



## 2026-2027 Student Course Catalog

GOA provides a positive, interactive, and intellectually rigorous environment for students to learn. We offer courses that connect students to topics they care about, and the opportunity to learn alongside a global network of peers as passionate and curious as they are.

We have identified the following six core competencies - the specific set of skills and habits of learning - that our students develop in practical, hands-on ways, no matter which GOA course they take:

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 teachers and classmates by using technology to build relationships. Our small classes have students from many different schools, led by expert teachers. 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 intellectually rigorous as any course at a home school. 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. Students have a videoconference experience approximately every 10 days, more frequently in our intensive summer courses.
- **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.

### **BOLLES-GLOBAL ONLINE ACADEMY COURSE INFORMATION**

No GOA courses can be taken to fulfill a part of a core-course graduation requirement.

They will count toward the 3 ½-credit elective requirement. GOA classes taken during the

school year will appear on the student's Bolles' transcript and be calculated into the Bolles GPA.

An asterisk (\*) below indicates that there is a prerequisite, co-requisite or extra information related to this class.

### ART, MEDIA, AND DESIGN

Course Title	Term
Architecture*	Semester 1, Semester 2, Summer
Arts Entrepreneurship	Semester 2
Computer Science II: Game Design & Development*	Semester 2
Creative Nonfiction Writing	Semester 1, Summer
Fiction Writing	Semester 2
Filmmaking*	Semester 1
Graphic Design*	Semester 1, Semester 2
Music Composition & Production	Semester 2

### BUSINESS, ECONOMICS, & FINANCE

Course Title	Term
AP Macroeconomics*	Yearlong
AP Microeconomics*	Yearlong
Arts Entrepreneurship	Semester 2
Business Problem Solving	Semester 1, Semester 2, Summer
Capitalism: Past, Present, & Future	Semester 2
Entrepreneurship in a Global Context ( <b>for non-Global Studies Program students</b> )	Semester 1, Semester 2
Introduction to Blockchain & Cryptocurrency	Semester 2
Introduction to Branding & Marketing	Semester 1, Semester 2, Summer
Investing I	Semester 1, Semester 2, Summer
Investing II*	Semester 1, Semester 2
Personal Finance	Semester 1, Semester 2, Summer

### COMPUTER SCIENCE & ENGINEERING

Course Title	Term
Computer Science I: Computational Thinking	Semester 1, Semester 2, Summer
Computer Science II: Analyzing Data with Python*	Semester 1, Semester 2
Computer Science II: Game Design & Development*	Semester 2

Cybersecurity	Semester 1, Semester 2
Introduction to Artificial Intelligence	Semester 1, Semester 2
Introduction to Blockchain & Cryptocurrency	Semester 2
Vibe Coding: Code, Create & Launch with AI	Summer

### GLOBAL STUDIES

Course Title	Term
AP African American Studies*	Yearlong
Applying Philosophy to Global Issues*	Semester 1
Capitalism: Past, Present, & Future	Semester 2
Climate Action & Sustainability	Semester 1
Discourse Across Difference	Semester 2
Entrepreneurship in a Global Context (for non-Global Studies Program students)	Semester 1, Semester 2
Genocide & Human Rights*	Semester 1, Summer
Global Health*	Semester 1
International Relations*	Semester 1, Semester 2, Summer
Japanese Language Through Culture I-III*	Yearlong

### HEALTH SCIENCES

Course Title	Terms
Biochemistry: Medicine, Drugs & Addiction*	Semester 2
Bioethics	Semester 1, Semester 2, Summer
Global Health*	Semester 1
Health & Fitness	Semester 1, Summer
Medical Problem Solving I*	Semester 1, Semester 2, Summer
Medical Problem Solving II*	Semester 1, Semester 2

### JUSTICE, ETHICS, & HUMAN RIGHTS

Course Title	Term
Applying Philosophy to Global Issues	Semester 1
Bioethics	Semester 1, Semester 2, Summer
Discourse Across Differences	Semester 2
Genocide & Human Rights*	Semester 1, Summer
Perspective on Gender & Culture	Semester 2
Prisons & Criminal Justice Systems	Semester 1, Semester 2
Race, Culture & Community	Semester 1

### MATHEMATICS & QUANTITATIVE REASONING

Course Title	Term
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Data Visualization	Semester 1
Game Theory	Semester 1, Semester 2
Multivariable Calculus 1: Vector & Differential Calculus*	Semester 1
Multivariable Calculus II: Integral Calculus*	Semester 2
Number Theory*	Semester 1

### PSYCHOLOGY & NEUROSCIENCE

Course Title	Term
Abnormal Psychology*	Semester 1, Semester 2, Summer
Developmental Psychology*	Semester 1, Semester 2
Neuropsychology*	Semester 1, Semester 2
Positive Psychology*	Semester 1
Social Psychology*	Semester 1, Semester 2

#### ABNORMAL PSYCHOLOGY

- **Prerequisite: Bolles Biology, Psychology or AP Psychology. *This course contains content that may not be appropriate for students younger than 15 years old.*** • **NCAA-Approved Course**

Discover the Complexities of the Human Mind: Ever wondered why society views certain behaviors “abnormal”? As you learn about Western abnormal psychology, you’ll explore the complex forces behind human behavior by studying conditions like anxiety, depression, eating disorders, and schizophrenia. Through engaging readings, videos, thought-provoking discussions, and a student-led project centered on your local community, you’ll dive into the symptoms, diagnoses, and responses to these disorders. You’ll also examine how mental health is influenced by cultural differences and global perspectives, gaining insight into the stigma surrounding psychological disorders.

#### AP AFRICAN AMERICAN STUDIES

- **Prerequisite: Successful completion of AP US History and the recommendation of your social studies teacher.** • **NCAA-Approved Course**

What stories emerge when we study Black communities in the U.S. within the broader history of Africa and the African diaspora? In this interdisciplinary course, you’ll examine culture, history, literature, the arts, and social sciences through diverse African American voices and perspectives. Fully aligned with College Board requirements, the course will strengthen your skills in analyzing sources, applying concepts, and making evidence-based arguments while preparing you for the AP® Exam. You’ll investigate topics ranging from early African kingdoms to present-day successes and challenges, analyzing literary works, political texts, visual culture, and data sets to understand essential concepts and pivotal movements in the Black experience. Along the way, you’ll consider how identities such as race, class, and gender intersect to shape perspectives and experiences within African American communities.

## AP MACROECONOMICS

• **Prerequisite: The completion of Bolles economic class, a B+ in Honors Algebra II, and the recommendation of your social studies teacher.** • **NCAA-Approved Course**

What happens when governments change interest rates, when inflation rises, or when global trade shifts? In this course, you'll explore how entire economic systems work at both the national and international levels. Fully aligned with the College Board requirements, you'll study big topics like economic performance, business cycles, and the impact of fiscal, monetary, and trade policies, all while preparing for the AP<sup>®</sup> Exam. You'll learn to analyze data, interpret models, and evaluate governmental policies and to apply these skills to real-world issues such as inflation, unemployment, and international trade.

## AP MICROECONOMICS

• **Prerequisite: The completion of Bolles economic class, a B+ in Honors Algebra II, and the recommendation of your social studies teacher.** • **NCAA-Approved Course**

Why are movie tickets cheaper on Tuesdays? Why do some products seem overpriced? And when should governments step in to fix markets? In this course, you'll explore decision-making at the level of individuals, businesses, and governments using graphs, models, and economic indicators. Fully aligned with College Board requirements, the course covers supply and demand, costs and profits, competition and markets, wages and income, and the challenges of market failures like pollution and inequality. Along the way, you'll build skills in applying concepts, interpreting data, analyzing models, and making evidence-based arguments as you step into the role of an economist to explain, critique, and problem-solve these everyday puzzles—all while preparing for the AP<sup>®</sup> Exam.

## APPLYING PHILOSOPHY TO GLOBAL ISSUES

• **Prerequisite: Contemporary World History** • **NCAA-Approved Course**

Think Like a Philosopher: What would Socrates, Confucius, and Kant have to say about today's global issues? In this applied philosophy course, you'll uncover how great thinkers from many traditions and centuries tackled social and political challenges across the world—both successfully and unsuccessfully. You will challenge your perspective through an interdisciplinary approach, pulling in concepts, models, and methods related to history, journalism, literary criticism, and media studies.

## ARCHITECTURE

• **Prerequisite: Completion of Fine Arts requirement (1 credit)**

Design the Future, Shape the World: This is your chance to think like an architect, transforming abstract concepts into tangible spaces with other students from around the world. In this hands-on course, you'll master the fundamentals of architectural design—from exploring building materials and analyzing structures to creating 3D models and developing spatial awareness. Discover how architecture drives the evolution of contemporary styles and shapes our culture as you design innovative architectural solutions for real-world challenges. Your journey will end with a final project that showcases your unique vision and design process.

## **ARTS ENTREPRENEURSHIP**

Create Your Future in the Arts: Ready to turn your creativity and passion for the arts into a thriving career? This course will help you develop real-world strategies for building a personal brand, networking, and launching a career in fields like design, music, and filmmaking. You'll learn directly from industry insiders, analyze successful (and not-so-successful) artistic ventures, and gain practical skills to kickstart your own arts business.

## **BIOCHEMISTRY: MEDICINE, DRUGS & ADDICTION**

- **Prerequisite: Students need to have taken or be currently enrolled in chemistry •  
NCAA-Approved Course**

Unlock Medicine and Drug Design: Discover the fascinating science behind medicine and drug interactions, exploring how drugs impact the human body at the molecular level. You'll dive into the chemistry and biology behind drug design, effectiveness, and safety; learn how drugs interact with molecules, such as receptors and enzymes, to create therapeutic effects; and tackle complex topics like tolerance, addiction, and withdrawal. You'll also investigate the processes of drug testing, legalization, and regulation, gaining a well-rounded view of the pharmaceutical world.

## **BIOETHICS**

Navigate the Ethical Questions of Medicine and Science: How do we know what's right and wrong in medicine, public health, and life sciences? In this course, you'll explore some of today's most pressing ethical dilemmas that significantly impact the medical field. Through engaging debates on topics like the "right to die," vaccination policies, organ transplants, genetic technology, and animal research, you'll learn how to discuss differing views with respect. Innovative research projects and interactive discussions will help you develop critical-reasoning skills and think deeply about how we balance individual rights, societal needs, and scientific advancement. The course ends with a deep dive into a bioethical issue of your choosing, helping you understand the crucial role bioethics plays in shaping the future.

## **BUSINESS PROBLEM SOLVING**

Tackle Real-World Challenges in Business: How does climate change impact supply chains? Are tariffs a threat or an opportunity? Is your company's cybersecurity strong enough? In today's fast-paced business landscape, problem-solving is essential. In this course, you'll analyze relevant, real world case studies from global corporations and innovative startups, and you'll collaborate with peers to develop creative solutions to challenges in operations, marketing, finance, sustainability, and more.

## **CAPITALISM: PAST, PRESENT & FUTURE**

- **NCAA-Approved Course**

In some circles, capitalism has been blamed for most of society's ills. In others, it has been  
Understand the Economic System That Shapes Our World: Is capitalism the source of society's problems or one of the grandest achievements in human history? In this thought-provoking course, you'll examine perspectives from both sides, exploring capitalism's components and

impact on social, political, and economic systems worldwide. Through engaging case studies and historical examples, you'll dive into how capitalism has evolved and influenced societies.

## **CLIMATE ACTION & SUSTAINABILITY**

- **NCAA-Approved Course**

**Build a Just and Sustainable Future:** Explore the critical issues of climate change and its wide-reaching impact on communities and ecosystems. In this course, you'll examine essential topics like climate justice, agriculture, wildfires, renewable energy, sea level rise, and invasive species—all through the lenses of equity and sustainability. Engage in hands-on projects to understand the causes and effects of climate change, dive into public policy and equity debates, and analyze how these issues shape the experiences of diverse populations around the world. Your journey will finish with a student-led project, creating an action plan for change in your community.

## **COMPUTER SCIENCE I: COMPUTATIONAL THINKING**

- **This course (or its equivalent) is a prerequisite to all Computer Science II courses at GOA.**
- **NCAA-Approved Course**

**Problem-Solve in a Digital World:** Unlock the power of solving problems, designing systems, and understanding human behavior in this beginner-friendly course. You'll learn to think like a computer scientist, developing skills that go beyond programming and apply across fields. Starting with the basics of computer science, you'll learn how to read code and pseudocode as well as develop strategies for debugging programs—all without prior programming experience.

## **COMPUTER SCIENCE II: ANALYZING DATA WITH PYTHON**

- **Prerequisite: Computer Science I: Computational Thinking or its equivalent.**
- **NCAA-Approved Course**

**Turn Data into Insight:** Gain hands-on experience with the Python programming language as you learn to read, analyze, and visualize real-world data. Using Python's powerful data structures and clear syntax, you'll work with large, messy datasets—just like those in scientific computing. Discover how Python makes data analysis accessible and see firsthand why it's one of the most popular tools in fields like biology, engineering, and statistics.

## **COMPUTER SCIENCE II: GAME DESIGN & DEVELOPMENT**

- **Prerequisites: Computer Science I: Computational Thinking or its equivalent.**
- **NCAA-Approved Course**

**Create Your Own Games:** Do you love to play video games? Ever wanted to make your own? Explore what makes a game exciting and how game developers create games from scratch. In this immersive and hands-on course, you'll start creating your own games from the ground up by tackling design challenges and refining the game's theme and structure. Gain experience with Unity, a professional game development tool, as you build games using graphics, sounds, and effects and control events and behaviors with the C# programming language.

## **CREATIVE NONFICTION WRITING**

- **NCAA-Approved Course**

Craft True Engaging Stories: Are you a storyteller at heart? In this course, you'll learn how to transform real experiences into captivating narratives, all while strengthening core writing skills. You'll explore diverse forms of creative nonfiction— personal narratives, opinion pieces, profiles, and more. Along the way, you'll create a library of inspiring texts, consider publishing opportunities, and establish sustainable writing habits. Connect with a global community through video chats and online discussions, where you'll participate in a supportive workshop model, receive valuable feedback, and grow as a writer in today's exciting nonfiction genre.

## **CYBERSECURITY**

Safeguard the Digital World: Cybercrime is on the rise, and this is your chance to be part of the solution. Go beyond the basics of cybersecurity, as you explore the inner workings of computer components, network design, DNS, TCP/IP, and how cybercriminals exploit both technology and human behavior to breach systems. Examine ciphers, encryption, data security, and malware anatomy, while also considering the complex balance between privacy and tracking. You'll emerge with the expertise to defend both personal and organizational data, equipped with knowledge in data recovery, enterprise security, and the latest trends in cybersecurity.

## **DATA VISUALIZATION**

- **NCAA-Approved Course**

Turn Numbers into Narratives: In a world flooded with data, visualizations cut through the noise to reveal meaning. This course teaches you to collect, organize, interpret, and effectively communicate massive amounts of information. You'll master data wrangling in spreadsheets, harness the power of charts, and learn to spot both effective and misleading visuals. Using principles from information graphics, visual art, graphic design, and cognitive science, you'll create your own compelling visualizations using tools like Datawrapper, Tableau Public, and Python.

## **DEVELOPMENTAL PSYCHOLOGY**

- **Prerequisite: Biology, Bolles Psychology or AP Psychology** • **NCAA-Approved Course**

Understand the Journey of Human Growth: Why do we think, learn, and behave the way we do? In just a few years, humans transform from infants to individuals capable of complex thought, communication, and moral reasoning. Through engaging reading, observations, case studies, and hands-on activities, this course will introduce you to the fascinating study of human development, focusing on significant physical, emotional, cognitive, and social changes from birth through adolescence. You'll explore key questions like heredity vs. environment, stability vs. change, and continuity vs. discrete stages of development.

## **DISCOURSE ACROSS DIFFERENCE**

- **NCAA-Approved Course**

Navigate Today's Complex Issues: How do you engage in conversations when you don't agree? In today's interconnected world, complex social, political, and ethical issues demand thoughtful dialogue. This course will equip you with the skills to engage thoughtfully and effectively through structured conversations, debates, rhetorical analysis, and guided reflection. You'll

learn to navigate challenging discussions and foster understanding across differences on pressing topics like technology's impact on privacy, environmental sustainability, and social justice reform.

## **ENTREPRENEURSHIP IN A GLOBAL CONTEXT**

- **For non-Global Studies Program students • NCAA-Approved Course**

Turn Your Ideas into Global Impact: How does an entrepreneur think? What skills are essential to stay competitive and relevant in today's fast-paced market? This course will push you to step beyond the classroom and into real-world environments to understand how global markets work. Collaborating with peers worldwide, you'll dive into essential topics like customer development, value propositions, brand strategy, and funding sources. Using the business model canvas, you'll build a viable framework and ultimately develop, refine, and present your own online startup pitch.

## **FICTION WRITING**

- **NCAA-Approved Course**

Find Your Voice in Fiction: Love telling stories? In this course, you'll dive into the art of fiction writing, focusing on short stories, character development, and intricate plot-building. You will gain hands-on experience with the workshop model, learning how to provide and receive constructive peer feedback and discuss each other's work in a supportive online setting. You'll encounter masterful works by authors from around the world. Through engaging in discussions and exchanging feedback, you will develop your unique writing style and sharpen your skills as both a writer and a critic.

## **FILMMAKING**

- **Prerequisite: Completion of Fine Arts requirement • Students must have access to an HD video camera OR NEWER I Phone or Android phone, tripod or other stabilizing equipment, as well as editing software such as iMovie, Premiere Pro, etc.**

Express Your Vision: If you've ever dreamed of being behind the camera and bringing your stories to life, this course will help you master the technical and creative skills you need for visual storytelling. You'll learn from inspiring short films, applying new techniques to create your own short experimental pieces. This practical and collaborative environment will provide opportunities to screen your work, give and receive constructive feedback, and develop critical-thinking skills to refine future projects.

## **GAME THEORY**

- **NCAA-Approved Course**

Solve Real-World Problems Like a Mathematician: What can mathematical models teach us about decision making? This course will show you how dilemmas and conflicts—ranging from international diplomacy to sports scheduling—can be approached as mathematical games. You'll analyze real-world events in fields like political science, anthropology, philosophy, economics, and even popular culture through two-person zero-sum games, two-person non-zero-sum games, sequential games, multiplayer games, linear optimization, and voting theory.

## **GENOCIDE & HUMAN RIGHTS**

- **Prerequisite:** *This course contains content that may not be appropriate for students younger than 15 years old.* • **NCAA-Approved Course**

Learn From the Past to Protect the Future: Why does genocide happen, and how can societies prevent it? In this course, you'll explore some of the most significant tragedies of the 20th century, including the Holocaust and the Armenian, Cambodian, and Rwandan genocides. You'll analyze the role of the international community in responding to and preventing further genocide, with a focus on the Nuremberg Tribunals, as well as investigate ongoing human rights crises around the globe. Through engaging discussions, brief papers, and documentaries, you will gain a deeper understanding of global issues related to justice and humanity.

## **GLOBAL HEALTH**

- **Prerequisite:** **Biology** • **NCAA-Approved Course**

Help Solve the World's Health Challenges: What makes people sick? Why do health disparities persist both locally and globally? In this course, you'll explore the social and political factors that influence health and the biggest challenges in global health today. Using an interdisciplinary approach, you'll engage in analytical reading and writing, research, and collaborative projects. You'll examine case studies, present your findings, and gain a deeper understanding of the biology of diseases, the social determinants of health, and the roles of public and private organizations. Additionally, you'll learn how global health statistics shape our understanding of health inequities and critically analyze how the distribution of healthcare resources and access impact health equity worldwide.

## **GRAPHIC DESIGN**

- **Prerequisite:** **Completion of Fine Arts requirement (1 credit)**

Unleash Your Visual Voice: What makes a message persuasive and compelling? How do audiences interpret and make sense of information? This course dives into the powerful relationship between information and influence from a graphic design perspective. You'll gain the skills to create impactful visual content, exploring design principles, infographics, social media, digital search strategies, social activism, and multimedia storytelling. Through a case study and design-based approach, you'll work on individual and collaborative projects, content curation, writing, peer critiques, and online presentations.

## **HEALTH & FITNESS**

Chart Your Path to Lifelong Fitness: What factors influence our bodies as we strive to maintain an active and healthy lifestyle? In this course, you'll learn about fitness components, exercise principles, training methods, movement phases, and athletic performance. You'll set personal fitness goals, track your progress, and engage in weekly exercises to target various areas of fitness. Through reflection and feedback, you'll understand how your efforts lead to improvement. The course ends with a student-led project where you will choose and explore topics that matter to you, such as nutrition, mental health in sports, exercise science, biomechanics, careers in sport, or community-based sports initiatives.

## **INTERNATIONAL RELATIONS**

- **Prerequisite: Contemporary World History**

Understand Global Conflict and Cooperation: Are China and the U.S. on a collision course for war? Can the Israelis and Palestinians reach a peaceful solution to a long-term conflict? Will North Korea launch a nuclear weapon? Can India and Pakistan find a way to share the subcontinent in peace? In this course, you'll go beyond soundbites and daily news headlines to examine the context, causes, and consequences of today's most pressing global issues. Working alongside classmates from around the world, you'll learn strategies to prevent, mediate, and resolve conflicts, equipping you with the knowledge and skills to engage with global challenges thoughtfully and effectively.

### **INTRODUCTION TO ARTIFICIAL INTELLIGENCE**

Explore AI's Impact on Our World: Artificial intelligence is everywhere, powering your favorite apps and influencing daily life in ways you may not see. How much do you really know about how generative AI works and how it's impacting our world? In this course, you'll dive into the history of AI research, from the early dreams of artificial general intelligence to the development of AI technologies like neural networks, machine learning, deep learning, generative AI, natural language processing, and facial recognition. You'll explore how AI systems are trained, understand the biases that arise from datasets, and learn about responsible AI principles like fairness, transparency, human-centeredness, and data privacy.

### **INTRODUCTION TO BLOCKCHAIN & CRYPTOCURRENCY**

Discover the Tech Shaping Tomorrow: The skyrocketing value of Bitcoin and the rise of meme tokens have captured the world's attention, but there's more to cryptocurrency than market capitalization and dog-themed coins. This beginner-friendly course dives into the fascinating world of blockchain and cryptocurrency, exploring how we got here and where the technology might be heading. You'll learn how crypto markets work, examine real-world applications, and consider the potential future of crypto through the perspectives of creators, consumers, and governments. Plus, you'll explore blockchain's far-reaching potential to revolutionize government, business, the arts, and more.

### **INTRODUCTION TO BRANDING & MARKETING**

Build Brands That Stand Out: Ever wonder what gives your favorite brands their unique edge? In today's digitized world, we're constantly bombarded by ads and content, making it harder for brands to capture and keep our attention. This course reveals what it takes to build an effective brand that authentically connects with consumers and leaves a lasting impact. You'll explore the core elements of branding—from visual identity and advertising strategy to content marketing and the nuances of the customer journey. You'll also explore how addressing ethical, social, and environmental issues can influence a brand's success.

### **INVESTING I**

Make Smart Financial Decisions: Step into the shoes of an investor, using real-world tools, theories, and decision-making practices to make smart financial choices. You'll explore key finance concepts, like valuation and risk management, and apply them to portfolio management, venture capital, and social investing. You'll learn how to manage and grow an investment

portfolio by simulating investments in stocks, bonds, and options. Take on the role of a venture capital investor, analyzing startups and forecasting their potential before they go public, as well as exploring social investing to see how finance can be a powerful force for positive change.

## **INVESTING II**

- **Prerequisite: Investing I**

Master Diverse Investment Strategies: Deepen your understanding of smart investment practices and explore finance concepts across four key contexts: fixed-income investments, foreign exchange and cryptocurrency, commodities, and real estate. After an introduction to behavioral finance theories, you will simulate scenarios to strategically expand your equity portfolio. Discover how to hedge risk with bonds, navigate the volatility of forex and crypto markets, grasp the economic impact of commodity prices, and explore strategic approaches to real estate investing.

## **JAPANESE LANGUAGE THROUGH CULTURE I**

- ***This course (or its equivalent) is a prerequisite to Japanese II and Japanese III at GOA.***

Journey Through Language and Tradition: Immerse yourself in the fascinating world of Japanese culture and language with this full-year course. You'll learn the basics of Japanese grammar, vocabulary, and the writing systems Hiragana and Katakana, while also diving into cultural topics like literature, art, lifestyle, and the economy. Through engaging assignments and hands-on projects, you'll develop your speaking, listening, reading, and writing skills. Cultural dynamic and relevant discussions conducted in English will deepen your understanding of Japan along the way.

## **JAPANESE LANGUAGE THROUGH CULTURE II**

- **Prerequisite: Japanese Language Through Culture I or permission from the instructor.**
- **NCAA-Approved Course**

Expand Your Voice and Perspective: Building on your foundational skills, this course will take your Japanese language abilities to the next level, enhancing your speaking, listening, writing, and reading skills while immersing you further into Japanese culture. You'll engage in interpreting authentic Japanese material, practicing communication through speaking and writing, and delivering impactful oral and written presentations. Each unit explores fascinating cultural topics, 14 such as design and expression, ecology, entertainment, East meets West, harmony, and nature, with opportunities to explore your own interests. You'll learn advanced grammar forms typical of second- and third-year high school Japanese, progressing from simple sentences to more complex, coherent paragraphs.

## **JAPANESE LANGUAGE THROUGH CULTURE III**

- **Prerequisite: Japanese Language Through Culture II or permission from the instructor.**
- **NCAA-Approved Course**

Communicate Naturally and Confidently: Take your language and grammar skills to new heights as you develop your ability to understand the nuances of the Japanese language. Through face-to-face conversations and recorded messages, you'll practice informal styles, gaining confidence

in using the Plain Form in conversations with your peers and teacher. You'll also dive into authentic, real-world Japanese by curating and interpreting materials like TV commercials, news articles, movies, children's books, and cooking recipes.

### **MEDICAL PROBLEM SOLVING I**

- **Prerequisite: Biology • NCAA-Approved Course**

Think Like a Doctor: This course puts you in the role of a medical detective as you investigate mysterious cases, identifying symptoms, making diagnoses, and exploring treatments—just like in medical school. You'll work both individually and collaboratively, sharpening your critical thinking skills as you analyze data, diagnose illnesses, and develop treatment plans for patients. Dive into anatomy, physiology, disease process, demographics of disease, and treatment protocols, while also debating current health issues and evaluating the factors that influence patient care.

### **MEDICAL PROBLEM SOLVING II**

- **Prerequisite: Medical Problem Solving I • NCAA-Approved Course**

Explore Global Medicine and Social Justice: Building on the problem-based approach of Medical Problem Solving I, this course will take you deeper into the world of global medicine, medical ethics, and social justice. You'll collaboratively analyze medical cases from around the world and your own community, uncovering the challenges patients face due to limited healthcare access, systemic discrimination, and the unequal distribution of medical resources. Tackle real-world medical dilemmas and engage in a culminating project, where you'll research a local health issue, go beyond the classroom to consult local sources, and propose actionable solutions for positive change.

### **MULTIVARIABLE CALCULUS I: VECTOR & DIFFERENTIAL CALCULUS**

- **Prerequisite: Completion of Bolles Calculus Honors or AP Calculus • NCAA-Approved Course**

Explore the Math of Higher Dimensions: Embark on an exciting journey into multivariable calculus through vector and differential calculus, setting the groundwork for advanced study in three-dimensional space. You'll begin with parametric equations, polar coordinates, and space curves to explore movement and paths in higher dimensions. Then you'll progress into three-dimensional coordinate systems, mastering vectors, dot and cross products, and equations of lines and planes in space. Dive deeper into vector functions, derivatives, integrals, arc length, and curvature to quantify the behavior of curves in space. Then you will be ready to analyze functions of several variables, using tools like limits, continuity, partial derivatives, and the gradient vector, and you'll apply these skills to optimization problems, including constrained optimization with Lagrange multipliers

### **MULTIVARIABLE CALCULUS II: INTEGRAL CALCULUS**

- **Prerequisite: Successful completion of Multivariable Calculus I: Vector & Differential Calculus, and the equivalent of a university year of single-variable calculus with**

**integration techniques, including trigonometric substitution, integration by parts, and partial fractions.**

- **NCAA-Approved Course**

Master Integrals, Theorems, and Beyond: In this advanced course, you'll dive deeper into multivariable calculus with a focus on integral calculus in multiple dimensions. Start with double integrals over rectangles and irregular regions, leveraging polar coordinates for applications like surface area, then advance to triple integrals in cylindrical and spherical coordinates. You'll also apply the change of variables technique to simplify complex integrations across various coordinate systems and explore vector fields, line integrals, Green's Theorem, curl, divergence, and parametric surface calculus. The course ends with surface integrals, leading to Stokes' Theorem and the Divergence Theorem—powerful tools in mathematics and physics.

## **MUSIC COMPOSITION & PRODUCTION**

In this course, you'll learn how to shape sound into songs that spark imagination and emotion. You'll experiment with melody, rhythm, harmony, texture, and form while using digital tools for recording, sequencing, sampling, arranging, and editing. Along the way, you'll explore how music functions across genres and cultures, drawing ideas from classical composers like Mozart and Ravel to contemporary DJs and digital artists. Weekly creative challenges will build your technical skills and artistic voice as you work toward a culminating project that showcases your unique style.

## **NEUROPSYCHOLOGY**

- **Prerequisite: Biology, Bolles Psychology or AP Psychology • NCAA-Approved Course**

Understand the Brain-Behavior Connection: Have you ever wondered how the anatomy of the brain shapes behavior? Discover the fascinating connections as you learn about neural function as well as cognitive and behavioral disorders. Explore how neural communication works and examine how environmental factors, like smartphone use, impact the nervous system and human behavior. You'll have the chance to choose research subjects that interest you and dive further into topics like Alzheimer's disease, addiction, neuroplasticity, and neurodegenerative diseases as you share your findings with your peers in creative ways.

## **NUMBER THEORY**

- **Prerequisite: A strong background in Precalculus and above, as well as a desire to do rigorous mathematics and proofs.**

- **NCAA-Approved Course**

Discover the Math Running Digital Security: Once considered the most abstract and least practical area of mathematics, number theory is now essential to our everyday digital world: every second, millions of secure internet transmissions rely on number theory for encryption. In this course, you'll explore the world of mathematical reasoning and proof, learning the tools needed to understand the RSA algorithm—the backbone of global internet security. You'll also invent your own encryption schemes and encounter games that use number theory. Alongside practical applications, you'll get a taste of the rich history of this subject, from legendary

mathematicians to the proof of Fermat's Last Theorem (a famous problem solved just 20 years ago after 350 years of effort).

## **PERSONAL FINANCE**

**Manage Money to Make an Impact:** Ready to plan for your financial future? In this course, you'll explore financial responsibility and social consciousness, diving into personal finance topics like budgeting, credit scores, career and earning potential, insurance, real estate, investments, retirement savings, charitable giving, and taxes. Through experts with diverse perspectives and simulating real-life financial scenarios, you'll learn to weigh the costs and benefits of your decisions and build confidence in managing your money.

## **PERSPECTIVES ON GENDER & CULTURE**

### **• NCAA-Approved Course**

**Explore Identity Across Cultures and Time:** How does gender shape the world around us? This dynamic course uses the concept of gender to explore a wide range of current topics, from feminism and LGBTQ+ studies to popular culture and politics. You'll investigate how gender intersects with other social identifiers like class, race, sexual orientation, culture, and ethnicity. Through engaging reading, thoughtful writing, and lively discussions, you'll analyze gender issues and reflect on how they have shaped both your experiences and those of your global peers.

## **POSITIVE PSYCHOLOGY**

### **• Prerequisite: Biology, Bolles Psychology or AP Psychology • NCAA-Approved Course**

**Unlock the Secrets to a Meaningful Life:** What does it take to live a happy, meaningful, and fulfilling life? While traditional psychology often focuses on diagnosing human suffering, positive psychology flips the script and explores what truly makes life worth living—love, creativity, humor, mindfulness, and more. In this course, you'll dive into fascinating research about the ingredients for happiness and the science behind fulfilling relationships, creativity, mindfulness, and even the brain's response to art, music, and physical activity. You'll learn from experts, including Martin Seligman's well-being theory, Mihaly Csikszentmihalyi's concept of flow, and Angela Lee Duckworth's research on grit. But it doesn't stop at theory— you'll put your knowledge into action by learning how to conduct ethical research and experiments with subjects like yourself, your peers, and your family.

## **PRISONS & THE CRIMINAL JUSTICE SYSTEMS**

### **• NCAA-Approved Course**

**Balance Rights and Power:** What determines who goes to prison and for how long, and how do legal systems shape justice—or fail to? In this course, you will gain a practical understanding of legal systems while confronting mass incarceration as a pressing legal, ethical, and societal challenge. You will also explore the various stages of the U.S. criminal justice system—arrest, prosecution, adjudication, sentencing, and imprisonment—and dive into key topics like policing practices, prosecutor reform, sentencing guidelines, and the role of AI in justice.

## **RACE, CULTURE & SOCIETY**

- **NCAA-Approved Course**

Explore the Dynamics of Social Construct: What is race? Is it something we're born with, or is it an idea created by society? Is it an identity we perform? A privilege for some? And how do the ways people understand race vary around the world? In this course, you'll dive into these essential questions, examining race as a social construct that has a profound impact on societies and cultures. Through thought-provoking readings, films, and guest speakers from fields like history, sociology, anthropology, and literature, you'll research, reflect on, and discuss the intricate dynamics of race and society across different times and places.

## **SOCIAL PSYCHOLOGY**

- **Prerequisite: Biology, Bolles Psychology or AP Psychology**

Decode Human Influence: Are your thoughts, feelings, and actions truly your own, or are they shaped by the people around you? Social psychology explores how the real, imagined, or implied presence of others influences what we think, feel, and do. From understanding why we obey stop signs at intersections when no one is around or why we buy certain products to exploring dramatic phenomena like mass discrimination or extreme group behavior, you will examine the principles that shape human behavior in this course. You'll explore, investigate, and apply key concepts in social psychology, culminating in a public exhibition of your own self-designed research project on a topic that interests you.

## **VIBE CODING: CODE, CREATE & LAUNCH WITH AI**

Ready to turn your ideas into working apps—no coding experience required? In this seven-week summer course, you'll learn to create software by describing what you want and guiding AI to build it. You will work with AI coding agents that will help you write, test, and refine code, while staying in control of the creative process. Through design thinking, you'll move from brainstorming to prototyping and launch, learning how to craft effective prompts, iterate with confidence, and bring your vision to life. You'll design and deploy two applications, an individual prototype and a collaborative project, while exploring the ethical and security implications of AI-generated code, including privacy, bias, and responsible use.

## **GOA SUMMER COURSES 2026**

**JUNE 15- JULY 31, 2026**

GOA offers a number of summer courses in an intensive seven-week format. Students should expect to dedicate 10-12 hours per week. Course descriptions can be found above. Students register for the GOA Summer Courses on their own and submit payment (\$860/class) to GOA directly. After completion of the summer course, students will receive a transcript from GOA that will be added to their academic record and sent to colleges when they apply. Grades for the GOA summer courses below do not get factored into the Bolle's GPA.

- **Abnormal Psychology**
  - **Architecture**
  - **Bioethics**

- **Business Problem Solving**
- **Computer Science I: Computational Thinking**
- **Computer Science I: Computational Thinking (Middle School)**
  - **Creative Nonfiction Writing**
    - **Cybersecurity**
    - **Genocide & Human Rights**
      - **Health & Fitness**
    - **International Relations**
  - **Introduction to Branding & Marketing**
    - **Investing I**
  - **Medical Problem Solving I**
    - **Personal Finance**
- **Vibe Coding: Code, Create & Launch with AI**