around the world. Students will read primary and secondary sources, engage in discussions with classmates, write brief papers, watch documentaries, and learn to in-

dependently evaluate human rights in contemporary and historical contexts. (.5 credit; 2nd semester)

650 INTERNATIONAL RELATIONS

This course introduces students to major paradigms in international relations. We explore the different schools of thought and philosophies that have developed in the field and look at their predictably divergent assessments of, and answers to, the main problems in the international arena. We look at a series of questions central to the study of International Relations: issues such as war and peace in the modern state system, the growth of the global economy, the role of international law and supranational institutions, and the challenges posed by nuclear proliferation and terrorism. Students explore the complexity of current affairs through case studies, simulations of international crises, and in-depth analysis of global issues. Throughout the course, discussion is grounded in real-world problems, with the primary emphasis on current global issues and their historical background, as well as on concepts and theories. (.5 credit; 1st semester or 2nd semester)

650 THE MAKING OF MODERN EUROPE: 1790–PRESENT

This fast-paced course picks up with the legacies of the French and Industrial Revolutions after the Congress of Vienna as nation-states and political actors employ various ideologies (liberalism, imperialism, fascism, socialism, communism) to amass influence and power. Students will give special attention to the material and philosophical consequences of WWI and WWII to European ideas and institutions and trace the emergence of and challenges to the European Union. This course provides partial preparation for the AP European History Exam. (.5 credit; 2nd semester)

650 THEORIES OF KNOWLEDGE

The Greek word “philosophy” means “love of wisdom;” and “gnosis” means “inquiry and awareness toward spiritual truth.” This course will foster a lifelong passion for exploring how we come to know, and how these philosophies of knowing shape our relationship to the world and building our lives of purpose. As we engage Western, African, and Indigenous philosophies, we will reflect on the rigor of questions like What is real? What is love? How can one achieve happiness? What communities of knowers do I belong to; how have these communities shaped my perspectives? Together we will find that most famous philosophers did not arrive at irrefutable conclusions; instead, each philosopher's work provides an important link in a chain that spans the ages and continues to improve how we understand ourselves.



In this class, we emphasize questions rather than answers. Not only will we study philosophers through history, we will also look at specific fields, such as ethics and aesthetics. Together we will reflect on how the ways we “Dare to know!” (in natural science, social science, ethics, arts, history, or mathematics) influence the way we live our lives, how we listen or act in our relationships, and how we may improve our ability to honor our beliefs and choices. In an open forum for questions and discussion, we will explore and expand our breadth of knowledge. (.5 credit, 2nd semester)

650 TOPICS IN MODERN UNITED STATES HISTORY

This course introduces students to major themes in United States history in the twentieth century. The course continues from the first semester US History elective to expand upon three interrelated developments: the continuous social and economic transformations wrought by industrialization and urbanization; the contested development of US political institutions and state capacities to meet the challenges of a modern capitalist and democratic society; and struggles over lines of inclusion, identity,

and citizenship that transformed US culture and politics. Students will also explore the country’s changing role in the world, as it grew from a regional power to a global colossus over the course of the century with an emphasis on the ways in which this shifting global role helped to shape US politics, society, and culture at home. Although this course builds upon topics and themes from the 1st semester US History elective, the 1st semester elective is not a prerequisite for this course. (.5 credit; 2nd Semester)

650 UTOPIA/DYSTOPIA

What will the future look like? What kind of a society do we want to live in? In this course, we will explore utopian and dystopian visions dreamt up throughout history and consider how such thinking reflects and influences our present age. Possible topics include free will and human nature, surveillance, authority and obedience, artificial intelligence, social contracts, and the role of the state. Special emphasis is given to critiquing films from this genre. After surveying utopian and dystopian movements and ideas, students will choose an area of focus for a final project constructing their own vision of the future. (.5 credit; 2nd semester)

INQUIRY IN HISTORY & GLOBAL STUDIES

700 READING INQUIRY

A Reading Inquiry would include directed readings, regular discussion, and short writings or projects. Students may propose topics for study by approaching a faculty mentor and writing and submitting a course of study proposal. Departmental approval required. (.5 credit; full year)

750 RESEARCH INQUIRY: AMERICAN HISTORY

This inquiry allows for guided research on a topic or theme in American History. This opportunity for a deep dive into a topic of interest in American History will be an ideal accompaniment or follow up to the work done in the American History survey class. Open to 11th- and 12th-graders. (.5 credit; full year)

750 RESEARCH INQUIRY: ART HISTORY

From Romanticism to Environmental Art, the past three centuries have witnessed a sea of change in the world of visual arts. The recalibration of aesthetics has raised many questions. What role has modern ideology played in energizing artistic expression? How much attention should be dedicated to an artist’s biography when considering his or her body of work? To what extent should we consider

issues of gender and power when analyzing artwork? Has technological innovation enhanced or diminished the creative process? The study of art history provides us with an opportunity to examine broad historical trends through a unique channel of inquiry. This inquiry course is an open invitation to join in an independent journey to unravel some of the mysteries of Modern Art. Open to 11th- and 12th-graders. (.5 credit; full year)

750 RESEARCH INQUIRY: EUROPEAN HISTORY

This inquiry allows for guided research on a topic or theme in European History. This opportunity for a deep dive into a topic of interest in European History will be an ideal accompaniment or follow-up to the work done in either European History semester electives. The Ancient-Medieval-Modern time frame of European History could also connect with and build on topics introduced in the Brief History of Humankind course. Open to 11th- and 12th-graders. (.5 credit; full year)

750 INQUIRY: THE SUPREME COURT AND CONSTITUTIONAL LAW

This inquiry, taught by a practicing attorney, will explore the current role of the Supreme Court in a politically-divided nation in which the people increasingly look to the courts to resolve policy disputes. The beginning of the course will examine the historical role of the Supreme Court, as compared to Congress and the executive branch, and the different approaches to interpreting and applying the text of the Constitution. The bulk of the course will be devoted researching hot-button issues that have come before the court in recent times, such as gun control, campaign finance, voting rights, partisan gerrymandering, the death penalty, search and seizure of evidence in the age of technology, the right of privacy, and equal protection of the laws in the context of gender and

sexual orientation. Lively in-class discussion is central to the course, with a moot course exercise at the end of the semester in which students can argue a hypothetical case before a judge. The goal of the course is to develop not only an appreciation and understanding of the role of the judicial branch, but also skills in critical thinking, effective writing, and oral advocacy. Prerequisites: World History and US History. (.5 credit; full year)

850 ADVANCED INQUIRY: GLOBAL THESIS

This course deepens students' understanding of the world by guiding them through an independent research project on a global issue. The global thesis process is driven by students' inquiry about questions of global significance. The course begins with a period of exploration in which students consider a wide range of questions related to their topic of interest. Once they select a research question, they produce a formal proposal in which they must justify the significance of their project. Students then use research methods from various academic disciplines to collect and analyze real-world data. They share their findings in an academic paper and a presentation at the World Perspectives Symposium. Along the way, they develop their critical thinking, research, writing, and public speaking skills, and their ability to think about the issues from a global perspective. Open to 12th-graders who successfully complete the Advanced Inquiry application process. (1 credit; full year)

850 ADVANCED INQUIRY: RESEARCH IN HISTORY

This course will allow students to deepen their understanding of a topic or theme in history by delving into archives to explore a historical topic through primary sources and research. Students will bring the knowledge learned and interest fostered in their work in previous history classes to formulate a question that will lead



them into meaningful research work and writing. The final product will be a substantial paper that features original research and a presentation during the World Perspectives Symposium. Open to 12th-graders who successfully complete the Advanced Inquiry application process. (1 credit; full year)

MATHEMATICS

150 ALGEBRA 1

This course is a first-year high school introductory algebra course that emphasizes mathematical relationships and understanding of underlying concepts as tools for building skill proficiency. Throughout the course, students investigate the foundations of algebra through sophisticated, formal mathematical methods and vocabulary, including using a function-based approach to understand linear and quadratic relationships. Topics include solving equations, inequalities, and systems, factoring, polynomials, rational expressions, irrational numbers, radicals, and quadratic equations. It is in Algebra 1 that students acquire an appreciation for the value and power of their new algebraic and graphing tools. (1 credit; full year)

250 GEOMETRY

This course explores similar content and themes as Geometry (Math200) with additional emphasis on collaboration, independence, creative problem solving, and co-construction of understanding and skills. Students will be introduced to the study of geometric objects and their properties, such as parallel lines, symmetry, congruency, and similarity of triangles and polygons, properties of secants and tangents to circles, area and volume, right triangles (including trigonometric ratios), and vectors. Occasional investigations utilizing dynamic geometry software such as GeoGebra will introduce a new topic, while rigorous proof of geometric statements (including analytical methods) and the development of strong communication skills will be emphasized. Prerequisite: Algebra 1; departmental permission. (1 credit; full year or summer with departmental approval)

300 ALGEBRA 2 & TRIGONOMETRY

This course focuses on the study of functions—linear, quadratic, polynomial, rational, exponential, logarithmic, and trigonometric—and provides an introduction to basic probability concepts. Additional topics may be included at the discretion of the instructor. These concepts are explored algebraically, graphically, and

numerically, and through this triplex approach, students will continue to acquire an understanding of algebraic structure and how algebra can be used to model various situations. The TI Nspire CX II CAS graphing calculator becomes an integral tool used not only for numerical manipulation but also for visualization and verification. Prerequisites: Algebra 1, Geometry (may be taken concurrently with departmental permission). (1 credit; full year)

350 ALGEBRA 2 & TRIGONOMETRY

This course addresses the same topics noted for Algebra 2 & Trigonometry (Math300) with additional emphasis on collaboration, independence, creative problem solving, and co-construction of understanding and skills. The TI Nspire CX II CAS graphing calculator becomes an integral tool used not only for numerical manipulation but also for visualization and verification. Prerequisites: Algebra 1, Geometry (may be taken concurrently with departmental permission), and departmental permission. (1 credit; full year)

400 PRE-CALCULUS

This course is designed to provide the essential mathematical background needed in the study of calculus and advanced statistics. The topics presented develop both an intuitive base and introduce some of the working tools for the study of advanced mathematics. Topics include in-depth algebraic concepts, elementary and trigonometric functions with applications, and analytic geometry. Prerequisites: Geometry, Algebra 2 & Trigonometry. (1 credit; full year)

450 PRE-CALCULUS

Topics in this course are prerequisites for Calculus and develop both an intuitive base and introduce some of the working tools for the study of advanced mathematics. Topics include in-depth algebraic concepts, elementary and trigonometric functions with applications, probability and combinatorics, parametric and polar equations, vectors, analytic geometry, sequences and series, and an introduction to limits. Additionally, this course emphasizes independence, collaboration, high-level creative problem solving, and co-construction of understanding and skills. Prerequisites: Geometry, Algebra 2 & Trigonometry, and departmental permission. (1 credit; full year)

550 FUNDAMENTALS OF CALCULUS

This semester course is an introduction to the study of differential and integral calculus at an elementary level.

Students will learn to find limits, derivatives, and integrals and acquire the ability to apply those concepts to problem-solving situations. With the exposure to the “big picture” of Calculus in this course, students will receive a firm foundation for future college calculus courses and for fields requiring calculus-related concepts. Generally, students enrolled in the Fundamentals of Calculus course will enroll in the Fundamentals of Probability and Statistics course during the 2nd semester. Prerequisite: Pre-Calculus. (.5 credit; 1st semester)

550 FUNDAMENTALS OF PROBABILITY AND STATISTICS

This semester course is an introduction to the field of probability and statistics at an elementary level. Students will work with simulated and real data sets to study the central concepts of statistics—data analysis, probability, and inference. Course content will include, though not exclusively: exploring data arguments, probability distributions, estimation and error, and sampling methods. Students enrolled in this course will receive a firm foundation for future college statistics courses and for fields requiring statistics-related concepts. Prerequisite: Geometry and Algebra 2 & Trigonometry. (.5 credit; 2nd semester)

650 ADVANCED CALCULUS AB

This advanced Calculus course includes an in-depth study of differential and integral calculus, as well as applications to physics and economics. Students are encouraged to sit for the AP Calculus AB exam in the spring. Prerequisites: Pre-Calculus and departmental permission. (1 credit; full year)

650 ADVANCED CALCULUS BC

In addition to all topics of the AP Calculus AB curriculum, this faster-paced course covers methods of integration, convergence of series, Taylor and Power Series, and calculus of polar and parametric functions in one year. Students are encouraged to sit for the AP Calculus BC exam in the spring. Prerequisite: Pre-Calculus (MATH450) and departmental permission. (1 credit; full year)

650 ADVANCED STATISTICS

This course is designed to introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. The topics are divided into four major themes: exploratory analysis; planning a project; probability; and statistical inference. Working within these themes, students learn to identify important variables, observe patterns in order to detect and

form conjectures about relationships among variables, anticipate and reasonably model these relationships, form hypotheses, and draw valid conclusions based on analytical methods. Students are encouraged to sit for the AP Statistics exam in the spring. Prerequisite: Pre-Calculus (Math 450 may be taken concurrently); departmental permission. (1 credit; full year)

750 MULTIVARIABLE CALCULUS

This course introduces students to the concepts of partial derivatives, multiple integrals, vector functions, and linear algebra. In addition, the software package Mathematica will be used to illustrate surfaces and space curves. Prerequisite: AP Calculus BC; departmental permission. (1 credit; full year)

INQUIRY IN MATHEMATICS

550 INQUIRY: EXPLORATIONS OF MATHEMATICS

The world of mathematics is full of rich applications and diverse fields of study that are not encountered directly in the core curriculum. This course provides students with the opportunity to explore two of these fields or applications for a half-semester each. The study of each field provides an overview of the scope of the field, digs deeply into a number of fundamental topics, and highlights applications. Students may enroll in this course multiple times to study different topics but may not repeat a topic area. Topics rotate on a semester basis and may include, but are not limited to, the history of mathematics, number theory, graph theory, set theory, probability and combinatorics, abstract algebra, discrete mathematics, formal logic, topology, foundations of pure mathematics, and applications of algebra. Prerequisite: concurrent enrollment in or completion of Algebra 2 & Trigonometry. (.5 credit, full year)

550 INQUIRY: INTRODUCTION TO INVESTING: THEORY AND PRACTICE

In this course, students simulate the work of professional investors by using the tools, theories, and decision-making practices that define smart investment. We explore prominent investment styles and apply concepts in finance to investment decisions. Topics covered include the characteristics of various financial instruments, the time value of money, and the valuation of financial instruments using a discounted cash flow model. We also focus on the methodologies employed by value investors in finding attractive investment opportunities in the stock market. We also cover the concept of risk reduction via diversification and explore the relationship

between market risk and the expected return of a given asset. Students are introduced to asset allocation strategies that distribute capital across asset classes, geographic locations, and industry groups, and they apply those strategies to building portfolios to meet the financial goals of potential investors. We consider both active and passive investment strategies and the use of mutual funds or exchange-traded funds as asset allocation tools. Overall, students learn to identify attractive investments, manage the risk of a diversified global portfolio, and appreciate the skills necessary to manage their own portfolios in the future. This course is open to 11th- and 12th-graders. (.5 credit, full year)

550 INQUIRY: LINEAR ALGEBRA

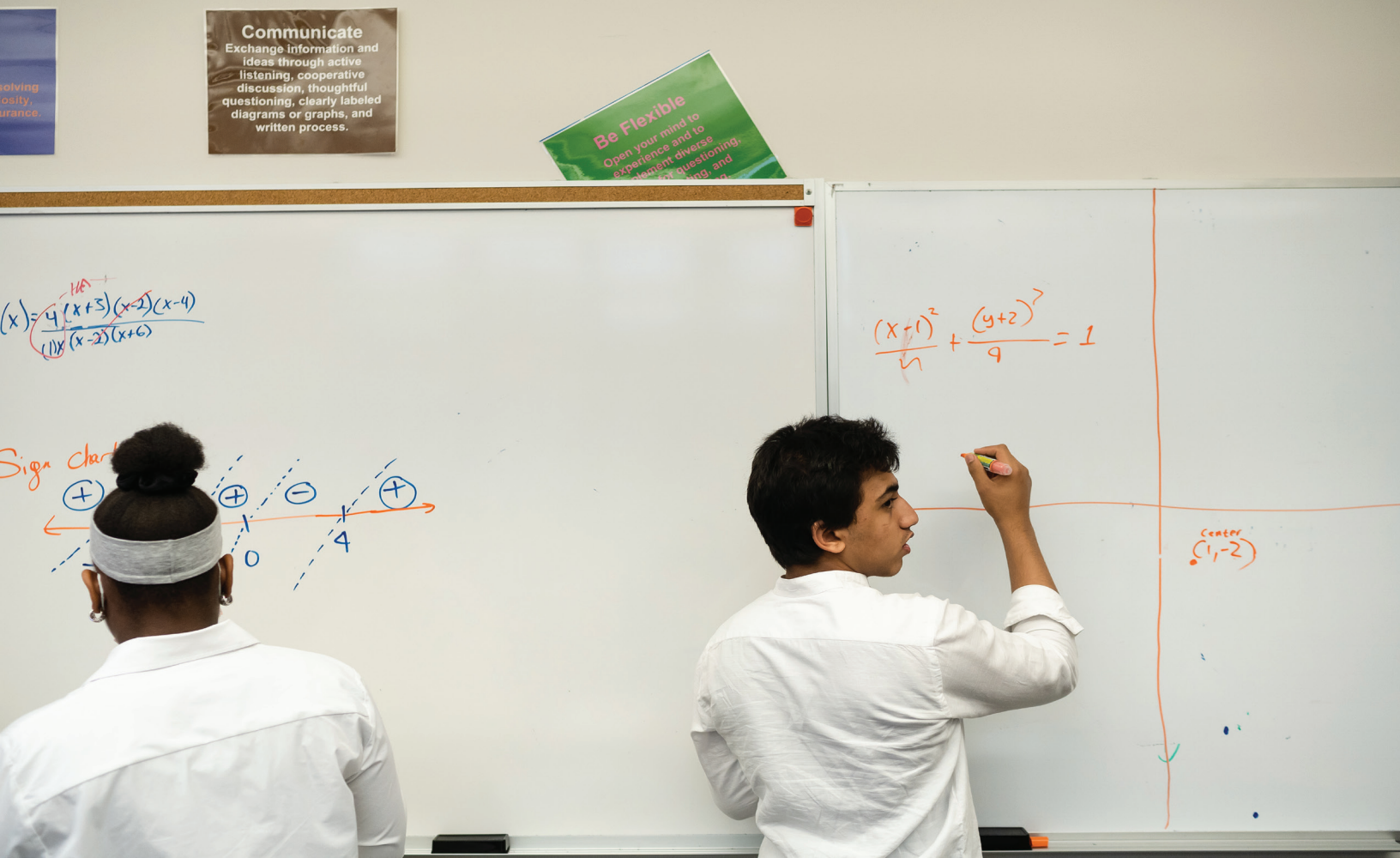
This course introduces students to the fundamentals of linear algebra, a field of math with diverse applications in economics, various sciences, computer science, and engineering, as well as to other fields of study in mathematics. Students will study linear equations, vectors, and matrix operations in the context of vector spaces, linear transformations, and eigenvalue theory. This course also includes reading and constructing formal mathematical proofs. Prerequisite: Algebra 2 & Trigonometry. (.5 credit, full year)

550 INQUIRY: MATHEMATICAL MODELING

Mathematical modeling is the process of describing a real-world problem in mathematical terms, usually in the form of equations, and then using these equations both to help understand the original problem and to work towards potential solutions. This course provides students with the opportunity to study various types of mathematical modeling and its applications. In addition to exploring many of the rules and techniques that govern mathematical modeling, students will study applications in finance, sports analytics, health and medicine, and social sciences. Prerequisite: Algebra 2 & Trigonometry. (.5 credit, full year)

550 INQUIRY: PROBABILITY AND COMBINATORICS

This course is designed to provide an introduction to probability and some of its applications. In addition to exploring many of the rules and techniques that govern probability, students enrolled in the course will encounter topics including, but not limited to: set theory, counting arguments, combinatorics, expected value, and probability distributions. Games of chance will be analyzed, and probability simulations will be incorporated to support the course content. Prerequisite: Algebra 2 & Trigonometry. (.5 credit, full year)



850 ADVANCED INQUIRY IN MATHEMATICS

An Advanced Inquiry in Mathematics provides students with the opportunity to explore the richness and depth of mathematical fields not formally covered as a part of the GFA curriculum or the application of mathematics to a real-world context in an area of the student's interest. Topics could include, but are not limited to, number theory or its applications to cryptography, topology or its applications to art and design, graph theory or its application to networks, abstract algebra, or the use of mathematical modeling and statistical methods to study significant phenomena around the world. A student completing an Advanced Inquiry in Mathematics will partner with faculty in the math department and, if appropriate, another department as it relates to the particular application of the mathematics. Advanced Inquiries focused on pure mathematics include a rigorous study of mathematical proof techniques. Completion of the Advanced Inquiry requires students to present their work. Open to 12th-graders; departmental permission required. Prerequisites: Advanced Calculus (AB or BC) or Advanced Statistics (any of which may be taken concurrently). (1 credit; full year)

PERFORMING ARTS**MUSIC****ENS A CONCERT CHOIR**

Vocal techniques, sight singing, and the art of performing in a vocal ensemble are incorporated into the study of a repertoire that includes sacred and secular works from the Baroque through the 21st century and from many different world cultures. Students perform throughout the year in school concerts and at community events. The Concert Choir is a non-auditioned choir and is open to any student in the Upper School. There is an audition for placement purposes only. (1 credit; full year)

ENS B CHAMBER ORCHESTRA

The goals of this course are to further enhance a student's knowledge of orchestral repertoire from a variety of musical and cultural traditions and to reinforce ensemble and instrument skills. In addition, students are required to take playing tests, keep a practice chart, and participate in several concerts per year. Prerequisite: several years of experience playing a stringed instrument. (1 credit; full year)

ENS C WIND ENSEMBLE

This group plays a wide variety of traditional concert band and jazz band music, including music from Broadway shows and movies, transcriptions and arrangements of orchestral literature, contemporary and classic big band jazz, marches, and an interesting mixture of music from around the world. This group performs in two or three concerts per year and attends at least one off-campus music festival. In addition to serving as the core ensemble for orchestral winds and percussion, Wind Ensemble students often form small jazz combos that frequently perform during the year. Prerequisite: several years of experience playing a wind or percussion instrument, guitar, electric bass, or piano; ability to read music is essential. (1 credit; full year)

ENS A, B, & C ADVANCED LEVEL OPTION

Students who have the necessary background and commitment to the performing arts may be allowed to participate in a yearlong, half credit. This option is for rare situations and requires permission from the department. (.5 credit; full year)

INSTRUMENTAL AND VOCAL INSTRUCTION

Students who are new to an instrument or who would like to add practice time in addition to an ensemble, will benefit from these individualized, small-group lessons. Availability is based on schedule. Department permission is required. (.5 credit; full year)

250 MUSIC TECHNOLOGY

This is a hands-on course in sound creation, sound design, and sound reinforcement. Using the computer and the synthesizer, students compose sound pieces in a variety of styles. One group project involves a collaborative effort with the Guild School in New York City. In this "Audio Book" project, students create books as audio files, complete with original music and sound effects, for the visually impaired students of the Guild School, as well as for our own Lower School students. Students are required to complete a number of individual and group projects that range from composing an aleatoric piece to writing and recording a public service announcement. Students will use Garageband, Logic, FL Studio, and ProTools for recording and mixing. (1 credit; full year)

250 MUSIC THEORY

This course is a study of the fundamentals of music in terms of notation and analysis. Emphasis is placed on developing the rhythmic, melodic, and harmonic skills necessary to analyze pieces, compose original works, and



arrange pieces for various ensembles. Emphasis is also placed on understanding and using traditional systems of tonal harmony through ear training, composing, and analysis. Creativity, keyboard skills, and compositional skills are stressed. Students are asked to work on individual pieces as well as group projects. Prerequisite: basic knowledge of music notation; participation in school music activities is highly encouraged. (1 credit; full year)

550 JAZZ & BLUES: THE HEART & SOUL OF AMERICAN POPULAR MUSIC

The history of American popular music of the 20th century is a chronicle of synchronous popular culture. The music that has come to be known as “jazz” is the ever-changing and evolving music of the American people. This semester inquiry defines and explores the various

developmental styles of jazz: New Orleans jazz (Dixieland) and its roots; ragtime and stride piano; Chicago and the “Swing Era”; the Big Bands; bebop; the “cool school”; fusion and the avant-garde movement (free jazz); the education movement in jazz; and neoclassicism in contemporary jazz. Major figures in jazz, including Louis Armstrong, Charlie Parker, John Coltrane, Miles Davis, and Duke Ellington are studied, using their leadership roles to

expand on the various movements in and permutations of jazz. The primary text for the course is *Jazz Styles* by Mark C. Gridley and David Cutler. Other readings are taken from the following: *The Birth of Bebop* by Scott Deveau, Ken Burns’ *Jazz: The Story of American Music*, *The History of Jazz* by Ted Gioia, *A New History of Jazz* by Alyn Shipton, *The Oxford Companion to Jazz* by Bill Kirchner, and *Jazz 101: A Complete Guide to Learning and Loving Jazz* by John Szwed. Major sources of listening materials will include The Smithsonian Collection of Classic Jazz, Ken Burns’s *The History of Jazz*, and selected other recordings as applicable. Open to 11th- and 12th-graders. (.5 credit; 2nd semester)

650 ADVANCED MUSIC THEORY

This course integrates aspects of melody, harmony, texture, rhythm and form, history, and style. Aural skills developed include sight singing, keyboard harmony, and melodic, rhythmic, and harmonic dictation. Students will read, notate, and compose music. In-class performance is part of the learning process. Students are expected to demonstrate a high level of proficiency in all areas of music theory. Prerequisite: Music Theory and/or departmental permission. Students are encouraged to sit for the AP Music Theory Exam. (1 credit; full year)

INQUIRY IN MUSIC

750 INQUIRY: COMPOSING & ARRANGING

This course focuses on composing and arranging music in various styles for both vocal and instrumental use. A study of classical, jazz, and folk forms is included. Students are encouraged to perform (or have performed) their works at assemblies and concerts, to enter their works in the Connecticut Music Educators’ Association sponsored composers’ competition and other relevant competitions. Prerequisite: Music Theory and/or Advanced Music Theory; departmental permission. Open to 11th- and 12th-graders. (.5 credit; full year)

750 INQUIRY: MUSIC PERFORMANCE

This inquiry brings together the teacher and the student to plan, research and prepare for a short recital in April or May. The planning and research are intended to select compositions from appropriate periods of music history, to listen to a broad range of recordings and live performances, and to submit short papers about the composers and compositions selected for performance. Selections chosen for performance need not all be solo works — there is a rich tradition of ensemble playing which would be ripe for exploration and programming.

Open to 11th- and 12th-graders. (.5 credit; full year)

850 ADVANCED INQUIRY: MUSICAL PERFORMANCE, COMPOSITION, OR CONDUCTING

This course provides a path for the dedicated musician to follow a passion as a performer, creator, or director of music at its most advanced level. The prospective participant will have demonstrated a commitment to and intensive involvement in music. The student will design a project that will involve creating, performing, or directing music, musical instruments, music notation, or may design a mentoring program with a Lower School musician. The projects could range from a recital to designing and creating a musical instrument and notation for that instrument, to creating an original musical theater work, to a thorough analysis of a major musical work culminating in a presentation to a select group of students and adults. Prerequisite: one credit of music courses, may be taken concurrently; departmental permission. Open to 12th-graders; departmental permission required. (1 credit; full year)

THEATER

250 INTRODUCTION TO THEATER

The course emphasizes the building blocks of acting, including correct vocal production, and movement for the stage. Poetry, monologues, and improvisation will be used to help open a creative link to theatrical storytelling. Students explore theater more deeply with an emphasis on first-hand experience by going on a field trip to see a play outside of school, and they will be exposed to world theatrical literature. Performance in the spring in the Upper School or elsewhere in the GFA community is a feature of this class. (.5 credit; full year)

250 INTRODUCTION TO THEATER DESIGN

In this course, students will learn to collaborate with playwrights and/or directors to design sets, props, lighting, projections, and costumes that further the vision for the piece. A rotating set of guest lecturers will give students brief lessons in the fundamentals such as set, prop, lighting, projection, and costume design. Guest lecturers will focus on the collaboration that incorporates the visual aspect of storytelling, with an emphasis on the way decisions in technical theater can dictate emotional tone, character development, and a sense of place and time period. Students in this course will learn concurrently with Intermediate Theater Design students. (.5 credit, 2nd semester)

450 INTERMEDIATE THEATER DESIGN

In this course, students will build on the knowledge and skills they gained at the introductory level of theater design. They will have the opportunity to focus their work on specific areas of theater design, such as custom, lighting, sound, and set design. They will be responsible for elements of the design process in both the winter showcase and the spring show. Guest lecturers will focus on the collaboration that incorporates the visual aspect of storytelling, with an emphasis on the way decisions in technical theater can dictate emotional tone, character development, and a sense of place and time period. Students in this course will learn concurrently with students in Introduction to Theater Design. Prerequisite: Introduction to Theater Design; departmental permission. (.5 credit, 2nd semester)

550 BROADWAY & BEYOND

This course combines a classic “survey style” history of how the American Musical was born. The course continually re-creates itself with hands-on performances. Students may have the opportunity to sing, act, and dance pieces from representative musicals. This course will combine the historical perspective with the practical aspects of performing parts of musical productions—remarkable iconic works that have come to define The American Broadway Musical. Field trips, including seeing a show in New York, will be part of this class, and guests will come to share their expertise in the profession with the students. Open to 11th- and 12th-graders. (.5 credit; 1st semester)

650 ADVANCED THEATER

This course exposes students to three areas of advanced theater: companies, production, and directing. Students begin with an exploration of influential theater companies such as those of Shakespeare and Molière. How did these creative artists come together to make what we now consider “classic” theater? What is the evolution of the plays they created, and what was the cultural impulse behind them? The course then turns to the study of all production elements and their use. Students learn about sets, lighting, sound, and costumes as primary elements in focusing attention and creating mood and character in a theatrical production. The course then explores the relationship between the director and designers to define the look and feel of a final production. Students direct one another after exploring the techniques and skills involved in creating a production as a director. Students engage in scene work to practice proper vocal and movement techniques as well as the development of

the relationship between actors and directors. Students in this course participate in performance opportunities around the school, when and where they present themselves. Prerequisite: Introduction to Theater, Theater Design, or departmental permission. (1 credit; full year)

INQUIRY IN THEATER

750 INQUIRY IN THEATER AND DESIGN

This class is a guided study of a student's passion for Theater performance, design, playwriting, or direction. It allows students to partner with a teacher in close connection while encouraging the freedom of innovative expression. The focus will be on the spark of creativity inherent in the formative process, and the work may be from any existing play or an original piece fashioned by the student. Prerequisite: Theater classes in 200–600 levels. Open to 11th- and 12th-graders. (.5 credit; full year)

850 ADVANCED INQUIRY IN THEATER: ACTING, DIRECTING, PLAYWRITING, OR DESIGN

This course is designed to give students the opportunity to build on the foundation of the curricular offerings at GFA through an independent creative project. Inspired by the idea that students and teachers always pass cyclical transmissions between them, students will propose a project through which they can further express their vision and voice, and partner with the instructor(s) to fully develop the project. They will submit an academic paper with the dramaturgical rationale for the choices they made, based on relevance to both the piece and their creative vision. The project culminates in a final presentation to an appropriate audience. Prerequisite: Advanced Theater. Open to 12th-graders; departmental permission required. (1 credit; full year)

SCIENCE

250 BIOLOGY

This is the first required course in our science curriculum. Students will explore how humans and other living things stay alive, evolve, and interact. Using interdisciplinary thematic units, students will learn about important foundational biology topics, including evolution, ecology, metabolism, cell biology, genetics and physiology. Students will learn to think like scientists through practice with data, inquiry-based labs and case studies. Students will also learn how to think critically, evaluate experimental data and use scientific reasoning to write strong scientific arguments. (1 credit; full year)

450 CHEMISTRY

Chemistry is the study of matter and change. In this course, students will explore fundamental questions by looking at interactions between matter on both microscopic and macroscopic levels. This course focuses on scientific literacy and preparation for future science classes through a framework of guiding questions, including atomic structure and nuclear energy, electrons and light, the unique properties of water, chemical reactions in the real world, and the impact of acidity in the ocean. These essential questions provide a global approach to our study of chemical and physical change and the conservation of energy and mass. Throughout the year, in addition to studying the foundational content of chemistry and quantitative reasoning, students will continue to develop skills related to disciplinary understanding, including evaluating claims and evidence, and uncertainty in science. Prerequisite: Biology (1 credit; full year)

500 PHYSICS

This course is an introduction to the principles of physics through a conceptual- and algebra-based approach. Topics include a traditional study of mechanics—kinematics, Newton's laws, energy, momentum, gravitation and other mechanical concepts. In addition to basic physical principles, the course examines the role of physics in society. The course has a conceptual and interactive approach, with frequent hands-on laboratories, activities, and projects; real-world applications; and problem-solving. Prerequisites: Biology and Chemistry; concurrent enrollment in or completion of Algebra 2. (1 credit; full year)

550 PHYSICS

This course investigates the traditional topics of motion, momentum, energy, light, electricity, magnetism, and atomic and nuclear physics. Emphasis is placed on applying math techniques to problem-solving and developing basic principles from the analysis of lab work. Prerequisite: concurrent enrollment in or completion of Pre-Calculus 450 or grade of A- or higher in Pre-Calculus 400; departmental permission. (1 credit; full year)

550 MARINE SCIENCE: LOCAL

In this course, we will focus on the local marine and coastal environment, the "Nature of GFA", by exploring and learning about each of the three ecosystems right in our backyard (sound, beach, and marsh). This introduces many topics (physical, chemical, and biological) that we explore in more detail as the semester progresses, and prepares us for our regular monthly surveys and other



fieldwork. These surveys allow them to hone their data collection and analysis skills. In addition to conducting their own research, students will also be exposed to current marine science research and the researchers that work in the field. At the end of the semester, they will spend time with the data collected throughout the year and present it in an authentic and creative way for their final project. Prerequisite: Biology. (.5 credit, 1st semester)

550 MARINE SCIENCE: GLOBAL

In this course, we will take a more global focus on the oceans. Students will engage in fieldwork and take time to explore and learn in our backyard ecosystems, and our labs and activities will also investigate global ocean ecosystems and issues with a focus on ways in which human activities influence the oceans. The units in this course may include oyster reefs, coral reefs, noise pollution, and marine debris, among other topics. As in Marine Science: Local, we will continue conducting regular monthly surveys to hone their data collection and analysis skills. Students will also be exposed to current marine scientist research and the researchers that work in the field. Prerequisite: Biology. (.5 credit, 2nd semester)

650 ADVANCED BIOLOGY

This course is designed to offer interested students a solid foundation in college-level introductory biology with a focus on inquiry-based learning. The students will develop an appreciation for the study of life and be able to ask and answer questions about the world around them in order to understand the unifying principles within our diverse biological world. Experimentation and project work models various fields of biology, ranging from the molecular focus of genetics to ecological systems. Students examine a selection of topics in considerable depth, focusing on the interconnections and complexity of living systems. Students are expected to take substantial initiative and responsibility for their learning in and out of class. Coursework emphasizes the development of collaborative skills and the application of ideas explored in the course. Prerequisites: Biology and Chemistry; departmental permission. (1 credit; full year)

650 ADVANCED CHEMISTRY

This course is modeled after a college chemistry course. It is structured around six science practices that develop students' skills involving models and representations, questioning and methods, model analysis, math routines,

analyzing data, and argumentation, and the unifying ideas of scaling quantities, structure and properties, transformation, and energy as foundations of course content and the connected enduring understandings by design framework. It focuses on some areas of chemistry not previously explored in our first-year chemistry course, as well as topics that will be explored in greater depth, including atomic structure, molecular and ionic structure, and intermolecular forces; chemical reactions; kinetics; thermodynamics and their applications; equilibrium; and acids and bases. Prerequisites: Biology and Chemistry; departmental permission. (1 credit; full year)

650 ADVANCED ECOLOGY AND ENVIRONMENTAL SCIENCE

Naturalist Aldo Leopold noted that the greatest challenge facing humanity is to learn to live in a place without destroying it. Students in this interdisciplinary science course will use scientific principles, content, and methodologies to learn about how the natural world functions and how humans interact with the planet. They will study local and global environmental problems, including human population growth; air, water, and noise pollution; climate science; and problems causing global change, including ocean acidification, ozone destruction, and acid deposition. Critical-thinking skills will be applied to evaluate risks associated with these problems and to identify and examine sustainable solutions for the resolution and prevention of such problems. The ecology, natural history, and human impacts of Long Island Sound will feature prominently in the course content. Prerequisites: Biology and Chemistry. (1 credit; full year)

650 ADVANCED PHYSICS: MECHANICS

This college-level course is designed for those students with a keen interest in physics and a solid background in mathematics. Calculus is used extensively. The course covers the topics of a first-semester college class (Mechanics), and much of the material is discussed from a theoretical point of view. Analytical and problem-solving skills are developed, and lab work is more open-ended than in previous science courses. The class will also give an introduction to computer programming with practical applications in numerical methods and Computational Physics. Students may choose to sit for the AP Physics exam for the topic at the end of the year. Prerequisites: Biology, Chemistry; concurrent enrollment in or completion of Calculus AB or BC; departmental permission (1 credit; full year)

750 ADVANCED PHYSICS: ELECTRICITY & MAGNETISM

This college-level course is designed for those students

with a keen interest in physics and a solid background in mathematics. Calculus and computer programming are used extensively. The course covers the topics of a second-semester college class (Electricity & Magnetism), and much of the material is discussed from a theoretical point of view. Analytical and problem-solving skills are developed, and lab work is more open-ended than in previous science courses. Students may choose to sit for the AP Physics exam for the topic at the end of the year. Prerequisites: Advanced Physics: Mechanics; completion of Calculus AB or BC; departmental permission.. (1 credit; full year)

INQUIRY IN SCIENCE

650 INQUIRY: HUMAN ECOLOGY AND SUSTAINABILITY

This course is an exploration of what it means to live well in a place. We will start with discussions about sustainability and formulate our own thoughts on what sustainability is and what a sustainable school looks like. A major focus of this course will be for students to identify and lead their own projects that connect and demonstrate an understanding of the interdisciplinary threads of this program and aim to move the school forward with regard to its sustainability. Students identify the projects they pursue. They participate in discussions around a shared text which may involve learning from 750 level inquiry students and other members of the GFA community. Topics for the projects in this course may include but are not limited to ecosystems, water, pollution, infrastructure, energy, waste, and education. This course prepares students to pursue an Advanced Inquiry in Sustainability. Prerequisites: Biology; departmental permission for students in 10th grade. (.5 credit; full year)

750 INQUIRY: HUMAN ECOLOGY AND SUSTAINABILITY 2

This course is for students who wish to continue doing sustainability work after completing SCI650E Inquiry: Human Ecology and Sustainability. Students may continue working on an earlier project or may design and carry out another project in human ecology or sustainability (HES) that connects and demonstrates an understanding of the interdisciplinary threads of HES. They may also assist with student projects and discussions with students in SCI650. There are many different options for the field of inquiry within their project and options for this project. The form of each student's work and presentation will vary depending on the endeavor. Students in this level of Inquiry will likely present their work at the GFA Symposium and potentially other venues such as a

Film Festival, Sustainability Conference, Town Forum, etc. Class time will be in support of student work, and the instructor will guide student projects and facilitate feedback and troubleshooting. This course may serve to further prepare students for an Advanced Inquiry in Human Ecology and Sustainability. Prerequisites: Inquiry: Human Ecology and Sustainability and departmental permission. (.5 credit; full year)

850 ADVANCED INQUIRY: HUMAN ECOLOGY AND SUSTAINABILITY

Students have the opportunity to carry out an original, action-based project in human ecology or sustainability (HES) that connects and demonstrates an understanding of the interdisciplinary threads of HES. There are many different options for the field of inquiry within their project. Class time will be in support of student work, and the instructor will guide student projects and facilitate feedback and troubleshooting amongst the whole class as the projects progress. The form of each student's work and presentation will vary depending on the endeavor. Students will present their work to an appropriate audience--typically at the GFA Symposium, but perhaps including other venues such as a Film Festival, Sustainability Conference, Town Forum, etc.



This is a unique opportunity to capture the energy and passion of students coming back from Chewonki, Island School, and HMI. Open to 12th-graders; departmental permission required. Prerequisites: Inquiry: Human Ecology and Sustainability plus an additional semester of relevant coursework (Advanced Environmental Science, Marine Science, or relevant off-campus study approved by the department) .5 credit of the prerequisite may be taken concurrently. (1 credit; full year)

550 INQUIRY: RESEARCH AND EXPERIMENTAL DESIGN

This course will expose students to the principles and practices inherent in scientific research. Topics covered include reading and understanding scientific publications, scientific literature searching including citation research, statistical design of experiments, project planning, visual presentation of numeric data, scientific writing, and presentation methods for scientific findings. During the class, students will select a specific project to plan. Assignments will be applications of topics related to the chosen project. The end product of the class will be a complete research proposal, which the student may choose to execute during further research. Prerequisite: Biology; departmental permission. (.5 credit; full year or summer)

650 INQUIRY: SCIENCE RESEARCH 1

Students in this course have the opportunity to conduct the investigation proposed in Inquiry: Research and Experimental Design or start a new project. They will compete at a state science fair and present their findings at the GFA Symposium. Prerequisites: Biology, Chemistry (may be taken concurrently), Inquiry: Research and Experimental Design, and departmental permission. (.5 credit full year)

750 INQUIRY: SCIENCE RESEARCH 2

This course is for students who wish to continue executing science research after completing Inquiry: Science Research 1. Students may continue working on an earlier project or may design and carry out another original investigation. Students are expected to complete and present their findings at state and/or national science fairs as well as the GFA Symposium. Prerequisites: Inquiry: Science Research 1 and/or Inquiry: Research and Experimental Design and departmental permission. (.5 credit; full year)

850 ADVANCED INQUIRY: SCIENCE RESEARCH AND EXPERIMENTAL DESIGN

This course will engage students in the principles and practices of college-level scientific research. It is intend-

ed for students who have demonstrated an interest in pursuing research in biological, physical, medical, and/or engineering sciences. Student work will include reading scientific literature, statistical design of experiments, project planning, visual presentation of quantitative data, scientific and proposal writing, and presentation methods for scientific findings. Students will plan and conduct a year-long or multi-year independent science experimental research project under the mentorship of the instructor and, in some cases, field scientist(s). Students are expected to present the results of their research at local, state, or national fairs, symposia, or competitions. Open to 12th-graders; departmental permission required. (1 credit; full year)

VISUAL ARTS

250 INTRODUCTION TO VISUAL ARTS

A full-year, one-credit course consisting of the disciplines offered in the Upper School: Studio Art, Photography, and Video. This integrated curriculum enables students to develop skills in craftsmanship, idea generation, critical thinking, and the common vocabulary across the disciplines. A range of approaches to surface, form, space, and time will be addressed through a variety of traditions and technologies, as well as concepts of theory and art history. (1 credit; full year)

450 INTERMEDIATE STUDIO ART

This course is a full-year, one-credit course that increases students' skills and competency in 2 and 3-D media. Continuing to build on skill development and visual problem solving, students will explore composition through perspective, figure and gesture drawing, portraiture, printmaking, and color theory. The course emphasizes art making as an ongoing process that involves the student in informed, imaginative, and critical decision-making and risk-taking. Key to this process is the student's visual documentation of their experiments and discoveries in their research workbook. Prerequisite: Introduction to Visual Arts or permission of the instructor. (1 credit; full year)

450 INTERMEDIATE PHOTOGRAPHY

This course offers students the technical and conceptual skills to allow them to become visual storytellers, with an emphasis on documentary photography. Through the analysis of the work of prominent photographers and group critiques, students will develop their critical skills and identify their personal aesthetics. The focus is on developing their particular vision and expanding

their voice, especially through inquiry into themes that are relevant to them. Proficiency in image composition, technical knowledge of digital and analog cameras, digital editing, portfolio curation, and alternative printing will provide the tools for creative assignments. Students will have the opportunity to take photographs in and out of the classroom regularly. Beyond camera work, this course integrates mindfulness techniques to provide students an opportunity to integrate what they obtain by looking through the viewfinder into other aspects of their lives, fostering personal growth, a sense of connection and belonging, and opportunities to make sense of the world and express their most authentic selves. Prerequisite: Introduction to Visual Arts or permission of the instructor. (1 credit; full year)

450 INTERMEDIATE VIDEO

This course combines practice with theory and investigates the process of digital filmmaking through a variety of approaches and technologies. Students will explore, through individual and collaborative projects, topics in documentary, narrative, experimental, and animation techniques. Over the course of the year, the class will view and discuss a variety of feature and short films that challenge students from an aesthetic, practical, and cultural perspective. Students will explore sophisticated sound and editing techniques using a variety of equipment provided to them. Regular critiques and discussions will further students' communication skills and understanding of cinematic language. Prerequisite: Introduction to Visual Arts or permission of the instructor. (1 credit; full year)

550 ARCHITECTURE

This course will introduce students to the history of architecture and the fundamentals of architectural design. Through sketching, model making, and hand drawings, students will explore aesthetic and structural concepts and how they relate to the contemporary built environment. A variety of media--watercolor, pastels, pens--will be used as drawing tools. (.5 credit; 1st semester)

650, 750 ADVANCED ART

A one- or two-year program. Students work within a single medium, or any combination of media including painting, drawing, photography, animation, video, sculpture, printmaking, installation art, graphic design, fashion design, architecture, and a variety of digital art programs. Over the course of one or two years, students create a portfolio of work to demonstrate inquiry through art and the development of materials, processes,



and ideas. Students will develop a body of work investigating a strong underlying visual idea that grows out of a coherent plan of action or investigation. Portfolios include works of art, process documentation, and written information about the work presented. Prerequisites: Intermediate Studio or Intermediate Photography and departmental permission. (1 credit; full year)

650 ADVANCED VIDEO

Students will learn advanced storytelling strategies as they write, produce, direct, shoot and edit an original short film. Building upon the skills learned in the intermediate level class, students will explore new directions and their own personal vision through independent and collaborative projects. Regular critiques, screenings, and discussions will further students' communication skills and understanding of the cinematic language. Prerequisite: Intermediate Film/Video (1 credit; full year)

INQUIRY IN VISUAL ARTS

550 INQUIRY: CERAMICS

In this course, students will explore ceramics as an art form and develop an appreciation for functional and

non-functional ceramic forms as well as traditional and contemporary forms. Students will develop modes of self-expression through handbuilding methods such as wedging, pinch, coil, slab, mosaic, and sculptural forms. They will gain an understanding of ceramic terms and control of the clay in its different stages of development: plastic, leatherhard, greenware, bisque, and glaze. Special consideration will be placed on safety in the clay studio as well as proper care of materials and equipment. Students will be involved in each step of the ceramic process in a studio environment and experience various decorative techniques and firing processes with an emphasis on creative problem solving, craftsmanship, and enjoyment of the medium. (.5 credit; full year)

850 ADVANCED INQUIRY: VISUAL ARTS

Students wishing to pursue independent inquiry in the Visual Arts must have demonstrated advanced skill in visual arts and a history of independent work, research, and critical thinking through practice, experimentation, and revision. Either building upon a previous sustained investigation by exploring the topic in greater depth, or guided by an entirely new research-based question (including those potentially from a different discipline),

students will produce an original body of work that is a synthesis of materials, processes, and ideas through a coherent plan of action. At the end of the year, students will articulate and present the culmination of their process along with their final body of work. Open to 12th-graders; prerequisites: Advanced Video or Advanced Art and Design; departmental permission. (1 credit; full year)

WORLD LANGUAGES

150 FRENCH 1

This course is a proficiency-oriented beginner language course. Students learn the language by practicing the four modalities (reading, writing, listening, and speaking) in order to communicate meaningfully, effectively, and creatively for real-life purposes. The course addresses authentic resources from the francophone world; this allows the students to investigate the culture through the lens of its people, and to understand their place in the world as language learners. Prerequisite: placement by the department. (1 credit; full year)

250 FRENCH 2

In this course, students continue to build upon their previously learned knowledge and skills. Over the course of the year, they study the past tenses and narration, allowing them to handle daily life situations with confidence while improving their command of the four main language skills: reading, writing, speaking, and listening. Careful attention is paid to linguistic accuracy. Using an increased vocabulary, students practice integrating circumlocution, formulating questions, describing, narrating, and negotiating meaning. The course uses interactive exercises and authentic materials to provide an immersion into French and Francophone cultures. Prerequisite: placement by the department. (1 credit; full year)

350 FRENCH 3

This course reinforces the past tenses and narration, allowing students extended practice in handling daily life situations with confidence while improving their command of the four main language skills: reading, writing, speaking, and listening. Students will refine their linguistic accuracy, build and diversify vocabulary, and continue to practice using the target language in real-life contexts. The course uses interactive exercises and authentic materials to provide an immersion into French and Francophone cultures. Prerequisite: placement by

the department. (1 credit; full year)

450 FRENCH 4

This course builds on students' skills and allows them to advance their proficiency in reading, writing, speaking, and listening. The focus of the course is to recombine and expand upon elements previously learned, enabling students to express themselves in greater detail. New grammatical structures will be taught, with a culmination in learning the subjunctive mood. Students explore overarching themes of French and Francophone history and culture. Prerequisite: placement by the department. (1 credit; full year)

650 ADVANCED FRENCH

This course is organized around the following six themes: Global Challenges, Science and Technology, Contemporary Life, Personal and Public Identities, Families and Communities, Beauty and Aesthetics, and exposes students to information, ideas, and language from a variety of authentic sources from the Francophone world. Students' interpretive comprehension will be assessed through the use of multiple-choice questions and short written or spoken presentations in response to audio and/or textual stimuli. Students' presentational language will be assessed through the writing of persuasive essays and through spoken presentations in response to a given stimulus on which they compare cultural features of their own community to those in the Francophone world. Students' interpersonal language will be assessed through the writing of letters and emails and by participating in a simulated conversation. Students will be expected to pay careful attention to appropriate register and social and emotional context, and to make reference to their knowledge of the Francophone world. In sum, this course demands focus and attention to detail in all areas of study. Students in this course may elect to sit for the AP French Language exam in the spring. Prerequisite: placement by the department. (1 credit; full year)

750 ADVANCED TOPICS IN FRENCH

The student-led inquiry in French will provide a space for students to deepen their understanding of specific topics from the target language culture of study. These topics may have originated in previous courses and/or in the student's exposure to the language outside of the classroom. Teachers and students will partner to pinpoint themes of interest and to design a path of student-led investigation and exploration. Prerequisites: FRE650A and departmental permission (.5 credit; full year)

150 MANDARIN 1

This course for beginners emphasizes learning the four language skills: listening, speaking, reading, and writing. In this course, students learn to express themselves and understand others by focusing on topics closely related to their own experience and their daily life. They study pronunciation, tones, character writing, and basic grammar. “Pinyin” is used as the phonetic transcription system for Chinese characters. Students learn to read and write simple passages in Chinese characters about the themes learned. The course also aims to improve the student’s general knowledge of Chinese culture, geography, and history. Prerequisite: placement by the department. (1 credit; full year)

250 MANDARIN 2

This course continues to introduce Chinese grammar, vocabulary, characters, and usage. The four language skills (listening, speaking, reading, and writing) will be further developed. Careful attention is paid to accuracy. Using an increased vocabulary and sentence structures, students respond to a variety of functions: formulating questions, describing, and narrating. The text, *Integrated Chinese*, combines audio-visual material as well as interactive exercises to provide an immersion into the Chinese language and culture. Prerequisite: placement by the department. (1 credit; full year)

350 MANDARIN 3

This course is designed to continue learning the four skills (reading, writing, speaking, and listening). The student is given regular opportunities for meaningful communication on different themes by using more complex structures and vocabulary. The focus of the course is to recombine and expand elements previously learned in order to enable the students to express language more accurately. Students learn to read and understand short essays and to produce compositions on class themes. This course begins a formal introduction to literature and reading selections. The text, *Integrated Chinese*, combines audio-visual material as well as interactive exercises to provide an immersion into the Chinese language and culture. Prerequisite: placement by the department. (1 credit; full year)

450 MANDARIN 4

This immersion course emphasizes oral communication and listening skills through vocabulary exercises, readings, and discussions around various themes. Students will be able to communicate with greater confidence. They discover different aspects of Chinese culture

through literary excerpts, movies, and songs. They will be encouraged to discuss current events and to develop their creativity through projects using posters, videos, and oral presentations. Extensive reading materials will be used, and essays will be written regularly. Prerequisite: placement by the department. (1 credit; full year)

650 ADVANCED MANDARIN

This course is intended for qualified students who are interested in completing studies comparable in content and difficulty to a full-year course at the second-year college level. The course is taught entirely in Chinese. It includes aural/oral skills, reading comprehension, grammar, and composition. Course content reflects intellectual interests shared by the students and the teacher (cultural celebrations, beliefs and attitudes, interests and career, teen life/self and the global community, famous people, social issues and current events, art and music appreciation, literature and poetry, geography/ climate/ political divisions, etc.). Students are expected to read and write on a weekly basis. Oral skills are also emphasized through class discussion, which provides opportunities for students to articulate and debate their understanding of the materials in Chinese. Students are encouraged to sit for the AP Chinese Language exam in the spring. Prerequisite: placement by the department. (1 credit; full year)

750 ADVANCED TOPICS IN MANDARIN

This is a college-level course taught entirely in the target language. Students continue to develop their proficiency at a higher level via the three modes of communication: interpersonal, interpretive, and presentational. Students apply their knowledge and skills to communicative tasks in real-life contexts and develop the ability to debate and write using various discourse styles. In addition to learning about various subjects of Chinese history, culture, and current affairs, students will select a topic of their interest to research. As a culminating project, students will use their original research to write an in-depth paper and present their findings orally. Possible topics include geography and population, ethnic and regional diversity, travel and transportation, holidays and cuisines, sports and games, current affairs, and societal relationships. Prerequisite: placement by the department. (1 credit; full year)

150 SPANISH 1

This course is a proficiency-oriented beginner language course. Students learn the language by practicing the four modalities (reading, writing, listening, and speaking) in order to communicate meaningfully, effectively,



and creatively for real-life purposes. The course addresses authentic resources from the Spanish-speaking world; this allows the students to investigate the culture through the lens of its people and to understand their place in the world as language learners. Prerequisite: placement by the department. (1 credit; full year)

250 SPANISH 2

This course builds on what students can already do in Spanish, allowing them to communicate more elaborately and with a higher level of sophistication in real-world scenarios. Culturally rich thematic units provide the content and structure for the course and work to give students a broader understanding of the Spanish-speaking world. Using an increased vocabulary, students practice integrating circumlocution, formulating questions, describing, narrating, and negotiating meaning. In order to prepare students for future coursework, Spanish 2 focuses on the use of authentic listening and reading materials aimed to increase higher-level target language comprehension. Prerequisite: Spanish 150 and/or placement by the department. (1 credit; full year)

350 SPANISH 3

This course is designed to help students expand their speech and written expression through varied vocabulary and more sophisticated grammar structures. This course builds on students' knowledge of grammar, structure, and syntax in Spanish, allowing them to communicate with confidence. Students improve their command of the four skills: reading, writing, speaking, and listening. In order to prepare students for future coursework, students focus on the use of authentic listening and reading materials aimed to increase higher-level target language comprehension. Prerequisite: Spanish 200/250 or placement by the department. (1 credit; full year)

450 SPANISH 4

This course is designed to continue practicing the four skills: reading, writing, speaking and listening. Students will engage in regular opportunities for meaningful communication with much practice in sustaining conversation beyond simple statements or questions. Through rich thematic units, students will practice and expand upon linguistic elements previously learned in order to enable the students to express language more accurately. Students will broaden their knowledge of advanced

grammar structures and practice applying them to their written and verbal expression with accuracy. Students will deepen their understanding of Latin American and Spanish culture, literature, and film through the use of authentic resources. Prerequisite: Spanish 250/350 and/or placement by the department. (1 credit; full year)

550 SPANISH 5

This course is designed to allow students to gain greater exposure and the opportunity to refine their skills before taking more advanced courses in Spanish. Students are expected to engage in discussions of authentic sources in the target language and to express themselves with more spontaneity, fluency, and accuracy. Previously learned grammar is reinforced through application and spontaneous production through a wide variety of assessments. The course will be taught in thematic units that will broaden students' cultural perspectives through the use of authentic resources that include articles, videos, works of literature, and film. Throughout the year, students will amass more sophisticated vocabulary, become more adept at communicating with accuracy, and become more confident in communicating in Spanish. Prerequisite: Spanish 350/450 and/or placement by the department. (1 credit; full year).

650 ADVANCED SPANISH

This is a rigorous course that requires students to polish their skills across three modes of communication: interpretive, presentational, and interpersonal. The course focuses on the integration of authentic resources, including online print, audio, and audiovisual resources; as well as traditional print resources that include literature, essays, and magazine and newspaper articles; and also a combination of visual/print resources such as charts, tables, and graphs; all with the goal of providing a diverse learning experience. Students communicate using rich, advanced vocabulary and linguistic structures as they build proficiency in all modes of communication toward the ACTFL Advanced Low level. The course is divided into thematic units, which are further based on recommended contexts and guided by essential questions. Corresponding cultural elements are integrated into the study of the units, and activities are directed with those cultural connections in mind. It is assumed that students have previously been exposed to advanced language structures in the courses leading up to Advanced Spanish; however, a review of the mechanics is done within the contextual framework of each unit as needed. The content of this course prepares students to take the AP Spanish Language and Culture exam if they

choose to take it in May. Prerequisite: Spanish 450/550 and/or placement by the department. (1 credit; full year)

750 –SOCIETY, ECONOMICS & POLITICS

Students will continue improving their oral and written proficiency by studying socioeconomic and political changes/events that have shaped the Spanish-speaking world's way of life and identity. (.5 credit; 1st semester, *not offered in 2023-2024*)

750 –CREATIVE EXPRESSION IN SPANISH

Students will continue improving their oral and written proficiency by creating original work such as short stories, film production, poetry, and spoken word. Their form of expression will be inspired by exploring examples from prominent figures in the Spanish-speaking world. (.5 credit; 2nd semester. *Not offered in 2023-2024*)

750 –CULTURAL PHENOMENA

Students will continue improving their oral and written proficiency by expanding their knowledge of the Spanish-speaking world's cultural products, practices, and perspectives and how they are intrinsically connected to the Spanish language. (.5 credit; 1st semester.)

750 –LITERATURE & FILM

Students will continue improving their oral and written proficiency by exploring the Spanish-speaking world through the lens of literature and/or film. The content of the course will combine classic and contemporary works. (.5 credit; 2nd semester.)

850 ADVANCED INQUIRY: WORLD LANGUAGES

A student who has completed 650 may propose an advanced inquiry to delve into a topic of interest in the target language. The topics will include but are not limited to the evolution of the language throughout history, cultural phenomena and their impact on language, the study of a literary genre and/or author, or exploring history through art/film/literature. With the guidance of a world language faculty advisor, the student will conduct most research in the target language and create a product for a relevant target audience to be determined by the teacher and student. For admission, a student must demonstrate a passion for the study of languages and their respective cultures, an advanced level of proficiency, and the ability to work independently in the target language. Open to 12th-graders. Prerequisites: World Languages 650 and departmental permission. (1 credit; full year)

GLOBAL ONLINE ACADEMY

Greens Farms Academy is pleased to offer Global Online Academy (GOA) courses to our students in 10th–12th grades. Established in 2011, GOA offers diverse and rigorous credit-bearing courses to students in member schools around the world. The GOA catalog includes courses that GFA typically does not offer, such as Medical Problem Solving, Positive Psychology, and Graphic Design (for a full listing of the most current offerings, please visit www.globalonlineacademy.org). Students participate in a truly global classroom, learning alongside peers with diverse backgrounds and experiences. Courses are designed, developed, and taught by teachers from member schools and meet the standards of rigor and high quality for which these schools are well known. Students must have the ability and motivation to work independently and will be collaborating with their classmates and instructor completely online through the Global Online Academy.

ABOUT GLOBAL ONLINE ACADEMY COURSES

Global Online Academy courses are interactive, instructional, and experiential. All GOA courses have synchronous components (when students collaborate together, or work with their teacher, at a set time, generally using video conferencing software) and asynchronous components (students choose when to participate).

Please note that GOA courses require the same time commitment and have similar workloads as any other course you would take at GFA.

While there may be books and/or supplies to purchase, GFA tuition covers the cost of enrollment in GOA courses. The following guidelines apply to GOA courses:

- GOA courses are elective course offerings and are not intended to fulfill or replace core requirements.
- All GOA courses receive GFA course credit (semester courses .5 credit, yearlong courses 1 credit).
- GOA courses will be scheduled and treated in the same manner as traditional courses in respect to academic policies.
- Approval to take a GOA course will be determined by the GOA site director and the Head of Upper School based on a number of criteria.
- GOA adheres to strict drop/add policies and requires that students drop or add classes within the first week of the GOA semester.
- GOA course grades are listed and reported on GFA student transcripts.

For questions about GOA, please reach out to the GOA Site Director, Justine Fellows, or visit Global Online Academy online, www.globalonlineacademy.org

Application Process: Note on course plan or email signifying interest to GOA Site Director, jfellows@gfacademy.org, by April 1, 2023.

MAY TERM

Picture spending the final weeks of the school year building musical devices and exploring the concepts of sound and music in a course titled, “Sounds Great!” Or imagine debating the relationship between Magic and Mathematics with Mr. Matte. Every spring, we make good on our commitment to engage students as partners by collectively diving into intensive, focused, and innovative courses built around the interests and passions of GFA’s exceptional faculty. May Term courses allow students to engage deeply in a topic of interest, while connecting with teachers and collaborating with peers from different grades. Students have the opportunity to cultivate new passions outside of the traditional subjects by taking courses such as Introduction to Investments, Mock Trial, Documenting Long Island Sound, Anime, or Real Life 101. Students who show a deep interest in a particular course will have the opportunity to apply to be a teaching assistant. Teaching assistants take on additional responsibilities in partnership with faculty that may include developing curriculum, working with small groups, mentoring, developing and teaching a lesson, and assisting in the classroom and on field trips. This year’s May Term course catalog will be released in late March, and students will sign up for courses through advisory. All Upper School students who are enrolled for the spring semester are required to take one May Term course per year.



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Greens Farms Academy does not discriminate against any person in admission, financial aid, program involvement, employment, or otherwise because of sexual orientation, race, religion, age, gender, national origin, or disability.