

Gould

**Catalog of Academic Offerings
2018-2019**

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Independent Study

Graduation Requirements

The Gould Academy diploma represents success in high school, in general, and in Gould Academy's program, specifically. Therefore, our academic graduation requirements include both total credits in each department and a minimum number of departmental credits, while enrolled as a student at Gould Academy, based upon the academic year of the student's enrollment.

GENERAL REQUIREMENTS

A minimum of 18 total credits at the high school level, to include the following:

English: Minimum of 4 credits of high school English.

History: Minimum of 3 credits of high school history, to include US History.

Math: Minimum of 3 credits of high school math, to include Algebra 1, Geometry, and Algebra 2, or equivalent courses.

Science: Minimum of 3 credits of high school science, to include at least 1 credit of physical science and 1 credit of life science.

World Language: Minimum of 2 credits of the same world language. Additionally, students must successfully complete level 3 (e.g. Spanish 3) of a language, if they enroll at Gould prior to 12th grade.

Arts: Minimum credits in the arts are dependent on the student's year of enrollment at Gould. Please see below for the arts graduation requirement.

MINIMUM CREDITS WHILE ENROLLED AT GOULD

Students are expected to complete the following minimum number of departmental credits, while enrolled as a student at Gould Academy, based upon the academic year of their enrollment. Additionally, students must take at least five courses each trimester and must be continually enrolled in an English course, unless excused by the Dean of Academics to accommodate other pressing school commitments.

| Year of Entry | English | History | Math | Science | World Language | Arts | Total |
|---------------|---------|---------|------|---------|----------------|-------------------|-------|
| 9th | 4 | 3 | 3 | 3 | 2 | 1.33 ¹ | 18 |
| 10th | 3 | 2 | 2 | 2 | 1 | 1 ¹ | 14 |
| 11th | 2 | 2 | 2 | 1 | 1 | .67 | 9 |
| 12th | 1 | 1 | 1 | 1 | 0 | .33 | 5 |

Notes:

1. **Arts:** To include a minimum of .33 credits in visual art and .33 credits in performing art. Certain IDEAS Center courses can be used to satisfy the Visual Arts requirement, as noted in their course descriptions.

English Department

Department Chair: Ms. Manning

Departmental Requirements: Four years of English, all students must be enrolled in an English course at all times.

YEARLONG COURSES

World Literature

9th grade requirement

Students in this course experience a shared curriculum with their Human Geography course from Gould's History department. They work to develop a geographic imagination, so the students can better understand their presence and role in the world. Students begin deliberate development of the skills they need for success in high school, and beyond: reading, listening, thinking, and then writing and speaking. Reading and annotating texts, the writing process, the Socratic discussion method, group work, project management, academic organization, and media presentation skills are built into the curriculum. The course reflects the regions studied in Human Geography and explores those regions through poetry, fiction, nonfiction, and graphic novels. Texts may include *The Translator*, *The Alchemist*, *The Boy Who Harnessed the Wind*, *The Good Braider*, *Dreaming in Chinese*, *Balzac and the Little Chinese Seamstress*, *Persepolis*, and *Real Time*.

World Literature Embedded Honors

Students who are interested in further challenging themselves and earning honors credit can participate in the Honors program. Honors assignments demand a deeper academic understanding, while being a continuation of the regularly assigned work.

European Literature

10th grade requirement

Students in this course experience a shared curriculum with World History and develop an understanding of the history of western culture through literary analysis. Developing the analytical vocabulary to reason, to write, and to discuss competently about the underpinnings of western culture and society, as it is reflected in literature, is the foundation of the curriculum. Students will journey through the history of western literature by reading drama and poems from Ancient Greece, the Medieval period, the Renaissance, and the 20th Century as well as more modern genres of literature such as the novel and graphic novel. A variety of creative, analytic, and reflective assignments will assist students' development of analytical thinking skills, the writing process, academic organization, and an understanding of themselves as learners. Texts may include, *Antigone*, *The Tragical History of Doctor Faustus*, *Everyman*, *The Tempest*, *Frankenstein*, *Maus*, *The Sunflower*, and *Snow in August*.

European Literature Honors Designation

Students who are interested in further challenging themselves and earning honors credit can participate in the Honors program. Honors assignments demand a deeper academic understanding, while being a continuation of the regularly assigned work.

American Literature

11th grade requirement unless enrolled in AP English Language and Composition

During Gould Academy's eleventh grade year of English, students are exposed to a variety of poems, essays, stories, plays, and novels that illuminate the central themes of the course: identity, voice, freedom, justice, transcendentalism, and decision-making. Students focus on the five realms of English (reading, writing, speaking, listening, and thinking) to understand literature and language through critical thinking and analytical skill development. Each textual analysis starts with essential questions based on each trimester's themes. Students will consider texts in relation to themselves, the world, and other texts. Students will use the essential questions from the course to construct their own essential questions for each assigned project. In addition to a teacher-edited anthology of poems, short stories, and essays, texts may include *The Great Gatsby* and *Their Eyes Were Watching God*.

American Literature Honors Designation

Students who are interested in further challenging themselves and earning honors credit can participate in the Honors program. Honors assignments demand a deeper academic understanding, while being a continuation of the regularly assigned work.

AP English Language and Composition

11th grade offering by departmental recommendation

In this introductory college-level course students read and analyze a broad range of challenging nonfiction prose selections, deepening their awareness of rhetoric and how language works. Through close reading and frequent writing, students develop their ability to read, write, speak, listen, and think while gaining an awareness of purpose, strategy, and style. Course readings feature expository, analytical, personal, and argumentative texts from a variety of authors and historical contexts. Students examine and work through essays, letters, speeches, and images. Students conference on their writing in class and in the Writing Center. **Students enrolled in this course will be expected to take the AP English Language and Composition exam.**

AP English Literature and Composition

12th grade offering by departmental recommendation

Advanced Placement Literature and Composition is a yearlong challenging course which approaches literature and its themes from a global perspective. We will delve into some of the universal themes of humanity through close readings of a variety of works within the evolving literary canon. The goal will be to read, discuss, and write about these works with precision, sensitivity, clarity, and imagination. The overarching questions will include: How does our past shape our vision of ourselves and our world, our hopes, or our future? What is the nature of evil and its punishment? What does love teach us about life and ourselves? What is literature, and why are we driven to create it? Possible reading selections may include *Oedipus*, *The Awakening*, *Othello*, *M. Butterfly*, *Pride and Prejudice*, and *Purple Hibiscus*. **Students enrolled in this course will be expected to take the AP English Literature and Composition exam.**

TRIMESTER COURSES

English Elective Offerings

Twelfth grade students have the opportunity to pursue individual literary interests while ensuring the continued development of reading, writing, speaking, listening, and thinking skills. Elective English courses demand mature scrutiny and focused independent work. English electives are open to all students going into the 12th grade, as well as some 11th graders, with permission.

When selecting English electives as a 12th (or 11th) grader, students must:

1. Consult their English teacher and advisor.
2. Register for a total of three electives, one per trimester, to fulfill graduation requirements, unless they are also enrolled in a full year English course.
3. Pay attention. Some courses may be offered more than once a year or in consecutive years and students may not take the same elective more than once.

English Electives Honors Designation

Students who are interested in further challenging themselves and earning honors credit can participate in the Honors program. Honors assignments demand a deeper academic understanding, while being a continuation of the regularly assigned work.

FALL TRIMESTER OFFERINGS

Convergences: Literary Analysis and Criticism

A survey of different ways of analyzing popular culture through the lens of literature and criticism. This course provides a foundation for study through individualized readings. Student first learn the process of literary inquiry. Then, each student chooses a topic, selects a novel or non-fiction text on said topic, current research articles, film, and such to enrich the topical focus. Students ultimately present a paper and a presentation on their topic to the class.

Forgotten Language

“I want to tell you what the forests were like
I will have to speak in a forgotten language” – W.S. Merwin

Forgotten Language centers around the poetics of the natural world. How do we read, write, discuss, imagine, teach, and walk our way into the “wild”? Students grapple with their own interests and opinions about the environment through a variety of poetry and prose readings, fiction and nonfiction, from Sierra Club founder John Muir to Annie Dillard and Terry Tempest Williams.

Gothic Literature

This course will explore the style of writing that is characterized by elements of fear and horror, as well as Romantic elements such as nature, individuality, and strong emotion of curiosity and suspense. Fiction, poetry, and creative non-fiction in this category employs dark and picturesque scenery, startling and melodramatic narrative devices, and an overall atmosphere of exoticism and mystery. Through reading, discussion, and both analytical and creative writing, students will reflect on themes and ideas found in classic and contemporary gothic literature and begin to discuss the question of the human appeal and curiosity to fear and the unexplained. What is it about fear that excites and intrigues us? Texts may include *The Haunting of Hill House*, *Dracula*, *Carmilla*, fiction and non-fiction of Stephen King, and short stories and poetry of Edgar Allan Poe.

WINTER TRIMESTER OFFERINGS

Creative Writing

Students will read to write, studying contemporary poetry and flash fiction. Becoming an astute reader is the first step to finding power as a writer. Students write exercises that help them understand the potential of each form. Then, students write and conference on at least three drafts of each poem and story. The course culminates in a portfolio presentation.

Culture and Identity: Crossing Borders

In Western cultures, identity often tends to be defined in binary terms: an individual is either black or white, male or female, native or immigrant. This course seeks to explore the nature of identity by focusing on texts in which categories of identity — specifically those of race and nationality — are represented as fluid rather than concrete. Texts may include *The Kite Runner* and *The Prince of Los Cocuyos*, among others.

The Science Fiction of Climate Change Meets Design Thinking

Cross listed with the IDEAS Center. Earns English departmental credit.

This course offers an introduction to the study of literature by focusing on the emerging genre of climate change fiction (popularly known as “cli-fi”). Course readings invite students to think of climate change in new ways--through fiction. The essential question is: how and why does fiction, and specifically literary fiction, matter in the context of climate change? Specifically, we will read a range of short stories and novels, analyzing how features like point of view, characterization, and figurative language enhance the effects that those stories produce on their readers. We will also compare these literary texts to understand and relate to the world. The study of cli-fi text will create the baseline for an action project developed through the design thinking process.

SPRING TRIMESTER OFFERINGS

Banned Books and Films

This course explores the First Amendment and its importance to our country and culture. We will consider why books and films are challenged, who does the challenging, and why some books and films are ultimately banned. Through reading, discussion and writing, students will reflect on themes and ideas found in the text and on the screen and then delve into what makes them so “dangerous” or “inappropriate” to deserve harsh criticism and objections. Texts may include *The Chocolate War*, *The Handmaid’s Tale*, and *One Flew Over the Cuckoo’s Nest*. Films may include “The Life of Brian,” “A Clockwork Orange,” and “One Flew Over the Cuckoo’s Nest.”

Hip Hop: Race, Culture, and Art

This course has three movements. First, understanding the history of contemporary Urban Poetry. Second, acquiring the language to read, write, speak, listen, and think about these texts. Thirty-three literary terms will be used to study poetry, with insight from many notable writers. The terms include rhyming couplets, rhyme pattern, stressed/unstressed syllables, scansion, feet, internal rhyme, end rhyme, and slant rhyme among others. Third, critical analysis of each text. Students will write many single and multi-paragraph papers and present two multimedia presentations.

Literature of Adventure and Exploration

Some people are captivated by confrontation or communion with unknown geography and topography and by challenges of unknown proportion. Facing that challenge uncovers dual secrets of the land and one's soul. Students search for insight into this world of thinking and dreaming, triumph and tragedy. Readings may include Shelley, Blake, Byron, Shackleton, Amundsen, and Scott, along with 8,000-meter climbers and ocean voyagers.

History Department

Department Chair: Dr. Clarke

Departmental Requirements: Three years, to include U.S. History (generally taken during the junior year).

YEARLONG COURSES

Human Geography

(9th grade requirement)

Geography dramatically shapes our cultural identity as human beings. Human Geography will focus on learning to understand world cultures from many different perspectives. Strong emphasis will also be given to questions of place. What does it mean to be in a certain location? How does that location impact identity? How do people find ways to comprehend place? In conjunction with the English department, we will consider these questions both from a geographic and a literary perspective.

Human Geography Honors Designation

Students who are interested in further challenging themselves within the course and earning honors credit can participate in the Honors program. The assignments in the Honors program are designed to demand deeper academic work related to the material being studied that term within the history curriculum.

The West and the World

(10th grade requirement)

This course will study the major civilizations which have developed around the world over the last several thousand years, with a focus on the way in which Western Civilization has emerged and developed in the context of cultures and civilizations around the globe.

The West and the World Honors Designation

Students who are interested in further challenging themselves within the course and earning honors credit can participate in the Honors program. The assignments in the Honors program are designed to demand deeper academic work related to the material being studied that term within the history curriculum.

United States History

United States History offers an opportunity to study the life of the Republic, from its colonial beginnings to the present. During this exploration, we will not only focus on the who, what and wheres of United States History, but most importantly, the whys, looking at factors that contributed to the outcomes of pivotal events in the country's history. We will also work at improving and mastering the skill of writing research papers. Students will complete three research papers over the course of the year, with the last culminating in a 15 minute presentation over the topic selected. This course is required of all 11th grade (and older) students who have yet to satisfy departmental credit requirements. It is also a prerequisite for department electives.

AP United States History

Students may enroll in this course only with departmental approval.

This year-long course will introduce students to college-level study of American history as well as prepare them for the AP United States history exam in May. Primary source readings, individual research, group discussion, and debate are combined in each unit to develop the ability to think, speak, and write critically about United States history.

Major course themes include the development of American identities, American exceptionalism, law and social change, war and diplomacy, the evolving meaning of the Constitution, environmental change, art and literature as expressive of the American experience, and the rise of the United States as a global power. Course themes act as touchstones for discussion, writing, and analysis in each unit of study. Students will be expected to take the United States History AP exam in May. **Students will be expected to take the AP U.S. History exam in May.**

AP Government and Politics: Comparative

Students may enroll in this course only with departmental approval.

This course is designed to introduce students to comparative politics through studying the diversity of governments in a global context. The comparative method is used to analyze the governments of the Britain, France, Russia, China, Nigeria, Iran and the United States, among others. Current global political events are utilized to keep the course relevant to world affairs. As our world grows smaller with technological advances and increased economic ties between nations, it becomes increasingly important that we understand politics in such a comparative and global context. Students enrolled in this course will be expected to take the AP Comparative Government and Politics exam.

Students will be expected to take the AP Comparative Government and Politics exam.

TRIMESTER COURSES

History Elective Offerings

Twelfth grade students have the opportunity to pursue individual historical and social science interests, while ensuring the continued development of sound critical reading, research, writing, and presentation skills. Elective history courses emphasize increased independence and greater sophistication in critical analysis, further development of research methods and historical writing, and advanced skills in discussion and presentations. History electives are open to all 12th grade students.

Note: The normal prerequisite for trimester electives is completion of U.S. History. Students may, however, take electives before completing U.S. History with approval of the Department Chairperson.

FALL TRIMESTER OFFERINGS

Critical Readings on Genocide

This course will cover some of the theoretical explanations for the causes of genocide, discuss the philosophical implications of genocide in relation to human nature and world politics, and review historical events. The course will conclude with students creating case studies on other instances of genocide in the 20th century.

Critical Readings on the American Myth

Historian C. Vann Woodward wrote: “Every self-conscious group of any size fabricates myths about the past: about its origins, its mission, its righteousness, its benevolence, its general superiority.” Americans are no exception. Myths inform the image that Americans have of themselves and their country. In this course we will interrogate the meaning of the major myths that sustain and inform American culture and civilization, both past and present. By better understanding the place of myth in culture, we will arrive at a more complete understanding of American social structure and the place of various cultural groups within it. Readings for the course will include *Rereading America* by Colombo et al., *Myths America Lives By* from Richard Hughes, and *Mythologies* by Roland Barthes.

Social Entrepreneurship

Cross listed with the IDEAS Center. Earns History departmental credit.

How do I know? Why do I know? What does it matter? What can I do with it? What entrepreneurial ventures have shaped history? How might I develop an entrepreneurial idea into a business? While learning from history, case studies and innovative visionaries, students explore business development strategies using the design thinking approach, develop business plans, learn to network, practice pitch sessions, and bring an idea to a business model. Throughout the course, students get hands-on experience by learning to run SA-KRED, the student run cafe.

Western Philosophy

Who are we?

What is the meaning of life?

What is the nature of reality?

How do we live?

These questions have confronted human beings for centuries. This elective will introduce students to the big questions in philosophy. The course is designed as an introductory survey of Western Philosophy. Philosophers such as Socrates, Plato, Descartes, Hume, Spinoza, Hegel, Marx and Nietzsche will be read and discussed. The main text for the course is *Sophie's World*, a novel based around the history of philosophy. Students will come away from the course with an increased appreciation of philosophical questions and discussion. An emphasis on public philosophy through bringing Socratic discussion to the community will be a key part of this course.

WINTER TRIMESTER OFFERINGS

Design Activism

This interdisciplinary project based course emphasizes design activism, which stems from design thinking. Through hands-on collaborative making, students explore historical moments of activism and discover a relevant issue to explore and do design activism in the community. Students will explore an issue and learn design thinking skills such as user-centered research, rapid prototyping, iterative implementation as well as learning how to use a variety of tools in the IDEAS Center.

Maine History

Maine is a place of beauty, rich in history and has a culture all its own. In this class, we will examine the history and development of this state, looking at the days of the early native inhabitants to the modern day issues facing the state. When studying the larger issues, we will often look at Northern Oxford County and the Bethel area as case studies of how the state was affected by the many issues that were playing out at the state and

national levels. We will also examine the lore and tradition of the local history of Bethel and Gould Academy, using the resources housed at the Bethel Historical Society and the school.

Research Methods: Global Migrations

The movement of people across borders is a central political issue throughout the world. In North and South, East and West, the issue of migration is a controversial one that has at times even become the focus of violence. The movement of people from their homelands into other parts of the world changes the migrants themselves as well as the receiving communities. We will examine diverse cases of migration from around the globe as well as make connections to immigrant communities close by here in Maine with the goal of creating oral histories recounting the migration to and settlement in our region. We will use a range of texts, including journalistic accounts, academic writings, fiction, films, and lastly, the words of migrants themselves in order to study migration from both a structural and a local perspective.

SPRING TRIMESTER OFFERINGS

Baseball and American Culture

This course will cover the history of baseball and how it can be connected to other major themes in United States History. The course will cover roughly the last 100 years of the game and making connections with topics such as the origins of the game, how the corruption of the early 20th century affected the game, baseball in the 20's and 30's, baseball and World Wars, racism in baseball, and other selected topics.

Dylan and American Culture

The goal of this History Department elective is to introduce students to the words and music of Bob Dylan and the times that he lived. *Time Magazine* placed Bob Dylan in their list of the top 100 most influential people of the 20th century and called him a "master poet, caustic social critic and intrepid, guiding spirit of the counterculture generation." In this course, through reading, careful listening to his music, and

engaging in discussion and critical reflection on his lyrics, we will raise essential questions about the relationship between artistic creativity and American popular culture.

Presenting Great Decisions

This is a current events course that will focus on eight issues of concern to current US foreign policy, issues that represent foreign policy challenges of tomorrow. The topics of study will include: United States and rising global powers, Afghanistan/Pakistan, energy & the global economy, the Arctic, United States and Egypt, global food supply, Cuba after Castro, and universal human rights. Students will maintain websites devoted to one of the eight areas of study.

Presenting Psychology

This elective is an introduction to evolutionary psychology. Students will read, write, think, and talk about how the miracle of the human mind has evolved and paradoxically how its function today is strongly linked to our evolutionary past. The course will still contain a strong gender unit as gender differences in thought and behavior are strongly linked to biology, though there is certainly a degree of controversy over the extent to which gender roles are linked to biology.

Mathematics Department

Department Chair: Ms. Alford

Departmental Requirements: Three years to include completion of courses equivalent to Algebra 1, Geometry, and Algebra 2.

The TI-84 Plus calculator is required for all math students at Gould Academy.

YEARLONG COURSES

Algebra 1

This first year course covers such topics as algebraic expressions, linear equations, systems of equations, quadratics, and the introduction of functions. Emphasis is placed on learning algebraic skills and developing a deeper conceptual understanding of the material through problem solving and applications. Use of the TI-84 graphing calculator is introduced.

Geometry

Prerequisite: Algebra 1

This course is an exploration of geometric concepts covering parallel theory, similarity, congruence, and properties and attributes of angles, triangles, polygons, and circles. Proof writing and algebraic skills are learned and practiced throughout the year. Real world applications and online manipulatives help students to explore and gain a deeper understanding of the geometric world.

Algebra 2

Prerequisite: Geometry

Functions are explored and serve as a common domain throughout this course. Working with linear, quadratic, polynomial, exponential, and logarithmic functions, new skills

are learned and applied to a variety of real world situations. TI-84 calculators are used extensively to illustrate the functions graphically and to provide a visual representation for problem solving. Students are challenged to apply their skills and demonstrate their understanding both orally and in writing.

Honors Algebra 2

Prerequisite: Geometry (and a strong Algebra I background)

This is a rigorous Algebra II course designed for students who have strong algebraic skills, the capacity to work both independently and collaboratively, and the ability and desire to work towards Honors Precalculus and AP calculus. New algebraic skills are attained through the exploration of functions including, linear, quadratic, polynomial, exponential, logarithmic, and trigonometric. Students enrolled in this course are required to maintain at least a B average.

Precalculus

Prerequisite: Algebra 2

This course will extend the study of functions from Algebra II for those students preparing for a regular calculus course. Exponential, logarithmic, rational, and trigonometric functions will be explored. Also included with the trigonometry will be the unit circle and laws applied to triangle measurement. Applications and modeling are integrated into this skills-based course and there is extensive use of the TI-84 graphing calculator.

Honors Precalculus

Prerequisite: Honors Algebra 2/Departmental Approval

This rigorous course is designed for students who are planning to take a college-level Calculus course. Strong computational skills are required, as well as an ability to think and work abstractly to solve problems. A variety of concepts and tools from both this and previous courses will be used to solve multi-step problems. Inverse, trigonometric and rational functions are some of the topics that will be explored.

Calculus

Prerequisite: Precalculus

This course extends the concepts of precalculus and introduces the techniques of calculus, including limits, continuity, differentiation, and integration. Students use geometric, algebraic and trigonometric concepts to investigate real world applications. The course prepares students for a rigorous college calculus course and course content is reflected in topics studied in AP Physics.

AP Calculus

Prerequisite: Honors Precalculus (with an 85 or better average)

This is a college-level, high intensity class that serves a twofold purpose: to prepare the students to take the Calculus AB Advanced Placement Exam in the Spring and to provide the calculus tools to students concurrently registered in AP Physics. The class will be taught at a relatively quick pace and the material will be covered in depth. Proofs of basic results from Calculus will be covered throughout the year. A graphing calculator will be used in the class to help students visualize and better understand the functions commonly used in Calculus. **Students are expected to take the AP exam.**

AP Statistics

Prerequisite: Algebra 2 or above and departmental approval

This is a college-level course that covers the four major areas typically included in a statistics course. Students will be introduced to the four broad conceptual themes: exploring data, sampling and experimentation, anticipating patterns, and statistical inference. Students are expected to take the AP exam. **Students are expected to take the AP exam.**

Honors Senior Mathematics

Prerequisite: AP Calculus

Students in Honors Senior Math will get a taste of the concepts from higher level mathematics, including logic, set theory, and number theory during the fall trimester. The emphasis will be on understanding the abstract concepts and learning to write clear and efficient proofs. During the winter and spring terms, the class will switch gears in order to prepare the students for the Calculus BC Advanced Placement Exam. Topics

that will be covered include parametric and polar graphing, sequences and series, and advanced integration techniques. The graphing calculator will be used to assist students in preparing for the AP exam.

TRIMESTER COURSES

Mathematics of Financial Matters (Fall, Winter, and Spring)

Prerequisite: Algebra 2

Students will explore practical mathematical concepts relating to financial planning, money management, growing and protecting personal wealth, and will evaluate the risks and benefits associated with loans and investment instruments. The fundamental mathematical concepts students will apply include quantitative analysis, problem solving and linear algebra. Students will use spreadsheets to solve real-world problems involving the analysis and synthesis of data and formulas related to compound interest, cash-flow statements, budgets, credit cards and loans, financial aid, and will participate in a stock market game. The fall trimester will focus on financial planning and money management. The winter trimester will focus on income and asset protection. The spring trimester will focus on investing and personal wealth. This course is designed as a three-trimester sequence that can be taken for one, two, or all three terms.

Mathematics of Static Structure Engineering (Fall)

Prerequisite: Algebra 2

In this spring trimester course students will learn to analyze a variety of static structures, including pulleys and trusses. Through the proper use of free body diagrams students will master the ability to determine the stresses applied to these structures. They will also learn to determine where the center of mass is for basic and complex geometric objects. Homework and projects will include building and analyzing their own structures.

Dynamic Functions (Winter)

Prerequisite: Algebra 2

Dynamic Functions will be a Geogebra based course designed to deepen students' understandings of functions and their graphs. Students will be taught how to use the free online graphing program, and will work with Geogebra to solve a variety of tasks involving polynomial, exponential and trigonometric functions. The course will culminate with students making a math movie using Geogebra, demonstrating their understanding of function manipulation and movement.

Mathematical Problem Solving (Spring)

Prerequisite: Algebra 2

This course is designed to teach and develop mathematical problem solving skills and quantitative reasoning through non-traditional problems. Students are encouraged to collaborate, use the white-boards to draw pictures, and use manipulatives to attack a wide variety of problems. They learn different ways of approaching problems which can then be applied to anything from solving traditional math problems, to "real world" tasks. The text, "Crossing the River with Dogs," was designed to "promote(s) the philosophy that students learn best by working in groups and the skills required for real workplace problem solving are those skills of collaboration. The text aims to improve students writing, oral communication, and collaboration skills while teaching mathematical problem-solving strategies."

Science Department

Department Chair: Mr. Southam

Departmental Requirements: Three years of science, to include one year of a biological laboratory science and one year of a physical laboratory science.

YEARLONG COURSES

Research Methods in Science

This course available to students in any grade with an interest in pursuing independent laboratory research at Gould Academy. The course will follow a blended curriculum with students spending the majority of their class time in the laboratory, Laboratory spaces will also be available to students during evenings, weekends and potentially some afternoon activity time. Full class meetings will usually focus on individual research reports to the class, and a reporting out of findings from the science literature. Lab safety and protocol seminars will be scheduled multiple times throughout the year so that students can work through and “check off” these requirements as they progress through the course and before they undertake lab assignments that require these skills. Students may take Research Methods for more than one year with the expectation that more experienced students will take more responsibility for developing an environment of collegiality and mentorship for newer students and will build on past experience to develop more sophisticated projects. **Students will be expected to enter a project at the Maine State science fair in March and to meet all of the safety and paperwork requirements of an ISEF (International Science and Engineering Fair) affiliated event.**

Conceptual Physics

This year-long class is designed to prepare students for more advanced studies of science at Gould and beyond. This is achieved by developing important scientific skills

Gould

such as measurement, metric system, experiment design, and scientific writing, as well as an understanding of the physical principles that form the foundation of chemistry, biology, and modern physics.

Chemistry

This class is designed as an introduction to the principles of Chemistry. It is aimed towards developing an ability to interpret the world on an atomic and molecular level. Significant time will be spent completing laboratory experiments and interpreting the results. While basic algebra skills are necessary, the class will be primarily conceptual in nature.

Honors Chemistry

Prerequisite: By departmental recommendation. Alg. 2 concurrently

Honors Chemistry is designed for the math/science oriented student with honors grades in previous math and science courses. There is heavy emphasis on the mathematics of chemistry with considerable independent effort required.

Biology

Prerequisite: Chemistry

This class is designed for those with a solid understanding of the fundamentals of chemistry and is designed to develop an understanding of the biological system focusing at the molecular level. The class will include significant laboratory projects and will progress from the cellular level through animal physiology.

Physics

Prerequisite: Algebra 2 with a grade of 85 average or above or departmental approval

Students in physics will engage in a brief survey of Newtonian mechanics before moving on to a variety of topics in classical and modern physics including waves and optics, relativity, electrostatics, and other topics as time permits. Because many of the topics will involve quantitative (mathematical) analysis, students should be comfortable solving problems using Algebra II.

AP Physics: Mechanics

Prerequisite: Calculus concurrently

Students may enroll in the course only with departmental approval

AP Mechanics is a yearlong study of Newtonian physics, including kinematics (how things move), dynamics (why things move), forces, energy, and rotational motion.

Significant effort outside of class is expected, particularly for laboratory work. A spring independent research project is required. This calculus-based course is designed for the student who desires a more rigorous mathematical treatment of physics. **Students are expected to take the AP Physics: Mechanics exam at the end of the year.**

AP Biology

Students may enroll in this course only with departmental approval

This is a class designed to be the equivalent of a college introductory biology course usually taken by college biology majors during their first year. A curriculum designed to prepare students for success on the advanced placement exam in biology will be followed closely and will entail significant background reading, active participation in class discussions and demonstrations, and a sincere commitment on the part of the student. **Students are expected to take the AP Biology exam.**

AP Chemistry

Students may enroll in this course only with departmental approval

This is a class designed to be the equivalent of a college introductory Chemistry course. A curriculum designed to prepare students for success on the advanced placement exam in chemistry will be followed closely. The students need to be highly motivated and be willing to complete extra laboratory work outside of class in order to succeed in this class. Students are expected to take the AP exam. **Students are expected to take the AP Chemistry exam.**

TRIMESTER COURSES

Arduinos and Electronics - (Fall)

Cross listed with the IDEAS Center. Earns Science departmental credit.

This class introduces students into the world of electronics. They learn AC and DC theory as well as how discrete components like capacitors, resistors, and transistors work and why we use them. These components are used in conjunction with Arduino based microcontrollers to complete projects that open up students to the world of modern electronics. Through the use of prototype techniques and with equipment like oscilloscopes, multimeters, and logic probes students take their first steps into the world of electronics design and the internet of things.

Environmental Science (Fall, Winter, and Spring)

Prerequisite: Biology or permission of teacher

Environmental science is the study of how humans interact with their environment. The focus of this senior/junior science elective lies in learning the basic ecological concepts that function in the natural world, understanding environmental problems created by human interactions with the natural world, and identifying means of mitigating or solving these problems. Laboratory and fieldwork are an integral part of the curriculum. This class is designed as a three-trimester sequence that can be taken for one, two, or all three terms.

Marine Science – Explorations of the Gulf of Maine (Fall)

Prerequisite: Biology or permission of teacher

Marine Science is a fall trimester elective for eleventh and twelfth grade students that studies major topics in Marine Science through looking at the Gulf of Maine ecosystem. The Gulf of Maine extends from Cape Cod in the South to Bay of Fundy and Nova Scotia in the north. It is bordered on the southeast and east by large underwater banks which create a partially enclosed body of water, which is one of the most biologically productive ecosystems in the world.

Astronomy (Winter and Spring)

Prerequisite: Algebra 2 concurrent, Chemistry (75 average or better)

Astronomy is a physical science elective, less mathematically intensive than physics, intended for interested eleventh and twelfth grade students. The two-trimester course will be divided into two major topics: Exploring the Night Sky and the Solar System (winter trimester), and Exploring Stars, Galaxies, and the Universe (spring trimester). Each trimester will be independent of the others and students may choose to take either or both. There will be considerable out-of-class commitments in the form of readings, research, and naked eye, binocular, and telescopic observations.

Ecology of the Androscoggin River (Spring)

This course is a field study and will meet during the afternoon sports and co-curricular activity times. Students will participate in an extensive water monitoring study of the Androscoggin River and its free-flowing tributaries. Students will be building an understanding of the needs of different fish within their freshwater ecosystems. This course will also present a scientific approach to the sport of fly fishing. We will explore basic principles of hydrodynamics and the physics involved in presenting artificial lures within or upon the water column. Each student will be required to submit a final independent project based on the data collected throughout the trimester.

Food Science and Systems (Spring)

Cross listed with the IDEAS Center. Earns English departmental credit.

In Food Science and Systems students will gain a basic understanding of global food systems and resilient local food systems. We'll examine how global systems affect local systems, and vice versa. We'll examine how small scale and global trade affects how we eat. We'll examine how culture shapes food and how food shapes culture. We'll look at the environmental impact of human food production, and examine the pressures applied by our growing population. We'll explore the future of food, of biodiversity, and of species extinction. This course will dig deep for an understanding of soil science, and reach broad for an understanding of government regulation and global trade. Practical hands-on experience will be gained with local farms, in kitchens, in the laboratory, and with community groups.

Introduction of Unmanned Aerial Vehicles (Spring)

Cross listed with the Science Department. Earns Science departmental credit.

This course offers an introduction to Unmanned Aerial Vehicles (UAV). We will focus on RC scale UAVs. This will start with simple gliders and move on to 3 and 4 channel aircraft. We will also cover flying wings and multi rotors. Learning how each of these aircraft fly and what they can be used for is a great way to learn the skills required to be a UAV pilot. We will utilize simulators to get real life flight experience without having to do numerous repairs. Weather permitting we will fly our UAVs on the field. This is a great class if you have an interest in flight.

World Languages Department

Department Chair: Mr. Leff

Departmental Requirements: Two years of one language in secondary school to include the third year of that language.

YEARLONG COURSES

Mandarin 1

Mandarin is the most spoken language in the world. In this introductory course, the focus will be on the five aspects of language learning: reading, writing, speaking, listening, and cultural context. Students will study Chinese pronunciation (pinyin), simplified Chinese characters, and simple sentence structures. Topics covered will include talking about oneself, family, and daily obligations. This class is not open to native speakers of Chinese.

Mandarin 2

Prerequisite: Mandarin 1

A continuation of Mandarin 1, this course will continue to expand on language skills gained in the first level of Mandarin. Topics covered will include school life, schedules and calendars, and hobbies. There will be further emphasis on communicative skills and pronunciation through presentation and discussion. Topics about China and Chinese culture and history will also be covered.

Mandarin 3

Prerequisite: Mandarin 2

A continuation of Mandarin 2, this course will continue to expand on language skills gained in the earlier levels of Mandarin. Topics covered will include transportation, travel, and daily life. There will be further emphasis on productive presentational and interpersonal skills. Topics about China and Chinese culture and history will also be covered.

Mandarin 4

Prerequisite: Mandarin 3

This course will focus on reviewing material from Mandarin 3 and then completing the Huanying text book. If time permits, there will be a short unit on Classical Chinese. In the winter, we will study modernist Chinese poetry and read several short stories, comparing them to movie versions of the story. In the spring, we will read a play, work on a translation of part or all of the play and perform a staged reading of the play.

Mandarin 5

Prerequisite: Mandarin 4

Mandarin 5 continues the study of Chinese literature, including modernist Chinese poetry and short stories. The fall will be an introduction to Classical Chinese. The winter will focus on modern literature and literary analysis. In the spring, we will read a play, work on a translation of part or all of the play, and perform in Chinese using the translation as subtitles.

French 1

In this introductory course we stress listening, speaking, reading and writing about everyday topics, which promote a basic understanding of the French language and culture. The topics cover greetings, the French school system, hobbies, and family life, ordering meals and shopping for food. The textbook *Breaking the French Barrier Level 1* is used as a basis accompanied by the *Allons-Y* magazine, internet and video exercises.

French 2

Prerequisite: French 1

In French 2 we discuss topics such as shopping for clothing, fashion, transportation, sports, weather and French family life. The students present oral and written projects related to the topics mentioned. The listening, speaking, reading and writing skills continue to be reinforced by the text *Breaking the French Barrier Level I*, is used as a basis accompanied by the *Bonjour* magazine, as well as a variety of video and internet exercises.

French 3

Prerequisite: French 2

Previous material is reinforced while new vocabulary and structural topics are added. We cover topics about cultural activities, Francophone artists, the French health system, technological communication, travel (with emphasis on Paris), banking and French cuisine. The texts used are *Breaking the French Barrier Level II*, the *Ça Va* magazine, as well as the novel *Le Petit Prince*. Students are also introduced to French cinema and will watch several full length feature films in class; all accompanied by a variety of video and internet activities.

French 4

Prerequisite: French 3

This course which includes an intensive grammar review is designed to enable students to achieve a high level of proficiency in the language and to give solid preparation for the SAT II French examination as well as preparing students for upper level French courses in a university setting. Students will study the literatures and cultures of those countries where French is/was the official administrative language. Using readings in history, culture, and (primarily) literature as well as videos, internet resources, and periodicals, students will gain a sense of the diversity of the French-speaking world as well as the colonial history and modern day concerns that link francophone peoples throughout the world.

French 5

Prerequisite: French 4

In conjunction with the French 4 class, this course includes an intensive grammar review is designed to enable students to achieve a high level of proficiency in the language and to give solid preparation for the SAT II French examination as well as preparing students for upper level French courses in a university setting. Students will study the literatures and cultures of those countries where French is/was the official administrative language. Using readings in history, culture, and (primarily) literature as well as videos, internet resources, and periodicals, students will gain a sense of the diversity of the French-speaking world as well as the colonial history and modern day concerns that link francophone peoples throughout the world.

Spanish 1

This course builds a solid foundation of the language. Listening, writing, reading, and speaking drills are introduced to facilitate the understanding of the Spanish language and culture. There will be an emphasis on the building of the speaking skill working towards self-expression. Breaking the Spanish Barrier Level 1, a vocabulary notebook, and weekly journals (starting second trimester) will be required.

Spanish 2

Prerequisite: Spanish 1

A continuation of Spanish 1, further advancing oral and written communication. Selections of short stories and poems by Hispanic and Spanish novelists are incorporated in the class to aid the student in reading comprehension skills. Other requirements include weekly journals, vocabulary lists, and oral presentations over a wide range of cultural topics. Breaking the Spanish Barrier Level 2 is used in addition to a variety of video and internet exercises.

Spanish 3

Prerequisite: Spanish 2

The goal of Spanish 3 is to refine basic grammar and gain confidence in oral expression. Reading comprehension is emphasized through use of short stories. Weekly journal entries and vocabulary building are stressed, as well as oral presentations. Breaking the

Spanish Barrier Advanced text is used in addition to a variety of video and internet exercises.

Spanish 4

Prerequisite: Spanish 3

Spanish 4 surveys a range of topics relevant to Spanish and Hispanic life and culture, allowing members of the class to focus on honing their written and spoken Spanish through discussion and composition. Students will complete a thorough grammatical review of material covered in previous courses. Topics covered in this course include, but are not limited to, Spanish and Latin American Art, History, and Geography.

Honors Spanish 4: Latin American Literature

Prerequisite: Spanish 3 and departmental approval

Students in Honors Spanish 4 engage in a study of Latin American narrative, essay, poetry, and drama, in conjunction with the Spanish 5 class. Readings are studied chronologically, and held up against a historical background beginning in the twelfth century and continuing through the early twentieth century. In addition, students focus on speaking and writing skills through class discussion, presentation, and written exposition.

Spanish 5: Latin American Literature

Prerequisite: Spanish 3 and departmental approval

Students in Spanish 5 engage in a study of Latin American narrative, essay, poetry, and drama, in conjunction with the Honors Spanish 4 class. Readings are studied chronologically, and held up against a historical background beginning in the twelfth century and continuing through the early twentieth century. In addition, students focus on speaking and writing skills through class discussion, presentation, and written exposition.

English Studies Program

Director: Mr. Liff

Overview

The English Studies Program (ESP) is designed to support English Learners as they experience academic immersion in English. New arrivals are assessed to determine appropriate placement in mainstream humanities and corresponding ESP offerings. Small class sizes allow for individual attention to student needs. Additional support is available during evening study hall hours via the ESP Study Hall and the Writing Center. ESP students are encouraged to speak English whenever possible to maintain and improve English proficiency.

English Studies: Academic Reading and Writing 1

Students in this year-long course are generally, but not always, enrolled in a mainstream English course. Lessons and activities often complement the mainstream humanities curricula. Students will practice active reading strategies as they explore texts such as current news publications and short works of fiction. Grammar and vocabulary will be taught in the context of class readings and in response to student work in both the ESP and content area courses. Ample feedback and coaching will be provided to guide students toward improvement of individual challenge areas. While the emphasis is on reading and writing, speaking and listening experiences, such as reading aloud or discussing a text, are integrated. Whole group lessons and activities are balanced with individual student-teacher conferencing. Many students will continue on to ESP-2 after completing ESP-1.

English Studies: Academic Reading and Writing 2

Students in this year-long course are also enrolled in a mainstream English course. As in ESP-1, grammar and vocabulary are taught in the context of classroom readings and in response to student work in ESP and content area courses. Lessons and activities often

complement the mainstream humanities curricula. Active reading strategies are practiced as students explore texts such as current news publications and short works of fiction. Students will have many opportunities to practice writing skills and will be provided with individualized feedback and coaching for improvement. While the emphasis is on reading and writing, speaking and listening experiences, such as reading aloud or discussing a text, are integrated. Whole group lessons and activities are balanced with individual student-teacher conferencing. Many students will enroll in ESP-Tutorial after completing ESP-2.

English Studies: Tutorial

ESP-Tutorial is a regularly scheduled time in the academic schedule to support English learners across the curriculum. While additional work will sometimes be assigned in ESP-Tutorial, the time will be mostly spent with the teacher assisting the student in understanding all school assignments and ensure students are correctly completing those assignments to the best of their abilities.

TOEFL Preparation

While there is no formal Test of English as a Foreign Language (TOEFL) preparation course, students enrolled in the program are continually practicing academic English skills which are applicable to the TOEFL. ESP students are able to practice their skills in the official TOEFL lab located on campus. This is a great advantage to students as they can take this important test in a familiar environment without the worry of traveling to another location. ESP faculty members are available to assist students with specific preparation for the TOEFL, and this can be arranged on an individual or small group basis according to the needs and interest of the students.

Computer Science Department

Department Chair: Mr. Chase

YEARLONG COURSES

Computer Science

Prerequisite: Introduction to Computer Science, Robotics and Programming or departmental approval

This course introduces object-oriented software programming and algorithm development. Topics include control structures, objects, classes, inheritance, simple data structures, and basic concepts of software development. Students should be comfortable solving problems using Algebra. The class will use the Java programming language.

TRIMESTER COURSES

Introduction to Computer Science (Fall and Spring)

This introductory course in computer programming focuses on the fundamentals of software development using the programming environment called Processing. Processing is a flexible software sketchbook and a language for learning how to code through the creation of digital virtual arts. Students will create pictures, animations and interactive games while learning software development concepts.

Robotics and Programming - (Winter)

Cross listed with the IDEAS Center. Earns Computer Science departmental credit.

This course introduces a variety of skills from robotic design, programming, and designing to prototyping a mini-robot. Students learn how to program in Scratch and progress quickly to programming the Lego EV3 for creative problem solving. Robotic design extend to Arduino platforms and teach how to read sensors, control motors and lights, and write code to interact with the world.

Topics in Computer Science (Winter)

Prerequisite: Computer Science or departmental approval

This course will focus on the development of applications for current day gadgets including Apple IOS and Google Android. Object oriented programming language will be used (Java / Objective C). As trends change the class will change its focus. Students will complete the term with a final project to be deployed on the target platform.

Robotics and Engineering - (Spring)

Cross listed with the IDEAS Center. Earns Computer Science departmental credit.

Ready to learn how engineers design the world around use? Aspiring engineers will learn the process of designing, prototyping, and iterating designs to complete challenges using the VEX Robotics system. In this class you will learn the basics of engineering, Autodesk Fusion 360, and how to document your designs. The tasks you will need to complete will be robotic in nature which requires you to use the engineering principles to build something that works reliably and completes the tasks.

IDEAS Center

Director: Ms. Shifrin

Overview: The IDEAS Center supports four studio spaces for fabrication and design. The design thinking process is the mindset anchor for project development as students gain creative confidence and problem solving skills.

TRIMESTER COURSES

Foundations for Makers - (Fall and Spring)

Cross listed with the Visual Arts Department.

Foundations for Makers empowers students to develop the mindset and skill set of a Maker. Students receive entry level training in the physical and digital studios and basic electronics. Projects allow for tool certification with hand and power tools; experience with design construction for laser fabrication; practice with fasteners and fastening techniques for assembling 3D objects from 2D parts; and incorporating soldering techniques and basic arduino programming into woodcraft projects. **This course can be used to satisfy the Visual Arts departmental graduation requirement.**

Arduinos and Electronics - (Fall)

Cross listed with the Science Department. Earns Science departmental credit.

This class introduces students into the world of electronics. They learn AC and DC theory as well as how discrete components like capacitors, resistors, and transistors work and why we use them. These components are used in conjunction with Arduino based microcontrollers to complete projects that open up students to the world of modern electronics. Through the use of prototype techniques and with equipment like oscilloscopes, multimeters, and logic probes students take their first steps into the world of electronics design and the internet of things.

Composite Constructions - (Fall)

Prerequisite: Design Thinking and Intro to Fabrication, Foundations for Makers, or Departmental Approval based on prior experience. Cross listed with the Visual Arts Department.

Students will learn the basics of ski/snowboard design, composite construction, and shop safety. Each student will build a set of skis or a snowboard and learn how they are assembled and why certain materials are included. If you've ever wondered why carbon fiber makes a ski stiff and light this is the class for you. We utilize the same materials as commercial skis and your skis/snowboard can be just as functional.

(Course material fee required.) This course can be used to satisfy the Visual Arts departmental graduation requirement.

Social Entrepreneurship - (Fall)

Cross listed with the IDEAS Center. Earns History departmental credit.

How do I know? Why do I know? What does it matter? What can I do with it? What entrepreneurial ventures have shaped history? How might I develop an entrepreneurial idea into a business? While learning from history, case studies and innovative visionaries, students explore business development strategies using the design thinking approach, develop business plans, learn to network, practice pitch sessions, and bring an idea to a business model. Throughout the course, students get hands-on experience by learning to run SA-KRED, the student run cafe.

Design Activism (Winter)

This interdisciplinary project based course emphasizes design activism, which stems from design thinking. Through hands-on collaborative making, students explore historical moments of activism and discover a relevant issue to explore and do design activism in the community. Students will explore an issue and learn design thinking skills such as user-centered research, rapid prototyping, iterative implementation as well as learning how to use a variety of tools in the IDEAS Center.

Robotics and Programming - (Winter)

Cross listed with the Computer Science Department. Earns Computer Science departmental credit.

This course introduces a variety of skills from robotic design, programming, and designing to prototyping a mini-robot. Students learn how to program in Scratch and progress quickly to programming the Lego EV3 for creative problem solving. Robotic design extend to Arduino platforms and teach how to read sensors, control motors and lights, and write code to interact with the world.

The Science Fiction of Climate Change Meets Design Thinking (Winter)

Cross listed with the English Department. Earns English departmental credit.

This course offers an introduction to the study of literature by focusing on the emerging genre of climate change fiction (popularly known as “cli-fi”). Course readings invite students to think of climate change in new ways—through fiction. The essential question is: how and why does fiction, and specifically literary fiction, matter in the context of climate change? Specifically, we will read a range of short stories and novels, analyzing how features like point of view, characterization, and figurative language enhance the effects that those stories produce on their readers. We will also compare these literary texts to understand and relate to the world. The study of cli-fi text will create the baseline for an action project developed through the design thinking process.

3D Design with CAD - (Winter)

Cross listed with the Visual Arts Department.

3D design and modeling allows engineers and artists alike to quickly create complex models that can be turned into physical models or used as digital assets. This class teaches the fundamental skills to work in a 3D environment and create models. Students learn about the core concepts of both solid and polygon modeling and how they differ. There are opportunities to hold physical creations as students learn the process of preparing designs for digital fabrication and deploying the jobs. This is the perfect class for anyone looking to make their first steps as a 3D artist, engineer, architect, designer, and innovator. **This course can be used to satisfy the Visual Arts departmental graduation requirement.**

Food Science and Systems (Spring)

Cross listed with the Science Department. Earns Science departmental credit.

In Food Science and Systems students will gain a basic understanding of global food systems and resilient local food systems. We'll examine how global systems affect local systems, and vice versa. We'll examine how small scale and global trade affects how we eat. We'll examine how culture shapes food and how food shapes culture. We'll look at the environmental impact of human food production, and examine the pressures applied by our growing population. We'll explore the future of food, of biodiversity, and of species extinction. This course will dig deep for an understanding of soil science, and reach broad for an understanding of government regulation and global trade. Practical hands-on experience will be gained with local farms, in kitchens, in the laboratory, and with community groups.

Introduction of Unmanned Aerial Vehicles (Spring)

Cross listed with the Science Department. Earns Science departmental credit.

This course offers an introduction to Unmanned Aerial Vehicles (UAV). We will focus on RC scale UAVs. This will start with simple gliders and move on to 3 and 4 channel aircraft. We will also cover flying wings and multi rotors. Learning how each of these aircraft fly and what they can be used for is a great way to learn the skills required to be a UAV pilot. We will utilize simulators to get real life flight experience without having to do numerous repairs. Weather permitting we will fly our UAVs on the field. This is a great class if you have an interest in flight.

Robotics and Engineering - (Spring)

Cross listed with the Computer Science Department. Earns Computer Science departmental credit.

Ready to learn how engineers design the world around use? Aspiring engineers will learn the process of designing, prototyping, and iterating designs to complete challenges using the VEX Robotics system. In this class you will learn the basics of engineering, Autodesk Fusion 360, and how to document your designs. The tasks you will need to complete will be robotic in nature which requires you to use the engineering principles to build something that works reliably and completes the tasks.

Performing Arts Department

Department Chair: Mr. McLaughlin

Departmental requirement: Graduation requirements in the arts depend on the year that you enter Gould. For students entering as 9th graders, 4 terms of art taken at Gould, to include at least one term of performing and one term of visual art; for those entering as 10th graders, 3 terms of art taken at Gould, to include at least one term of performing and one term of visual art, taken at Gould; for those entering as 11th graders, 2 terms of visual and/or performing art taken at Gould; for those entering as 12th graders, 1 term of visual or performing art taken at Gould.

YEARLONG COURSES

Chorus

This is a vocal performance ensemble for credit. You do not need prior musical experience to sing in the chorus. We will learn and perform various musical arrangements in many different styles. Also incorporated will be methods in sight singing, breathing techniques, and basic music theory. Students will be assessed on participation in rehearsals and concerts. Oral performance tests will be given to measure each student's practice habits outside of the classroom.

Band

This is an instrumental performance ensemble for credit. You need to have some prior musical experience on an instrument to play in this ensemble. We will learn and perform various musical arrangements in many different styles. Also incorporated will be methods in sight reading, tone production, breathing techniques and basic music theory. Students will be assessed on participation in rehearsals and concerts. Aural playing tests will be given to measure each student's practice habits outside of the classroom.

Applied Music Study

Prerequisite: Departmental approval

Students may receive credit, on a pass/fail basis, for completion of a program of music lessons. Granting of credit is dependent on receiving lessons from a qualified teacher, including but not limited to the **Manhattan School of Music** instructors, completion of practice hours, and assessment by the Gould Academy music faculty. Public performance may also be a condition for receiving credit, at the discretion of the department chair.

Piano and Keyboard Studies

Course will earn .33 credits for each trimester completed.

This class is designed to teach piano/keyboard skills for all skill levels including students who are beginners, intermediate, or advanced. Each student, or group of students, will have one lesson each week in class, with practice time built into the rest of the week's class periods. Students will have the opportunity to learn piano skills in many different styles, from classical to rock, pop, and jazz. Techniques in reading music and ear training will be covered. Keyboards and pianos will be made available to the students. Beginning and intermediate level players will use a text as part of their study. Advance players will work on repertoires, as agreed in collaboration with their teacher.

TRIMESTER COURSES

Introduction to Music (Fall, Winter, and Spring)

Introduction to Music is designed for younger students. It is intended to expose students to the many facets of musical study including reading music, music history, music technology, contemporary musical culture, and attending performances. There is no prior musical experience needed. This class is a prerequisite for Music Theory and Music Technology.

Music Technology (Fall and Spring)

Prerequisite: Intro to Music or departmental approval

Music Technology explores the fundamentals of music composition. Student's work in the Musical Instrument Digital Interface (MIDI) lab using software for audio editing, multi-track recording, MIDI sequencing, and loop based composition. Students publish their compositions on the internet and have the option of recording CD's or performing their work. Previous musical experience is not required.

Introductory Music Theory (Fall)

Prerequisite: Intro to Music or departmental approval

Introductory Music Theory is a beginning course in the fundamentals of music notation and theory, designed to develop basic music literacy. Through analysis and application of compositional practices of the common-practice period, the course covers rhythm, pitch, notation, scales, intervals, key signatures, tonality, melody, harmony, and ear training. Although no previous knowledge of music theory is required, some musical background will be helpful.

Intermediate Music Theory (Winter)

Prerequisite: Intro to Music Theory or departmental approval

This course is for self-motivated students with some music theory training. In this course the student will build on preexisting tools to analyze and understand music as well as compose original music, building on what is learned in Music Theory.

History of Jazz: The Early Years (Winter)

Jazz is "America's classical music." This class begins by tracing the prehistory of Jazz from the "Ring Shouts" performed by slaves at Congo Square to the brass bands of the late 1800's. The class then moves on to follow the development of jazz music from Louis Armstrong to the big band era and onto the stride pianists of the Harlem Renaissance and Duke Ellington. Students gain an understanding of the art of improvisation through the lives and works of the great jazz players and composers as well as a sense of the relationship between jazz music and certain events in U.S. History.

Advanced Music Theory (Spring)

Prerequisite: Previous Music Theory coursework or departmental approval

This course is for self-motivated students with considerable music theory training. In this course the student will build on preexisting tools to analyze and understand music as well as compose original music, building on what is learned in earlier music theory courses.

Visual Arts Department

Department Chair: Mr. Greene

Departmental requirement: Graduation requirements in the arts depend on the year that you enter Gould. For students entering as 9th graders, 4 terms of art taken at Gould, to include at least one term of visual and one term of performing art; for those entering as 10th graders, 3 terms of art taken at Gould, to include at least one term of visual and one term of performing art, taken at Gould; for those entering as 11th graders, 2 terms of visual and/or performing art taken at Gould; for those entering as 12th graders, 1 term of visual or performing art taken at Gould.

YEARLONG COURSES

Ceramics: Functional Form

Basic throwing and handbuilding with glaze techniques and kiln firing.

TRIMESTER COURSES

Art Foundations (Fall, Winter, and Spring)

Students must enroll in two terms

This course is designed to expose students to a wide variety of art and design experiences during the freshman and sophomore years. Students will gain a broader understanding of the fundamentals of art and design, as well as gain more experience with a wider variety of faculty, materials and processes. The course will cover both 2 and 3 dimensional art, allowing students to develop an understanding of each, and allow them to make better informed decisions about future courses in the arts. The course will

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consist of 4, half-trimester modules, Drawing, and 3 Dimensional Design in the Fall trimester, and then Ceramics and Design in the Winter trimester. Sections of students will rotate through the classes after the midterm point. This course is required before ninth and tenth grade students can take other trimester-long visual art electives. This course is required before 9th and 10th graders can take other trimester long visual art electives.

Artist Blacksmithing: Functional Ironwork (Fall, Winter, and Spring)

Prerequisite for 9th and 10th Graders: Art Foundations

Artist Blacksmithing focuses on the production of forged ironwork. Emphasis will be placed on the design and function of tools, hardware, and utensils. **(Maximum 4 students)**

Ceramics: Exploration of Form (Fall, Winter, and Spring)

Prerequisite: Ceramics

This course will be a further exploration of ceramics for students who have completed the yearlong ceramics class and desire to continue their work in the medium. This trimester course will provide an opportunity for further exploration into the art of ceramics. Projects will be partly student driven, based on their particular interests. Weekly assignments will be given and assessed by their effort, craftsmanship, timely completion, and artistic merit. A final project will be completed. Students will also be expected to help with the loading and firing of kilns, clay recycling, and helping to maintain a functioning studio environment.

Ceramics: Alternative Firing Techniques (Spring)

Prerequisite: Ceramics (Ceramics can be taken concurrently)

History will be the backdrop to this studio class. The wood kiln will be the main tool for firing work. The course will also use several other firing techniques, including pit firing, saggar firing, and raku firing.

Composite Constructions - (Fall)

Prerequisite: Design Thinking and Intro to Fabrication, Foundations for Makers, or Departmental Approval based on prior experience. Cross listed with the IDEAS Center. Students will learn the basics of ski/snowboard design, composite construction, and shop safety. Each student will build a set of skis or a snowboard and learn how they are assembled and why certain materials are included. If you've ever wondered why carbon fiber makes a ski stiff and light this is the class for you. We utilize the same materials as commercial skis and your skis/snowboard can be just as functional.

(Course material fee required.) This course can be used to satisfy the Visual Arts departmental graduation requirement.

Digital Photography 1 (Fall and Spring)

Prerequisite for 9th and 10th Graders: Art Foundations

This course is an introduction to the world of digital photography, including basic photographic skills, features of a digital camera, and use of computer software for enhancement and color correction of images. This course focuses on intensive hands-on practice with digital cameras and computer software. Students will learn to optimize images for print and electronic distribution.

Digital Photography 2 (Winter)

Prerequisite: Digital Photography 1

This course is designed for students who are either committed to photography as a subject of study or motivated to explore advanced options in photography. This class will stress greater latitude in materials used, greater mastery of techniques, and most importantly a higher level of intellectual involvement in planning, designing and evaluating of the artworks created. Areas covered will be artificial lighting techniques, HDR imaging, RAW images and advanced editing techniques using Adobe Photoshop Elements. This will be a hands-on class and because of individualized portfolio feedback much of what is covered will require classroom attendance.

Drawing 1 (Fall, Winter, and Spring)

Prerequisite for 9th and 10th Graders: Art Foundations

The recording of an attitude or idea on paper. Emphasis will be on the use of mediums: pencil, charcoal, and brush (washes) with concern for the basic principles of design.

Drawing 2 (Fall, Winter, and Spring)

Prerequisite: Drawing 1

An advanced course in drawing, further exploration in tools, techniques, and subject matter.

Fashion Drawing (Winter)

Prerequisite for 9th and 10th Graders: Art Foundations

This course will begin with understanding the human figure through both the “9 Heads” method and basic human anatomy. Students will sketch the human figure for the first few weeks, and then move on to adding fabric and clothing. Students will discover various techniques for illustrating different types, and weights of fabrics. Students will explore various types of fashion throughout history in their research and sketchbook. As students develop their ideas we will then begin to render them in the Adobe Illustrator program, creating a portfolio.

Foundations for Makers - (Fall and Spring)

Cross listed with the IDEAS Center.

Foundations for Makers empowers students to develop the mindset and skillset of a Maker. Students receive entry level training in the physical and digital studios and basic electronics. Projects allow for tool certification with hand and power tools; experience with design construction for laser fabrication; practice with fasteners and fastening techniques for assembling 3D objects from 2D parts; and incorporating soldering techniques and basic arduino programming into woodcraft projects. **This course can be used to satisfy the Visual Arts departmental graduation requirement.**

Handbuilding (Winter)

Prerequisite for 9th and 10th Graders: Art Foundations

Long before pottery was made on a potter's wheel, it was all hand built. This class will explore the techniques used by many cultures to create objects made of clay, used in daily life. We will utilize the techniques of coil, slab, and pinch to create a series of projects based on the figure, architecture, the vessel, and utilitarian pottery. Various clay bodies and firing techniques will be explored.

Introduction to Graphic Design (Spring)

Prerequisite for 9th and 10th Graders: Art Foundations

Students will begin by doing research and discussing forms of advertising and signage. They will discuss pieces that they feel are successful and pieces that are not successful, they will then begin correcting the “unsuccessful” pieces. How would they make them better? They will be able ideate quickly in sketchbooks. The process of discussing the successful and unsuccessful pieces will serve as research for their corrections. Students will then survey the public as to which design they feel is more effective, the old or new version. They will learn that what you think as a designer, may not matter as much as what everyone else, or your client, thinks. They will also develop their own personal logo and visual identity in the class. This is an extremely valuable process to begin to understand as a designer. The course will move quickly and have many deadlines that students must meet. It should be a fun and exciting experience for all.

Metal Design 1 (Fall, Winter, and Spring)

Prerequisite for 9th and 10th Graders: Art Foundations

Design and fabrication of metal jewelry. Basic techniques such as soldering, sawing, piercing, stone setting, cold connections and finishing work will be covered.

Metal Design 2 (Spring)

Prerequisite: Metal Design 1

Advanced technique, including further exploration in tools, techniques, and subject matter. Enameling, hollow forms, precious metal clay, etching and casting are some of the processes that may be explored.

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Painting (Fall, Winter, and Spring)

Prerequisite for 9th and 10th Graders: Art Foundations

Exploration of various styles of painting following the historical evolution of attitudes toward the painted image (classicism, impressionism, romanticism, and expressionism). Emphasis on acrylic medium and color properties.

Painting 2 (Fall, Winter, and Spring)

Prerequisite: Painting 1

An advanced course in painting, further exploration in tools, techniques, and subject matter.

Portfolio Development (Fall)

Prerequisite for 9th and 10th Graders: Art Foundations

This course is designed for students who are considering applying to art or design schools and feel they need work to help round out their admissions portfolios. This course will be an opportunity for these students to increase the scale and scope of their work, giving their portfolio pieces more impact and resonance. The work will be multi-media and exploratory; developing themes and ideas as though a student were organizing and executing a body of work. The assignments will develop an understanding of the modern and contemporary issues in art and design through the exposure to a great deal of art history, design history, and practice.

Printmaking (Fall, Winter, and Spring)

Prerequisite for 9th and 10th Graders: Design or Art Foundations

Making multiple images through the use of various printmaking techniques. Monotypes, linoleum printing, etching and lithography are some of the techniques that may be explored.

Sculpture (Fall and Spring)

Prerequisite for 9th and 10th Graders: Design or Art Foundations

An introduction to three-dimensional expression in a variety of medium- metal, wire, plaster, paper, found objects and wood.

Slip Casting and Plaster Mold Making (Fall)

Prerequisite for 9th and 10th Graders: Design or Art Foundations

This course will explore the basics of plaster mold making. Students will learn how to frame molds and gain an understanding of mold making and why this process is executed. Students will first learn how to mold simple everyday objects and slip cast them using a ceramic slip. The class will then use the IDEAS center to develop objects and print them using the 3D printer and then cast the object that they made. Once students have a stronger understanding of mold making and slip casting they will begin to develop more complicated forms. Students will also learn the basics of glaze making and ceramic firing techniques.

3D Design with CAD - (Winter)

Cross listed with the IDEAS Center.

3D design and modeling allows engineers and artists alike to quickly create complex models that can be turned into physical models or used as digital assets. This class teaches the fundamental skills to work in a 3D environment and create models. Students learn about the core concepts of both solid and polygon modeling and how they differ. There are opportunities to hold physical creations as students learn the process of preparing designs for digital fabrication and deploying the jobs. This is the perfect class for anyone looking to make their first steps as a 3D artist, engineer, architect, designer, and innovator. **This course can be used to satisfy the Visual Arts departmental graduation requirement.**

Academic Support

Director: Ms. Stevens

Gould Academic Skills Center

The Academic Skills Program supports students with various learning styles. Specific routines are taught to promote executive skills development and self-advocacy to become independent learners. Students enrolled in the Academic Skills Program are assigned to the Academic Skills Center and paired with a learning professional. Together they will set goals and establish a set of steps to reach each goal. This may include reviewing assignments, preparing for tests/quizzes, writing/editing papers, self-advocacy skills and teaching executive functioning skills. In addition to regularly scheduled classes during the academic day, the Academic Skills Center is open 5 nights a week, with most students attending at least 2 nights per week for additional support.

Skills Development in the following areas are emphasized:

- Organizing for the day
- Developing homework plans
- Writing a paper
- Planning for long-term projects
- Studying for tests
- Organizing notebooks/homework
- Taking notes
- Active reading strategies
- Sustaining attention
- Managing anxiety
- Advocating appropriately

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Enrollment in the Academic Skills Program is based on, but not limited to, academic performance, advisor input, advisory council recommendation, educational consultants, and educational testing. In certain circumstances, participation in the Academic Skills Program may be a condition of acceptance or continued enrollment at Gould. Upon enrollment, a student learning plan is written for each student. This plan outlines the student's learning style and accommodations and/or modifications that will be executed in the classroom setting. These plans are shared with classroom teachers of the student.

Independent Study

Independent study is available for credit toward graduation under strict guidelines. If a student qualifies for independent study, the study will normally replace a standard academic course in the student's schedule.

Requirements: Independent studies are available only to enrolled seniors and other students who have exceeded departmental offerings in a particular discipline. To apply for an independent study a senior must submit an application on which is listed at least the following:

- Title of project
- Detailed description of the project
- Timeline for the project
- Descriptions of the products/mileposts of the project
- Detailed description of the final exam/product of the project
- An extensive bibliography of primary and secondary sources to be used
- Description of the means of evaluation to be used by the project sponsor
- Signature of a supporting teaching faculty member with relevant expertise

An independent study is just that, an opportunity for a single student with a passionate interest to study with minimal guidance in an area of study in which there are no formal course offerings in the school. Independent studies are not group projects, and they are not teacher-directed tutorials. Students must do sufficient research prior to making application to be able to put forward credible applications.

Applications will be evaluated and independent study decisions made by the Dean of Academics and the Academic Steering Committee.

In order to be considered, applications must be received by the following deadlines:

Fall Trimester: By returning student registration day

Winter Trimester: November 1st

Spring Trimester: February 1st