2021-2022 Student Course Catalog

GOA students are modern learners.

The mission of Global Online Academy (GOA) is to reimagine learning to enable students to thrive in a globally networked society. GOA provides a positive, interactive and academically rigorous environment for students to learn. We offer courses with topics that interest students and a network that connects students to peers as passionate as they are.

As GOA learners, our students also develop a specific set of skills, skills that might not be exercised as often in a bricks-and-mortar environment. Based on our research, student surveys and feedback from our faculty, we have identified the following six core competencies that our students develop in practical, hands-on ways, no matter which GOA course they take. Students will:

1. Collaborate with people who don't share their location.
2. Communicate and empathize with people who have perspectives different from their own.
3. Curate and create content relevant to real-world issues.
4. Reflect on and take responsibility for their learning and that of others.
5. Organize their time and tasks to learn independently.
6. Leverage digital tools to support and show their learning.

To build these skills, GOA courses are:

- **Globally connected**: Even though our courses are online, students get to know their teacher and classmates by learning how to use technology to build relationships. Each of our classes has no more than 20 students from many different schools, led by an expert teacher from one of our member schools. Students log in multiple times a week to engage in discussions, collaborate on projects, and share ideas.

- **Challenging**: GOA courses are designed to be as rigorous as any course at a home school. Students spend 5-7 hours a week on their courses. GOA courses are mostly asynchronous: students do not show up on certain days at certain times. Instead, teachers publish a calendar of activities, and within that framework, students work on their own schedules, gaining critical independent learning skills along the way.

- **Relevant**: We want students to pursue their passions. Our courses offer practical, hands-on experience in how these ideas can be applied to the world outside of school. Students have a voice and choice in the work they do and the ideas they explore.

DEPARTMENT DESIGNATIONS

Unless otherwise noted, courses are one semester long. Some courses are cross-listed and will appear in multiple departments. Some courses are offered in multiple terms and appear more than once.

ART, MEDIA, AND DESIGN

Semester 1	Semester 2
Architecture	Architecture
Creative Nonfiction Writing	Arts Entrepreneurship
Data Visualization	Creative Nonfiction Writing
Filmmaking	CS II: Game Design and Development
Graphic Design	Fiction Writing
	Graphic Design
	iOS App Design

ARCHITECTURE

In this course, students build an understanding of and apply skills in aspects of site; structure, space and design. While gaining key insights into the roles of architectural analysis, materials, 3D design and spatial awareness, students develop proficiency in architectural visual communication. We begin by learning the basic elements of architectural design to help analyze and understand architectural solutions. Through digital and physical media, students will use models to enhance visual communication, study the role building materials play in architectural design and develop an understanding of the impact materials have on structural design and cultural traditions. At each stage of the course students interact with peers from around the globe, learning and sharing how changes in materials, technology, and construction techniques lead to the evolution of contemporary architecture style and visual culture. The course culminates with a final project in which each aspiring architect will have the opportunity to work towards a personal presentation for the GOA Catalyst Conference. Students will, through a variety of outcomes, present an architectural intervention which they have proposed as a solution to an identified need, one emanating from or focused within their own community. Throughout the course students will refer to the design process and will use visual journaling techniques to track, reflect and evidence their burgeoning understanding of architecture, construction and engineering.

ARTS ENTREPRENEURSHIP

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

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

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

COMPUTER SCIENCE II: GAME DESIGN AND DEVELOPMENT*
 In this course, students design and develop games through hands-on practice. Comprised of a series of "game jams," the course asks students to solve problems and create content, developing the design and technical skills necessary to build their own games. The first month of the course is dedicated to understanding game design through game designer Jesse Schell's "lenses": different ways of looking at the same problem and answering questions that provide direction and refinement of a game's theme and structure. During this time, students also learn how to use Unity, a professional game development tool and become familiar with the methodologies of constructing a game using such assets as graphics, sounds, and effects, and controlling events and behavior within the game using the C# programming language. Throughout the remainder of the course, students will work in teams to brainstorm and develop new games in response to a theme or challenge. Students will develop their skills in communication, project and time management, and creative problem-solving while focusing on different aspects of asset creation, design, and coding. ***Prerequisites: Computer Science I: Computational Thinking or its equivalent.***

*Cross-listed in Mathematics and Technology

DATA VISUALIZATION

Through today's fog of overwhelming data, visualizations provide meaning. This course trains students to collect, organize, interpret, and communicate massive amounts of information. Students will begin wrangling data into spreadsheets, learning the basic ways professionals translate information into comprehensible formats. They will explore charts, 11 between effective and misleading visualizations. Employing principles from information graphics, graphic design, visual art, and cognitive science, students will then create their own stunning and informative visualizations. From spreadsheets to graphics, students in this course will practice the crucial skills of using data to decide, inform, and convince. There is no computer science, math or statistics prerequisite for this course, though students with backgrounds in those areas will certainly find avenues to flex their knowledge in this course. *Cross-listed in Mathematics and Technology

FICTION WRITING

This course connects students interested in creative writing (primarily short fiction) and provides a space for supportive and constructive feedback. Students gain experience in the workshop model, learning how to effectively critique and discuss one another's writing in an online environment. In addition to developing skills as readers within a workshop setting, students strive to develop their own writing identities through a variety of exercises. The course capitalizes on the geographic diversity of the students by eliciting stories that shed light on both the commonalities and differences of life experiences in different locations. Additionally, we read and discuss the work of authors from around the globe. Students' essential responsibilities are twofold: to engage in the class as readers and writers and to focus on their development as readers and writers. Both require participation in discussions of various formats within our online community, as well as dedicated time outside of class reading and providing feedback on one another's work and writing original pieces for the workshop.

FILMMAKING

This course is for students interested in developing their skills as filmmakers and creative problem-solvers. It is also a forum for screening the work of their peers and providing constructive feedback for revisions and future projects, while helping develop critical thinking skills. The course works from a set of specific exercises based on self-directed research and culminates in a series of short experimental films that challenge students on both a technical and creative level. Throughout, we will increasingly focus on helping students express their personal outlooks and develop unique styles as filmmakers. We will review and reference short films online and discuss how students might find inspiration and apply what they find to their own works. *Prerequisite: Students must have access to an HD video camera, tripod or other stabilizing equipment, as well as editing software such as iMovie, Premiere Pro, etc.*

GRAPHIC DESIGN

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

iOS APP DESIGN*
Learn how to design and build apps for the iPhone and iPad and prepare to publish them in the App Store. Students will work much like a small startup − collaborating as a team, sharing designs and learning to communicate with each other throughout the course. Students will learn the valuable skills of creativity, collaboration and communication as they create something amazing, challenging and worthwhile. Coding experience is NOT required and does not play a significant role in this course. ***Prerequisite: For this course, students are required to have access to a computer running the most current Mac or Windows operating system. An iOS device that can run apps (iPod Touch, iPhone, or iPad) also is highly recommended.***
 *Cross-listed in Mathematics and Technology

MATHEMATICS AND TECHNOLOGY

Semester 1	Semester 2
Computer Science I: Computational Thinking	Computer Science I: Computational Thinking
Cyber Security	Computer Science II: Analyzing Data with Python
Data Visualization	Computer Science II: Game Design & Development
Game Theory	Computer Science II: Java
Linear Algebra	Cybersecurity
Number Theory	Game Theory
Problem Solving with Engineering and Design	IOS App Design
	Linear Algebra

COMPUTER SCIENCE I: COMPUTATIONAL THINKING

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

COMPUTER SCIENCE II: ANALYZING DATA WITH PYTHON

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

COMPUTER SCIENCE II: GAME DESIGN AND DEVELOPMENT

In this course, students design and develop games through hands-on practice. Comprised of a series of "game jams," the course asks students to solve problems and create content, developing the design and technical skills necessary to build their own games. The first month of the course is dedicated to understanding game design through game designer Jesse Schell's "lenses": different ways of looking at the same problem and answering questions that provide direction and refinement of a game's theme and structure. During this time, students also learn how to use Unity, a professional game development tool, and become familiar with the methodologies of constructing a game using such assets as graphics, sounds, and effects, and controlling events and behavior within the game using the C# programming language. Throughout the remainder of the course, students will work in teams to brainstorm and develop new games in response to a theme or challenge. Students will develop their skills in communication, project and time management, and creative problem-solving while focusing on different aspects of asset creation, design and coding. ***Prerequisites: Computer Science I: Computational Thinking or its equivalent.***

COMPUTER SCIENCE II: JAVA

This course teaches students how to write programs in the Java programming language. Java is the backbone of many web applications, especially eCommerce and government sites. It is also the foundational code of the Android operating system and many tools of the financial sector. Students learn the major syntactical elements of the Java language through object-oriented design. The emphasis in the course will be on creating intelligent systems though the fundamentals of Computer Science. Students will write working programs through short lab assignments and more extended projects that incorporate graphics and animation. ***Prerequisite: Computer Science I: Computational Thinking or its equivalent.***

CYBER SECURITY

Cyber criminals leverage technology and human behavior to attack our online security. This course explores the fundamentals of and vulnerabilities in the design of computers, networks, and the internet. Course content includes the basics of computer components, connectivity, virtualization, and hardening. Students will learn about network design, Domain Name Services, and TCP/IP. They will understand switching, routing and access control for internet devices, and how denial of service, spoofing and flood attacks work. Basic programming introduced in the course will inform hashing strategies, while an introduction to ciphers and cryptography will show how shared-key encryption works for HTTPS and TLS traffic. Students will also explore the fundamentals of data forensics and incident response protocols. The course includes analysis of current 17 threats and best practice modelling for cyber defense, including password complexity, security, management, breach analysis, and hash cracking. Computational thinking and programming skills developed in this course will help students solve a variety of cyber security issues. There is no computer science prerequisite for this course, though students with some background will certainly find avenues to flex their knowledge in this course.

DATA VISUALIZATION*

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

*Cross-listed in Art, Media & Design

GAME THEORY

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

iOS APP DESIGN*

Learn how to design and build apps for the iPhone and iPad and prepare to publish them in the App Store. Students will work much like a small startup: collaborating as a team, sharing designs and learning to communicate with each other throughout the course. Students will learn the valuable skills of creativity, collaboration and communication as they create something amazing, challenging and worthwhile. Coding experience is NOT required and does not play a significant role in this course. ***Prerequisite: For this course, students are required to have access to a computer running the most current Mac or Windows operating system. An iOS device that can run apps (iPod Touch, iPhone, or iPad) also is highly recommended.***
 *Cross-listed in Mathematics and Technology

LINEAR ALGEBRA

In this course students learn about the algebra of vector spaces and matrices by looking at how images of objects in the plane and space are transformed in computer graphics. We do some paper-and-pencil calculations early in the course, but the computer software package Geogebra (free) will be used to do most calculations after the opening weeks. No prior experience with this software or linear algebra is necessary. Following the introduction to core concepts and skills, students analyze social networks using linear algebraic techniques. Students will learn how to model social networks using matrices as well as discover things about the network with linear algebra as your tool. We will consider applications like Facebook and Google. **Prerequisite: Geometry and Algebra 2 or the equivalents.**

NUMBER THEORY

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

reasoning and proof in a concrete and intuitive way and is necessary preparation for any future course in upper-level college mathematics or theoretical computer science. We progressively develop the tools needed to understand the RSA algorithm, the most common encryption scheme used worldwide. Along the way we invent some encryption schemes of our own and discover how to play games using number theory. We also get a taste of the history of the subject, which involves the most famous mathematicians from antiquity to the present day, and we see parts of the story of Fermat's Last Theorem, a 350-year-old statement that was fully proven only twenty years ago. While most calculations will be simple enough to do by hand, we will sometimes use the computer to see how the fundamental ideas can be applied to the huge numbers needed for modern applications. ***Prerequisite: A strong background in precalculus and above, as well as a desire to do rigorous mathematics and proofs.***

PROBLEM SOLVING WITH ENGINEERING AND DESIGN*

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

*Cross-listed in Science and Health

SCIENCE AND HEALTH

Semester 1	Semester 2
Abnormal Psychology	Abnormal Psychology
Bioethics	Bioethics
Global Health	Developmental Psychology
Medical Problem Solving I	Medical Problem Solving I
Neuropsychology	Medical Problem Solving II
Positive Psychology	Neuropsychology
Problem Solving with Engineering and Design	Positive Psychology
Social Psychology	Social Psychology

ABNORMAL PSYCHOLOGY

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

BIOETHICS

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

DEVELOPMENTAL PSYCHOLOGY

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

GLOBAL HEALTH

What makes people sick? What social and political factors lead to the health disparities we see both within our own community and on a global scale? What are the biggest challenges in global health and how might they be met? Using an interdisciplinary approach to address these questions, this course improves students' health literacy through an examination of the most significant public-health challenges facing today's global population. Topics include the biology of infectious disease (specifically HIV and Malaria); the statistics and quantitative measures

associated with health issues; the social determinants of health; and the role of organizations (public and private) in shaping the landscape of global health policy. Students use illness as a lens through which to examine social issues like poverty, gender and race. Student work includes analytical and creative writing, research, peer collaboration, reading and discussions of nonfiction and online presentations.

MEDICAL PROBLEM SOLVING I

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

MEDICAL PROBLEM SOLVING II

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

NEUROPSYCHOLOGY

Have you ever wondered how your brain determines all aspects of your behavior, emotion, learning and understanding each moment of the day? In Neuropsychology we will tackle this enormous question through our exploration of basic brain anatomy and function and the neurobiological perspective on cognitive and behavioral disorders. In addition, students investigate the neuropsychology of mindfulness, learning and memory along with how the brain and human behavior change over time. Students also pursue a citizen science project on mapping neurons to understand the nature and process of scientific research. The course culminates with students developing a fundraising campaign for a nonprofit foundation or research organization of their choosing, which supports research and/or patient care initiatives on a specific neurological condition. Student project topics have included everything from Alzheimer's disease to traumatic brain injury, addiction, synesthesia, and other areas of interest. We also focus on diagnostic and treatment challenges, including behavioral and pharmaceutical management.

Neuropsychology can be taken as a continuation of Introduction to Psychology, although Intro is not a prerequisite.

POSITIVE PSYCHOLOGY

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

PROBLEM SOLVING WITH ENGINEERING AND DESIGN*

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

*Cross-listed in Mathematics and Technology

SOCIAL PSYCHOLOGY

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

SOCIAL SCIENCES

Semester 1	Semester 2
Applying Philosophy to Global Issues	9/11 in a Global Context
Business Problem Solving	Business Problem Solving
Climate Change and Global Inequality	Climate Change and Global Inequality
Entrepreneurship in a Global Context	Entrepreneurship in a Global Context
Genocide & Human Rights	Gender & Society
International Relations	International Relations
Introduction to Investments	Introduction to Investments
Introduction to Legal Thinking	Introduction to Legal Thinking
Microeconomics	Macroeconomics
Personal Finance	Personal Finance
Prisons and the Criminal Law	Prisons and the Criminal Law
Race & Society	Race & Society
	Religion & Society

APPLYING PHILOSOPHY TO MODERN GLOBAL ISSUES

This is an applied philosophy course that connects pressing contemporary issues with broad-range philosophical ideas and controversies, drawn from multiple traditions and many centuries. Students use ideas from influential philosophers to examine how thinkers have applied reason

successfully, and unsuccessfully, to many social and political issues across the world. In addition to introducing students to the work of philosophers as diverse as Confucius, Immanuel Kant, John Rawls and Michel Foucault, this course also aims to be richly interdisciplinary, incorporating models and methods from diverse fields including history, journalism, literary criticism and media studies. Students learn to develop their own philosophy and then apply it to the ideological debates which surround efforts to improve their local and global communities.

9/11 IN A GLOBAL CONTEXT

September 11, 2001 was a tragic day that changed the world in profound ways. In this course, students explore the causes of 9/11, the events of the day itself and its aftermath locally, nationally and around the world. In place of a standard chronological framework, students instead view these events through a series of separate lenses. Each lens represents a different way to view the attacks and allows students to understand 9/11 as an event with complex and interrelated causes and outcomes. Using a variety of technologies and activities, students work individually and with peers to evaluate each lens. Students then analyze the post-9/11 period and explore how this event affected the U.S., the Middle East and the wider world.

BUSINESS PROBLEM SOLVING

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

CLIMATE CHANGE AND GLOBAL INEQUALITY

Nowhere is the face of global inequality more obvious than in climate change, where stories of climate-driven tragedies and the populations hit hardest by these disasters surface in every news cycle. In this course, students will interrogate the causes and effects of climate change and the public policy debates surrounding it. In case studies, we will research global, regional and local policies and practices along with the choices of decision-makers and what they mean to the populations they serve. Who benefits, who suffers, and how might we change this equation? Following the Learning Studio model, in the second half of the course, students will work with

the teacher to design their own independent projects reflecting their individual interests and passions. We will collaborate in workshops with classmates to deepen our collective understanding of the complex issues surrounding climate change. Throughout the semester we also will build and curate a library of resources and share findings in varied media, engaging as both consumers and activists to increase knowledge, challenge and advocate for sustainable norms. Finally, students will have the opportunity to reach a global audience by participating in GOA's Catalyst Conference in the spring 2019, as they present their individual projects to spark change in local communities through well-informed activism.

ENTREPRENEURSHIP IN A GLOBAL CONTEXT

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

GENDER & SOCIETY

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

GENOCIDE AND HUMAN RIGHTS

Students in this course study several of the major 20th century genocides (Armenian, the Holocaust, Cambodian, and Rwandan), analyze the role of the international community in responding to and preventing further genocide (with particular attention to the Nuremberg tribunals) and examine current human rights crises around the world. Students read primary and secondary sources, participate in both synchronous and asynchronous discussions with

classmates, write brief papers, read short novels, watch documentaries, and develop a human rights report card website about a nation of their choice.

INTERNATIONAL RELATIONS

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

INTRODUCTION TO INVESTMENTS

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

INTRODUCTION TO LEGAL THINKING

Inspired by GOA's popular Medical Problem Solving series, this course uses a case-based approach to give students a practical look into the professional lives of lawyers and legal thinking. By studying and debating a series of real legal cases, students will sharpen their ability to think like lawyers who research, write and speak persuasively. The course will focus on problems that lawyers encounter in daily practice and on the rules of professional conduct case law. In addition to practicing writing legal briefs, advising fictional clients and preparing

opening and closing statements for trial, students will approach such questions as the law and equity, the concept of justice, jurisprudence and legal ethics.

MICROECONOMICS

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

MACROECONOMICS

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

PERSONAL FINANCE

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

PRISONS AND THE CRIMINAL LAW

Criminal courts in the United States have engaged in an extraordinary social experiment over the last 40 years: they have more than quintupled America's use of prisons and jails. Has this

experiment with "mass incarceration" produced more negative effects than good? Is it possible at this point to reverse the experiment without doing even more harm? In this course, students become familiar with the legal rules and institutions that determine who goes to prison and for how long. Along the way, students gain a concrete, practical understanding of legal communication and reasoning while grappling with mass incarceration as a legal, ethical, and practical issue. In an effort to understand our current scheme of criminal punishments and to imagine potential changes in the system, we immerse ourselves in the different forms of rhetoric and persuasion that brought us to this place: we read and analyze the jury arguments, courtroom motions, news op-eds, and other forms of public persuasion that lawyers and judges create in real-world criminal cases. Topics include the history and social functions of prisons; the definition of conduct that society will punish as a crime; the work of prosecutors, defense attorneys, and judges in criminal courts to resolve criminal charges through trials and plea bargains; the sentencing rules that determine what happens to people after a conviction; the alternatives to prison when selecting criminal punishments; and the advocacy strategies of groups hoping to change mass incarceration. The reading focuses on criminal justice in the United States, but the course materials also compare the levels of imprisonment used in justice systems around the world. Assignments will ask students to practice with legal reasoning and communication styles, focused on specialized audiences such as juries, trial judges, appellate judges, sentencing commissions and legislatures. The work will involve legal research, written legal argumentation, peer collaboration and oral advocacy.

RACE & SOCIETY

What is race? Is it something we're born with? Is it an idea that society imposes on us? An identity we perform? A privilege we benefit from? Does our own culture's conception of race mirror those found in other parts of the world? These are just a few of the questions that students in this course will explore together as they approach the concept of race as a social construct that shapes and is shaped by societies and cultures in very real ways. Throughout the course students will learn about the changing relationship between race and society across time and across cultures. Engaging with readings, films, and speakers from a variety of academic fields (history, sociology, anthropology, literature) students will explore, research, reflect on and discuss the complex set of relationships governing race and society.

RELIGION & SOCIETY

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

sociology, anthropology, psychology), students will grapple with the complex ways in which society and religious identity relate to one another.

SUMMER: JUNE 14-JULY 30, 2021
SUMMER SESSION TUITION IS NOT COVERED BY BOLLES.
Summer@GOA offers some of our most popular courses in an intensive 7-week format.

9/11 in a Global Context	Genocide and Human Rights
Abnormal Psychology	Introduction to Investments
Business Problem Solving	Introduction to Legal Thinking
Computer Science I: Computational Thinking	Medical Problem Solving I
Computer Science II: Java	Microeconomics
Cybersecurity	Number Theory
Digital Photography	Personal Finance
Fiction Writing	Race & Society

ACADEMIC CALENDAR 2021-2022
SEMESTER 1

SEPTEMBER 1- DECEMBER 17, 2021

August 20, 2021	Semester 1 and Yearlong Course welcome pages published for students
August 23 - September 3	Synchronous teacher/student pre-course conversations. These are important (ungraded) initial conversations between teachers and students.
Wednesday, September 1: Semester 1 and Yearlong Courses Open	
September 10 (5pm PST)	Last day to ADD a GOA course (and drop with no financial penalty)
September 17 (5pm PST)	Last day to DROP a GOA course
October 22	End of Grading Period 1
Semester Break	Due to the diversity of GOA schools' calendars, teachers in Semester 1 will be able to choose the week during which their class will be on break. They will make this choice the first week of the semester

	based on the schedules of the students on their roster and communicate that to students, Site Directors, and GOA.
December 3	Course Catalog for 2022-2023 will be published along with 2022-2023 Academic Calendar.
December 17, 2021: Semester 1 Ends (end of Grading Period 2)	
January 8, 2021	Semester 1 Grade Reports distributed

SEMESTER 2
JANUARY 12-APRIL 29, 2022

December 10, 2021	Semester 2 course welcome pages published for students
January 3 - 14, 2022	Synchronous teacher-student conversations for Semester 2 courses. These are important (ungraded) initial conversations between teachers and students.
Wednesday, January 12: Semester 2 Courses Open (yearlong courses resume)	
January 21	Last day to ADD a Semester 2 GOA Course (and last day to drop with no penalty)
January 28	Last day to DROP a Semester 2 GOA Course
March 4	End of Grading Periods 1 (semester) and 3 (yearlong)
Semester Break	Due to the diversity of GOA schools' calendars, teachers in Semester 2 will be able to choose the week during which their class will be on break. They will make this choice the first week of the semester based on the schedules of the students on their roster and communicate that to students, Site Directors and GOA.
March 30	Enrollment Opens at 00:00 UTC (8pm Eastern Time on March 30)
April 21 - 25	Catalyst Conference
Friday, April 29: Semester 2 Ends (end of Grading Periods 2 (semester) and 4 (yearlong)	
May 13	Grade Reports distributed

NCAA COURSE APPROVALS
The below GOA courses are NCAA-approved.

Abnormal Psychology	Computer Science II: Java	Introduction to Legal Thinking	Neuropsychology
9/11 in a Global Context	Computer Science II: Game Design and Development	Introduction to Psychology	Number Theory
Applying Philosophy to Modern Global Issues	Fiction Writing	Linear Algebra	Positive Psychology
Arabic Language Through Culture I-II	Game Theory	Macroeconomics	Prisons and the Criminal Law
Climate Change and Global Inequality	Genocide and Human Rights	Microeconomics	Problem Solving with Engineering and Design
Computer Science I: Computational Thinking	Gender & Society	Medical Problem Solving I	Social Psychology
Computer Science II: Python	Global Health	Medical Problem Solving II	Race & Society