



Brunswick School and Greenwich Academy



Course Catalogue 2024 - 2025

This publication is jointly issued by Brunswick School and Greenwich Academy. Each school operates as a separate, independent educational institution, with its own course offerings, student enrollment, Faculty, Administration, and governing bodies.

Consistent with each school's existence as an independent legal entity, Brunswick School grants certain rights and privileges to those students who are duly enrolled at Brunswick; likewise, Greenwich Academy grants certain rights and privileges to its students.

Brunswick School
and
Greenwich Academy

COURSE CATALOGUE
2024-25

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BRUNSWICK SCHOOL & GREENWICH ACADEMY

Brunswick School and Greenwich Academy are college-preparatory schools. Mindful of their responsibility to provide their students with a rigorous academic program and at the same time to recognize individual talents and special interests, both schools coordinately maintain a strong and balanced offering of required and elective subjects. Honors and Advanced Placement sections in many courses provide qualified students with special challenges, while elective courses available in most disciplines furnish enrichment and variety in traditional academic areas and in art, drama, dance and music.

Statements of each Department's requirements and philosophy and complete descriptions of core and elective courses are provided in the following pages.

Note that both Brunswick and Greenwich Academy reserve the right to cancel any course because of under-enrollment. Registrants in any canceled course will be notified as early as possible.

A minimum of **five academic courses** is required for all students. Those students proposing a program of six or more full-credit courses that include honors and Advanced Placement must have the permission of the Head of the Upper School for Greenwich Academy students or the Academic Dean for Brunswick students.

Students from Brunswick and Greenwich Academy enroll in courses on both campuses, schedule and numbers permitting. Both schools share a common academic schedule with hour-long classes and ten-minute passing time between classes. Students are expected to honor the rules of both schools as outlined in their respective handbooks.

Brunswick School and Greenwich Academy share a view that exams are crucial assessments for understanding the material and academic placement.

All academic classes will have a mid-year and final exam component.

Shared Graduation Requirements

ENGLISH:	Four years
HISTORY:	Three years (including Modern World History and U.S. History)
MATHEMATICS:	Three years (including Geometry)
SCIENCE:	Three years (Biology and Chemistry or Physics)
WORLD LANGUAGES & CLASSICS:	Completion of Level III in one language at GA Three years at BWK
ARTS:	One year (both semesters in a studio or performance course) at GA Two years at BWK
PHYSICAL EDUCATION: HEALTH:	Four years One half-year

Additional Brunswick School Graduation Requirements

COMPUTER SCIENCE:	One half-year at BWK
ETHICS:	One quarter-year at BWK
PUBLIC SPEAKING:	One half-year at BWK

Typical Recommended Four-Year Sequence of Courses

The sequence outlined below, while typical, is not fixed. Other options, permitting stronger emphasis in a particular subject area (e.g., Language, History, Science) are also open to students.

9 TH GRADE	10 TH GRADE	11 TH GRADE	12 TH GRADE
English 9	English 10	English 11	English 12 electives
Modern World	U.S. History	History elective	History elective
Geometry	Algebra II	Precalculus	Adv. Mathematics
Biology	Chemistry	Physics	Science elective
Languages	Languages	Languages	Languages
Arts or Comp Sci (BWK)	Arts or Comp Sci (BWK)	Arts or Comp Sci (BWK)	Arts or Comp Sci (BWK)
Health (GA: ½ year) 9th Grade Seminar (BWK ½ year)	Health (GA & BWK: ½ year)	Ethics (BWK: ¼ year)	Public Speaking (BWK: ½ year)

HONORS COURSES

Honors courses are significantly more rigorous than regular courses, and student work is expected to show greater depth, more sophisticated reasoning, academic independence and higher creativity than the work in regular courses. Almost all departments offer Honors courses that carry extra credit included in computing Honors. Students need specific departmental recommendation to take Honors courses. A student may, at the teacher's discretion, lose Honors status at any point during the year. Students do not, however, have the prerogative to opt out of an Honors course after the designated drop/add period.

ADVANCED PLACEMENT COURSES

Advanced Placement (AP) courses are college-level courses offered chiefly in grades 10 through 12. Almost all departments offer AP courses that carry extra credit included in computing GPA's. A sufficiently high score on an AP examination may allow the student to earn credit in the college he or she eventually attends. Students enrolling for any AP course **must take** the AP Examination in that course—even if they have already been accepted to college.

Students are carefully selected for AP courses according to the following criteria:

- teacher recommendation;
- grades in prerequisite courses;
- consideration of the student's total academic load;
- other specific departmental requirements (see appropriate section).

Students may not take more than three AP courses in a given year without permission of the Head of the Upper School for Greenwich Academy students or the Academic Dean for Brunswick students. The work of a typical AP course involves homework of an hour or more each night. A student may, at the teacher's discretion, lose AP status at any point during the year. Students do not, however, have the prerogative to opt out of an AP course after the designated drop/add period. Colleges will be notified of any change in a student's AP status.

AP and Honors courses may, at the sole discretion of a given school, receive an additional 5 points (honors bonus) when calculating semester averages. Students should contact the Academic Dean on their respective campus to determine if a given course is awarded an honors bonus before electing to pursue that class.

HONORS SEMINARS

Honors Seminars are designed as post-AP courses, intended to allow students to demonstrate mastery in a particular discipline. They represent the highest level of scholarship in their respective subject matter and, as such, require unique commitment and rigor on the part of students.

INDEPENDENT STUDY

Independent projects, in which students do considerable work on their own without the constant supervision of the teacher, are sometimes available. Subject to administrative and departmental approval, and working with a designated faculty sponsor, students will receive full or partial course credit for their work. An independent study cannot be used to fulfill the required minimum of five academic courses per semester.

OFF-CAMPUS STUDY

Brunswick School and Greenwich Academy sponsor a variety of off-campus study options that give students the opportunity to discover new cultures, engage in site-specific study and, in the case of studying abroad, speak a foreign language in full immersion with homestay programs. An array of experiences is offered domestically and abroad during the year, each of which offers intense academics, consistent with Brunswick and Greenwich Academy's academic program. Please consult the schools' websites for more information on these exciting educational opportunities.

Over the course of sophomore year, each Brunswick student will spend one week at the Randolph Campus (VT). While away they will stay current with their academic work at home (though not be responsible for missed assessments). In Vermont students will participate in service, experiential education, expeditions and lessons in self-knowledge, character and leadership. Selected seniors leaders will also attend. Attending students and their advisors will coordinate with teachers so as to best plan for class sessions missed while away.

GLOBAL ONLINE ACADEMY

Global Online Academy is a partnership consisting of select exemplary independent schools from around the world that have come together to offer a diverse array of online courses. These courses are designed with a focus on academic rigor, collaboration, innovation and development of key 21st-century learning skills. Sophomores, Juniors and Seniors may enroll in a GOA course as part of the registration process. Guidelines and the GOA course offerings are included at the end of this catalogue and can be found at www.globalonlineacademy.org

BRUNSWICK EXTENDED CURRICULUM

FRESHMAN SEMINAR

Freshman Seminar is a requirement for all Brunswick students, to be completed during the first semester of freshman year. The design of the program is to connect 9th graders with veteran faculty members in a once-a-week conversational class. Topics covered will include mental health and handling stress, healthy habits and hygiene, equity and inclusion, academic integrity, positive psychology, and drugs and alcohol. Much of the work also has to do with learning to navigate the Upper School and assisting the “on-boarding” of our 9th graders. Additionally, the boys will be given the chance to sit with senior students and hear about their Brunswick experience in the Upper School.

HEALTH

Health is a requirement for all Brunswick students, to be completed during one semester of sophomore year. Meeting twice a week (with sections running in the fall and spring semesters), this course provides essential information and a discussion forum for some of the critical issues tenth graders face. The curriculum covers such topics as nutrition, stress and anxiety, substance abuse, masculinity, sexual education and healthy relationships. Students will meet in small, informal discussion sessions where they are able to explore these relevant issues. We believe that through these classes the boys will get to know themselves better, learn important information, and gain helpful skills to navigate their adolescent years.

CHARACTER AND ETHICS

Character and Ethics is a requirement for all Brunswick students, to be completed during one quarter in the fall semester of junior year. Meeting twice a week (with sections running in the first and second quarters), the objectives of the class are to make Brunswick’s Character Continuum a part of our academic curriculum and to have boys self-identify as ethical thinkers while gaining self-knowledge. Exploring case studies, simulations and relevant articles, the class will encourage discussion, debate, and the opportunity for boys to take positions on such issues as the bystander effect, social influence, business ethics, bias and moral authority. This class will serve as a starting place for Brunswick boys to continue their examination of crucial issues of ethics, character and leadership, and the decisions that confront us in less than ideal circumstances

GREENWICH ACADEMY DISTINCTION PROGRAMS

CIVIC SCHOLARS

The mission of the Civic Scholars program at Greenwich Academy is to promote meaningful and substantial civic engagement and uplift the next generation of women leaders. Civic Scholars explore democracy through the lens of public policy, political science, and social organizations. Candidates for the distinction complete a course distribution and co-curricular requirement as well as 40 civic engagement impact hours and a ten-page research paper.

DISTINCTION IN CLASSICS

In recognition for having successfully completed three years of Latin in the Upper School, including one AP level Latin course and two years of classical Greek, Brunswick students are awarded a Classics diploma written in Latin. Greenwich Academy students who have completed the equivalent course of study are formally recognized at the Senior Honors Convocation.

GLOBAL SCHOLARS

With the goal of preparing students to be active and engaged members of the increasingly global community, the Global Scholars program offers Greenwich Academy students a thematic, interdisciplinary approach to their education. The program requires, among other things, international travel and project-based scholarship and seeks to teach students skills in problem-solving, communication, analytical thinking, collaboration, adaptability and inclusion. Most students apply to the program in the spring of their Group IX year. Successful completion of the Global Scholars program requires well-roundedness across the curriculum, the design of a digital portfolio, at least two weeks of study or project work outside of the United States and a capstone project to be completed during senior year.

THE SOMERVILLE SCHOLARS

The Somerville Scholars is a course of scholarship for students wishing to dedicate themselves to and distinguish themselves in the study of English. The program asks students to engage in reading, writing, and portfolio-building well beyond the scope of the standard English curriculum. Somerville Scholars will design their junior and senior year English study in concert with the program, including taking the Honors English Seminar and eligible senior electives. The Somerville Scholars will work closely with English department faculty on such cocurricular pursuits as additional summer reading and participation in a weeklong Summer Institute, a senior thesis presentation and defense, attendance of community literary events, and leadership of such events on campus. Students must apply for admission to the Somerville Scholars in the spring of their sophomore year. While Somerville Scholars membership may be concurrent with other scholarship distinctions at Greenwich Academy, it is designed for students with a particular love for the study of literature and the act of reading and should be pursued in that spirit.

EXPEDITION COURSES

In several disciplines, Greenwich Academy offers Expedition Courses in which academic study is enriched and deepened by an extended class trip. The class expedition -- whether it's traveling to landmarks of the Civil Rights Movement or participating in authentic conservation biology research -- is an essential part of the course. For these classes, financial aid is available so that students have an equal opportunity to participate.

NEW COURSES

DEPARTMENT		ID#	TERM
Computer Science (BWK)	CS-101: Foundations of Creative Computing (f)	78111	Fall Semester
	CS-102: Web Design and Development (f)	78112	Fall Semester
	CS-103: Introduction to Computer Science (f)	78113	Fall Semester
	CS-101: Foundations of Creative Computing (s)	78121	Spring Semester
	CS-102: Web Design and Development (s)	78122	Spring Semester
	CS-103: Introduction to Computer Science (s)	78123	Spring Semester
English	Eng XII: Modern Women Writers	14124	Full Year
	Eng XII: Poetry Seminar	14125	Full Year
	Eng XII: Twentieth Century American Storytellers	14123	Full Year
	Honors American Studies: Literature *	13200	Full Year
History and Social Sciences	Abnormal Psychology	38860	Full Year
	AP African American Studies	36426	Full Year
	Honors American Studies: History *	36427	Full Year
	Honors Seminar: A History of Women and Power	36425	Full Year
	Psychology of Positivity and Happiness (f)	38475	Fall Semester
	Psychology of Positivity and Happiness (s)	38476	Spring Semester
Math (BWK)	Accelerated Calculus	28406	Full Year
	Honors Math: Complex Analysis	28505	Full Year
Math (GA)	Honors Combinatorics (s)	26437	Spring Semester
	Honors Seminar: Linear Algebra	26434	Full Year
	Honors Seminar: Multivariable Calculus	26435	Full Year
	Honors Topics in Discrete Math and Topology (f)	26436	Fall Semester
Science	Building Science: Creating real-life representations of scientific principles	58047	Full Year
	Chemistry of the Cosmos and Earth (f)	58046	Fall Semester
	Forensic Science (f)	58032	Fall Semester
	Human Physiology I (s)	58034	Spring Semester
	Marine Biology (s)	58037	Spring Semester
Visual Arts	Honors Portfolio Prep & Open Studio (GA)	66414	Full Year
World Languages	Diverse Cultures in the Francophone World (f)	44513	Fall Semester
	French Studies using Bandes Dessinées (s)	44512	Spring Semester
	Honors Spanish for Heritage Speakers	43560	Full Year
	La Cocina Hispana: An exploration of Hispanic culture through food (f)	43524	Fall Semester
	La Cocina Hispana: An exploration of Hispanic culture through food (s)	43525	Spring Semester

* Honors American Studies comprises two distinct courses:
Honors American Studies: Literature (#13200)
Honors American Studies: History (#36427)
 Acceptance into Honors American Studies requires enrollment into both courses listed above.

ONE-SEMESTER COURSES

FALL

SPRING

Computer Science (BWK)	CS-101: Introduction to Creative Computing (f) CS-102: Introduction to Web Design and Development (f) CS-103: Introduction to Computer Science (f) STEAM-101: The Coding Palette (f)	CS-101: Introduction to Creative Computing (s) CS-102: Introduction to Web Design and Development (s) CS-103: Introduction to Computer Science (s) STEAM-101: The Coding Palette (s)
Engineering and Computer Science (GA)	Introduction to Computer Science (f)	Introduction to Computer Science (s)
General Electives	Impact of Technology: An Economic Perspective (f) Introduction to Journalism (f) Public Speaking and Effective Communication (f)	
History and Social Sciences	Criminal Justice (f) Debating History: Using Case Study Method (f) Economics: Personal Finance (f) Everyday Economics (f) Film Studies: Hollywood (f) History of Warfare: Ancient and Medieval World (f) Impact of Technology: An Economic Perspective (f) Modern Middle East (f) Psychology of Positivity and Happiness (f) Race and Cinema in Modern America (f) Songs of Freedom (f) Sport Psychology (f) The World at War (f)	Behavioral Economics (s) Cognitive Psychology (s) Debate (s) Economics: Entrepreneurship (s) Environmental History (s) Film Studies: Beyond Hollywood (s) History of Warfare: Development of Linear Warfare (s) Leaders, Leadership, and Strategy (s) Psychology of Positivity and Happiness (s) Racial Struggle on Film (s) The Global Cold War (s)
Mathematics (GA)	Honors Topics in Discrete Math and Topology (f)	Honors Combinatorics (s)
Science	Biology of Human Health (f) Chemistry of the Cosmos and Earth (f) Culinary Science I (f) Engineering I (f) Forensic Science (f) Honors Organic Chemistry (f) Human Physiology I (f) Marine Biology (f)	Astrophysics (s) Culinary Science II (s) Engineering II (s) Environmental Science and Sustainability (s) Forensic Science (s) Human Physiology I (f) Marine Biology (s)
Visual and Performing Arts	Architecture & Design I (f) Art and Design I (f) STEAM-101: The Coding Palette (f)	Architecture & Design II (s) Art and Design II (s) Honors Costume Design III (s)
World Languages and Classics	Diverse Cultures in the Francophone World (f) Espanol en Vivo: Spanish in the Community (f) La Cocina Hispana (f) Origins of Hispanic Culture in Europe (f)	Espanol de Negocios: Business Spanish (s) French Studies using Bandes Dessinées (s) La Cocina Hispana (s) Origins of Hispanic Culture in Europe (s)

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Abnormal Psychology	Psychology	29
Accelerated Algebra II with Trigonometry	Math - BWK	11
Accelerated Calculus	Math - BWK	12
Accelerated Geometry	Math - BWK	10
Accelerated Precalculus	Math - BWK	11
Acting I	Arts	64
Algebra and Computational Geometry	Math - BWK	10
Algebra I	Math - GA	14
Algebra II	Math - GA	14
Algebra II Accelerated	Math - GA	14
Algebra II with Trigonometry	Math - BWK	11
AP African American Studies	History	20
AP Art History	History	20
AP Biology	Science	32
AP Calculus AB	Math - BWK	12
AP Calculus AB	Math - GA	16
AP Calculus BC	Math - BWK	12
AP Calculus BC	Math - GA	16
AP Chemistry	Science	32
AP Chinese Language & Culture - Expedition Course	Language	42
AP Chinese Language and Culture	Language	42
AP Comparative Government & Politics	History	20
AP Computer Science A	Eng & CompSci - GA	72
AP Computer Science Principles	Eng & CompSci - GA	72
AP Economics	Economics	27
AP English Language and Composition (s) (BR)	English	3
AP English Literature and Composition (BR)	English	2
AP Environmental Science	Science	32
AP European History	History	20
AP French Language & Culture	Language	44
AP Human Geography	History	21
AP Italian Language & Culture	Language	46
AP Latin	Classics	51
AP Physics 1	Science	32
AP Physics 2	Science	33
AP Physics C	Science	33
AP Psychology	Psychology	29
AP Spanish Language & Culture	Language	48
AP Spanish Literature & Culture	Language	48
AP Statistics	Math - BWK	13
AP Statistics	Math - GA	16
AP Statistics Y	Math - GA	16
AP Studio Art: 2-D Design Portfolio (BR)	Arts	54
AP Studio Art: 2-D Design Portfolio (GA)	Arts	54
AP Studio Art: 3-D Design Portfolio (BR)	Arts	55
AP Studio Art: 3-D Design Portfolio (GA)	Arts	55
AP Studio Art: Drawing Portfolio (BR)	Arts	54

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AP United States Government & Politics	History	21
AP United States History	History	19
AP World History	History	21
Arabic I	Language	39
Arabic II	Language	39
Arabic III	Language	39
Arabic IV	Language	39
Architecture & Design I (f)	Arts	59
Architecture & Design II (s)	Arts	60
Art and Design I (f)	Arts	59
Art and Design II (s)	Arts	60
Art I	Arts	53
Astrophysics (s)	Science	35
Band I	Arts	61
Behavioral Economics (s)	Economics	29
Bel Canto	Arts	63
Biology	Science	31
Biology of Human Health (f)	Science	34
Building Science: Creating real-life representations of scientific principles	Science	37
Calculus	Math - BWK	12
Calculus	Math - GA	15
Ceramics I	Arts	55
Chemistry	Science	31
Chemistry of the Cosmos and Earth (f)	Science	34
Chinese I	Language	40
Chinese II	Language	40
Chinese III	Language	41
Chinese IV	Language	41
Chinese V	Language	41
Cognitive Psychology (s)	Psychology	30
Computer Graphics I	Arts	56
Costume Design I	Arts	65
Criminal Justice (f)	History	22
CS-101: Introduction to Creative Computing (f)	CompSci - BWK	67
CS-101: Introduction to Creative Computing (s)	CompSci - BWK	69
CS-102: Introduction to Web Design and Development (f)	CompSci - BWK	67
CS-102: Introduction to Web Design and Development (s)	CompSci - BWK	69
CS-103: Introduction to Computer Science (f)	CompSci - BWK	68
CS-103: Introduction to Computer Science (s)	CompSci - BWK	69
CS-201: AP Computer Science Principles	CompSci - BWK	70
CS-202: AP Computer Science A	CompSci - BWK	70
CS-301: Advanced Honors Seminar: Data Science & Machine Learning	CompSci - BWK	70
Culinary Science I (f)	Science	34
Culinary Science II (s)	Science	35
Dance Corps	Arts	66
Debate (s)	History	24

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Debating History: Using Case Study Method (f)	History	22
Diverse Cultures in the Francophone World (f)	Language	44
Economics: Entrepreneurship (s)	Economics	29
Economics: Personal Finance & Investment (f)	Economics	28
Eng XII: Creative Writing	English	3
Eng XII: Hemingway	English	4
Eng XII: In Our Time: Contemporary Fiction	English	4
Eng XII: Journalistic Storytelling	English	5
Eng XII: Mind Over Matter: Athletes as Heroes in History and Literature	English	5
Eng XII: Modern Women Writers	English	6
Eng XII: Nature of Mind: Moments of Awakening in Global Literature	English	6
Eng XII: New York State of Mind (Expedition Course)	English	6
Eng XII: On the Road: A Journey Across America	English	7
Eng XII: Philosophy and Literature	English	7
Eng XII: Poetry Seminar	English + General Electives	8, 75
Eng XII: Revolutionary Joy	English	8
Eng XII: Russian Literature: The Soul on the Steppe	English	8
Eng XII: The Criminal Mind	English	4
Eng XII: Theatre on Both Sides of the Pond: Page to Stage	English	8
Eng XII: Twentieth Century American Storytellers	English	9
Engineering I (f)	Science	34
Engineering II (s)	Science	36
English IX (BR)	English	1
English IX (GA)	English	1
English X	English	1
English XI	English	2
Environmental History (s)	History	24
Environmental Science and Sustainability (s)	Science	36
Español de negocios—Business Spanish (s)	Language	49
Español en vivo—Spanish in the Community (f)	Language	48
Everyday Economics (f)	Economics	28
Film Production I	Arts	56
Film Studies: Beyond Hollywood (s)	History	24
Film Studies: Hollywood (f)	History	22
Forensic Science (f)	Science	34
Forensic Science (s)	Science	36
French I	Language	43
French II	Language	43
French III	Language	43
French Studies using Bandes Dessinées (s)	Language	44
Geometry	Math - BWK	10
Geometry	Math - GA	14
Geometry Accelerated	Math - GA	14
Gospel Choir	Arts	63
Greek I	Classics	52
Greek II	Classics	52
Greek III	Classics	52

Course Name	Department (s)	Page (s)
Guitar I	Arts	61
History of Warfare: Ancient and Medieval World (f)	History	22
History of Warfare: Development of Linear Warfare (s)	History	25
Honors Acting II	Arts	64
Honors Acting III	Arts	64
Honors Algebra II	Math - GA	15
Honors Algebra II with Trigonometry	Math - BWK	11
Honors American Studies: History	History	19
Honors American Studies: Literature	English	2
Honors Arabic II	Language	39
Honors Arabic III	Language	39
Honors Arabic IV	Language	40
Honors Art II	Arts	53
Honors Band II	Arts	61
Honors Biology	Science	31
Honors Ceramics II: Ceramic Sculpture (BR)	Arts	55
Honors Ceramics II: Skills (GA)	Arts	55
Honors Ceramics II: Voice (GA)	Arts	55
Honors Chemistry	Science	31
Honors Chinese II	Language	41
Honors Chinese III	Language	41
Honors Chinese IV	Language	41
Honors Civil Rights Seminar (Expedition Course)	History	26
Honors Combinatorics (s)	Math - GA	17
Honors Computer Graphics II	Arts	56
Honors Costume Design II	Arts	65
Honors Costume Design III (s)	Arts	66
Honors Design and Stage Craft III	Arts	65
Honors Engineering and Design I: Inventor's Workshop	Eng & CompSci - GA + Arts	72, 57
Honors Engineering and Design II: Inventions that Make Life Better	Eng & CompSci - GA + Arts	73, 58
Honors Engineering Principles and Computing	Eng & CompSci - GA	72
Honors Film Production II	Arts	56
Honors Film Production III (BR)	Arts	57
Honors Film Production III (GA)	Arts	57
Honors Film Production IV (GA)	Arts	57
Honors French II	Language	43
Honors French III	Language	43
Honors French IV	Language	43
Honors Geometry	Math - BWK	10
Honors Geometry	Math - GA	14
Honors Greek II	Classics	52
Honors Greek III	Classics	52
Honors Guitar II	Arts	61
Honors Italian II	Language	45
Honors Italian III	Language	45
Honors Italian IV	Language	46
Honors Latin II	Classics	50

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Honors Latin III	Classics	51
Honors Latin IV	Classics	51
Honors Math: Complex Analysis	Math - BWK	13
Honors Math: Linear Algebra	Math - BWK	12
Honors Math: Multivariable Calculus	Math - BWK	12
Honors Math: Real Analysis	Math - BWK	12
Honors Music Improv I	Arts	62
Honors Music Improv II	Arts	62
Honors Organic Chemistry (f)	Science	34
Honors Physics	Science	32
Honors Playwriting & Directing	Arts	64
Honors Portfolio Prep & Open Studio (GA)	Arts	53
Honors PreCalculus	Math - BWK	11
Honors Precalculus	Math - GA	15
Honors Recording Studio II	Arts	62
Honors Science Research - Brunswick School	Science	33
Honors Seminar: A History of Women and Power	History	26
Honors Seminar: Engineering & Computer Science	Eng & CompSci - GA	73
Honors Seminar: English Literature	English	2
Honors Seminar: French Studies	Language	44
Honors Seminar: Humanities and Social Science Research	History	26
Honors Seminar: Latin Studies	Classics	51
Honors Seminar: Linear Algebra	Math - GA	16
Honors Seminar: Multivariable Calculus	Math - GA	16
Honors Seminar: Science Research (GA)	Science	33
Honors Spanish for Heritage Speakers	Language	47
Honors Spanish II	Language	46
Honors Spanish III	Language	47
Honors Spanish IV	Language	47
Honors Theatrical Design and Stage Craft II	Arts	65
Honors Topics in Discrete Math and Topology (f)	Math - GA	17
Human Physiology I (f)	Science	35
Human Physiology I (s)	Science	36
Impact of Technology: An Economic Perspective (f)	Economics + General Electives	28, 74
Introduction to Computer Science (f)	Eng & CompSci - GA	71
Introduction to Computer Science (s)	Eng & CompSci - GA	71
Introduction to Journalism (f)	General Electives	74
Italian I	Language	45
Italian II	Language	45
Italian III	Language	45
Italian IV: Language & Culture	Language	46
Junior Dance Corps	Arts	66
La Cocina Hispana: An exploration of Hispanic culture through food (f)	Language	48
La Cocina Hispana: An exploration of Hispanic culture through food (s)	Language	49
Latin I	Classics	50
Latin II	Classics	50
Latin III	Classics	50

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Latin IV	Classics	51
Latin V: Reading Latin Poetry (f)	Classics	51
Leaders, Leadership, and Strategy (s)	History	25
Madrigal Honors Ensemble	Arts	63
Marine Biology (f)	Science	35
Marine Biology (s)	Science	37
Microeconomics and Macroeconomics	Economics	27
Modern Middle East (f)	History	23
Modern World History	History	18
Morning M.O.B.	Arts	63
NEWL Arabic Language and Culture	Language	40
Origins of Hispanic Culture in Europe (f)	Language	49
Origins of Hispanic Culture in Europe (s)	Language	49
Physics	Science	32
Precalculus	Math - BWK	11
PreCalculus	Math - GA	15
Precalculus Accelerated	Math - GA	15
Precalculus with Statistics	Math - GA	15
Psychology of Positivity and Happiness (f)	Psychology	30
Psychology of Positivity and Happiness (s)	Psychology	30
Public Speaking and Effective Communication (f)	General Electives	74
Quantitative Geometry	Math - BWK	10
Race and Cinema in Modern America (f)	History	23
Racial Struggle on Film (s)	History	25
Recording Studio I	Arts	61
Songs of Freedom: A World History of Music and Social Change (f)	History	23
Spanish I	Language	46
Spanish II	Language	46
Spanish III	Language	47
Spanish IV	Language	47
Sport Psychology (f)	Psychology	30
Stanford Advanced Mathematics	Math - BWK	13
Statistics	Math - BWK	11
Statistics	Math - GA	15
STEAM-101: The Coding Palette (f)	CompSci - BWK + Arts	68, 59
STEAM-101: The Coding Palette (f)	CompSci - BWK + Arts	69, 60
The Blue Notes	Arts	62
The Global Cold War (s)	History	25
The World at War (f)	History	23
Theatrical Design and Stage Craft I	Arts	64
United States History	History	18

ENGLISH

The English program has several major objectives: to help students increase their understanding and command of language, to develop the process of critical and creative thinking, and to foster knowledge of a wide range of literature.

All English courses on both campuses are designed to help students improve their proficiency in reading, thinking, speaking, and writing, through reading and discussing literature, through extensive writing, and through grammar and vocabulary work. Word processing—which both departments regard as an integral tool for thinking and writing—is required for all outside assignments.

English IX (GA)

11006

Grade Level: 9th

English 9 has as its theme *Seeing and Being Seen: Reading and Writing Women's Stories*. The course provides a foundation in the study of literature, helping students to develop the increasingly complex writing and thinking skills they will need in the Upper School. Writing instruction focuses on the analytical essay, emphasizing process (topic generation, thesis writing, evidence selection and interpretation, revision, editing, etc.), but students also write informal responses and creative pieces. Active reading, annotation, class discussions, and writing-to-learn assignments help students build complex interpretations of a variety of texts, while ongoing self-assessment and portfolio assignments help students identify strengths and set goals for their work in reading, writing, and discussion, becoming more independent learners in the process. Recent texts have included: *Antigone*, *Pride and Prejudice*, *Twelfth Night*, *Little Fires Everywhere*, *Persepolis*, *The Catcher in the Rye*, and *The Hate U Give*.

English IX (BR)

11008

Grade Level: 9th

Continuing a longstanding Brunswick tradition, English 9 is an all-boys class taught around a Harkness table; it focuses primarily on stories depicting the journey to adulthood and maturity. Throughout the year, we will explore various novels, plays, poetry, and essays from around the world, beginning with the Ancient Greeks and ending in the 21st century. The course stresses the development of critical reading and thinking skills while challenging each boy to improve his writing. We also carry out a comprehensive study of grammar, vocabulary, and mechanics of essay writing. Core texts include: *The Odyssey*, *The Catcher in the Rye*, *Henry IV, Part I*, and *Lord of the Flies*. Other texts may include *Brave New World*, *Persepolis*, *The Power of One*, and *The Hate U Give*.

English X

12000

Grade Level: 10th

Prerequisite: English 9 or equivalent

English 10 traces American experiences as they are reflected in literature from the country's colonial beginnings to the present day. Students read works from a variety of genres and practice writing in many forms, with particular emphasis on the analytical essay. Grammar study arises out of students' specific needs, and vocabulary is studied in context with the literary texts. Core texts include: *The Crucible* or *Our Town*, essays by Thoreau and Emerson, stories by Hawthorne and Poe, and *The Great Gatsby*. Additional authors studied may include Twain, Whitehead, Cather, Douglass, Hurston, Hemingway, Tennessee Williams, Vonnegut, Highsmith, O'Brien, Kesey, and Alexie.

Honors American Studies **

13200 & 36427

Grade Level: 10th

Prerequisite: Departmental Approval from both History and English departments (see APPS)

Honors American Studies offers passionate students of the humanities an opportunity to explore the culture and history of the United States through a rigorous interdisciplinary approach. This double credit course will dive deep into primary and secondary texts, including essential and challenging works of American literature, alongside the historical context in which the authors lived, and that the works depict. The course will establish a firm understanding of American history, and will enhance students' historical thinking skills, and historical research methods and primary source analysis. The course will seek to answer questions such as: What is the American story?, Who tells the American story?, and How did we get here?, and it will explore themes including Freedom and Democracy, Faith and Belief, and Community and the Individual. As a multi-disciplinary course it will explore art, film and music as expressions of American culture, and will include field trips to local institutions. This is a reading and writing intensive course, co-taught by English and history teachers.

In addition to recommendations from current English and History teachers, students will complete a written component in the course approval process.

** **Honors American Studies** comprises two distinct courses - *Honors American Studies: Literature* (#13200) and *Honors American Studies: History* (#36427) - that students will take in two separate blocks. Accepted students will satisfy their 10th grade English and 10th grade History requirements by taking the two courses. Acceptance into **Honors American Studies** requires enrollment into both *Honors American Studies: Literature* and *Honors American Studies: History*.

English XI

13000

Grade Level: 11th

Prerequisite: English 10 or equivalent

English 11 is primarily a study of the literature from the United Kingdom and its former colonies. Students will read a variety of genres, from lyric poetry and short fiction to dramas and novels and non-fiction works. Writing assignments will ask students to express their ideas in a variety of forms, from personal and analytical essays to creative fiction and poetry. Core texts include: *Oedipus the King*, *Macbeth*, or *Othello*, *Dubliners*, and *Frankenstein* or another nineteenth century British novel. Other authors read may include: Chaucer, Dickens, Conrad, Orwell, McEwan, Coetzee, Kinkaid, Ishiguro, Lahiri, Soyinka, Hamid, and Kafka.

AP English Literature and Composition (BR)

13010

Grade Level: 11th (Brunswick only)

Prerequisite: Departmental Approval

In the AP English Literature and Composition course, students devote themselves to the study of literary works written in—or translated into—English. Careful reading and critical analysis of such works of fiction, drama, and poetry provide rich opportunities for students to develop an appreciation of ways literature reflects and comments on a range of experiences, institutions, and social structures. Students will examine the choices literary writers make and the techniques they utilize to achieve purposes and generate meanings. In addition to a variety of works of short fiction and poetry from authors from various eras and perspectives, various works of drama and longer narrative fiction will be studied. The literature studied may include works by Sophocles, Shakespeare, Tom Stoppard, Thomas Hardy, George Eliot, Herman Melville, William Faulkner, Virginia Woolf, Toni Morrison, and Iris Murdoch.

Honors Seminar: English Literature

14014

Grade Level: 11th–12th

Prerequisite: Departmental Approval

This honors English course—taken in addition to either a required English course or AP Spanish Literature—offers intensive study of more advanced works. Students will be challenged to become more independent, insightful readers and more forceful, artful writers with confident critical voices. Through study of narrative structure, form, and style, students will learn to discern and articulate authors' methods of making meaning through texts, themes, and concepts comparable to those that occur in college literature courses. Students in this course who wish to sit for the AP English Literature exam in the spring may do so, with the recommendation of the instructor. Application process to the English department includes a graded essay and a personal essay expressing interest in a more in-depth study of literature. The reading list for this course is in part a function of student interest. Past writers studied have included Shakespeare, Morrison, Dante, Hawthorne, Austen, Adichie, Hwang, and others.

SPRING SEMESTER COURSES

AP English Language and Composition (s)

13011

Grade Level: 10th–11th (Brunswick only; concurrent with English X or XI)

Prerequisite: Departmental Approval

In this course, comparable to a college-level rhetoric and writing course, students cultivate their understanding of writing and rhetorical arguments through reading, analyzing, and writing texts as they explore topics such as rhetorical situations, claims and evidence, and reasoning and organization. Throughout the course, students work on developing a personal voice by making appropriate stylistic and grammatical choices. Students will read and analyze the rhetorical elements and their effects in a variety of non-fiction texts, including graphic images as forms of text, from many disciplines and historical periods.

ENGLISH XII: LITERATURE & COMPOSITION—SENIOR ELECTIVES

The English Department offers specialized senior level courses that continue to teach reading, writing, and critical thinking skills. Although the syllabi of these seminars vary, the goals of instruction are consistent—to develop students' comprehension and expression so that they graduate as independent thinkers and persuasive writers. Common skills represented in each course will range from the proper methods of seeking outside critical sources to presentation skills, and in all courses, analytical writing will be stressed in full. In each course, students will write in various forms and read works representing diverse voices, experiences, genres, time periods, and cultures. In the fourth quarter, students will submit a significant critical paper that will be graded by the student's own teacher, and then submitted to a panel of English teachers. Each year, the joint English Departments will select one essay from each campus as a Senior Prize Paper.

Creative Writing

14016

Grade Level: 12th

This course is an introduction to creative writing in its many forms. We will read and analyze great pieces of literature while simultaneously working on our own creative writing; students will develop their own literary and artistic sensibilities while grappling with the question of what makes good writing? The class will consider non-fiction, fiction, memoir, drama, screenwriting, and poetry as related disciplines, but the year will be divided into units according to these genres.

We will spend most of the first semester reading and writing poetry while also extensively studying song lyrics. In the second semester, we will mostly study short fiction and some of the great short story writers, eventually getting to some new fiction by living authors.

Throughout the course we will discuss issues of voice, imagery, tone, characterization, and the elements of narrative, dramatic, and lyric form. Students will work towards the creation of a multi-genre portfolio that will include workshopped, revised pieces to be considered for publication in literary magazines such as Brunswick's *The Oracle* or Greenwich Academy's *Daedalus*.

The Criminal Mind

14015

Grade Level: 12th

Quick: think of a story that doesn't have a crime in it. (See, it's harder than you think). This course will form a jury of sorts as we consider the role of crime committed in works of literature and film, both fiction and non-fiction. We will discuss the nature of crime and the motives of a variety of criminals. We will look at how writers choose to present their criminals and how these choices influence our reactions to them, sometimes in surprising ways. We will consider: Do great stories require great transgressions? Is it more satisfying when a mystery has an artful solution or when it lives on, unsolved, in our hearts and minds? Recent texts have included: *Atonement*, *In Cold Blood*, *In the Lake of the Woods*, *Equus*, *The Talented Mr. Ripley*, *Medea* and *Glengarry Glen Ross*; films such as *Memento*, *Double Indemnity*, and *L.A. Confidential*; and a mix of classic and contemporary short fiction.

Hemingway

14054

Grade Level: 12th

Ernest Hemingway lives in the American consciousness like no other writer of the 20th century. He once famously said, "In order to write about life first you must live it"—advice he took himself. War, big-game hunting, deep-sea fishing, love affairs: Hemingway mythologized his own macho life and turned it into art. We'll interrogate his texts and his life with questions like: to what extent is Hemingway's masculine ideal still operative today—is it healthy or toxic—how has our definition of masculinity evolved in the 21st century, and which writers are redefining our current conceptions of gender roles? This course will also explore how Hemingway shaped (and was shaped by) literary Modernism by studying authors such as Sherwood Anderson, Gertrude Stein, William Faulkner, and Hemingway's "frenemy" F. Scott Fitzgerald. Students should expect to write both critically and creatively during the year.

Texts may include: *The Sun Also Rises*, *A Farewell to Arms*, *For Whom the Bell Tolls*, *The Old Man and the Sea*, among others. We'll study contemporary authors, including: Richard Ford, Tobias Wolff, Raymond Carver, Elmore Leonard, and Jay McInerney. Films may include: *The Hurt Locker*, *The Perfect Storm*, and *A River Runs Through It*. This course will feature field trips.

In Our Time: Contemporary Fiction

14030

Grade Level: 12th

While studying "The Classics"—the great artistic works of the rich and distant past—provides a necessary intellectual foundation for understanding literature, history, and culture, it is also exciting and interesting to experience and consider brilliant works created "in our time," by artists of the Contemporary World. With this in mind, this course will explore ways in which contemporary novelists, screenwriters, and songwriters have expressed and are currently expressing themselves through their works. Texts may include: John Irving's *The World According to Garp* (1979), Chuck Palahniuk's psychological thriller *Fight Club* (1996), Dan Brown's highly controversial *The Da Vinci Code* (2003), Cormac McCarthy's Pulitzer Prize-winning *The Road* (2005), and Alan Moore's critically-acclaimed graphic novel *V For Vendetta* (1985). The course will also include units on contemporary screenplays by Frank Darabont (*The Shawshank Redemption*), Christopher Nolan (*Batman Begins*), and Diablo Cody (*Juno*), as well as a "musical unit" in which we will study albums by Bob Dylan, Nirvana, Logic, J. Cole, and other musicians from "our time".

Journalistic Storytelling

14112

Grade Level: 12th

How can we tell the stories of sports? How can we use sports as a prism to view a much wider world of experience and emotion—or use storytelling to hit something inside people and move them—as former managing editor of *Sports Illustrated* Terry McDonell once suggested? In this senior elective, we will seek to do so by reading, writing, and discussing “all things sports”, analyzing the rhetorical strategies and techniques authors and journalists employ to tell a powerful story. We will read, write, and think about the players, places, and events of male and female sports, discussing essays, book excerpts, poems, stories, and pieces of journalism. In addition, we will view sports from our own personal lenses and focus on how they have transformed our own lives or the lives of those around us. Most important, we will work tirelessly to become more polished readers, writers, thinkers, and grammarians — using the art of sport as our guide as we share, critique, revise, and rewrite. It is often said that sports can represent a metaphor for life. In this class, we’ll dive in (head first) and search for the truth.

Possible texts and authors may include: David Remnick (editor), *The Only Game in Town: Sportswriting from The New Yorker*; David Halberstam (editor), *The Best American Sports Writing of the Century*; Wright Thompson (editor), *The Best American Sports Writing 2015*; Rob Fleder (editor), *Sports Illustrated: Fifty Years of Great Writing*; Roger Angell, *Let Me Finish*; John McPhee, *A Sense of Where You Are: Bill Bradley at Princeton*; Christine Brennan, *Best Seat in the House: A Father, a Daughter, a Journey Through Sports*, Andre Agassi, *Open*; Patricia O’Connor, *Woe Is I: The Grammarphobe’s Guide to Better English in Plain English*; along with selections from male and female writers including John Updike, Sally Jenkins, Malcolm Gladwell, Joyce Carol Oates, Dan Jenkins, Frank Deford, Melissa Ludtke, Rick Reilly, Susan Orlean, Leigh Montville, Roy Blount Jr., George Plimpton, and many more.

Mind Over Matter: Athletes as Heroes in History and Literature

14055

Grade Level: 12th

Athletes have been honored as heroes since the first Olympiad. From Pindar’s odes to the present day, writers have celebrated men and women who challenge themselves in sporting events. As organized competitions have taken an increasing amount of the cultural and political spotlight, the exploits of these athletes have in some cases reached the level of legend and myth. Names like Michael Jordan, Muhammed Ali, Michael Phelps, and Lionel Messi are just a few that come to mind. Yet one of the lessons of history is that there are some figures who become legends while others—even those who have made great athletic or cultural contributions—have toiled without due recognition or been consigned to relative oblivion. This course will examine the contributions of a variety of athletes who reached the pinnacle of success in their respective sports, but special attention will be paid to those who made contributions to their societies and to history itself. Joe Rantz, Louis Zamperini, Gino Bartali, Billy Mills, Wilma Rudolph, are a just a few of the less-heralded athletes we will focus on. Beyond their athletic achievements, each of these individuals persevered in the face of extraordinary adversity and within the difficult historical context in which they lived— whether it was during the Great Depression, World War II, or the Civil Rights Movement. In addition, novels such as Bernard Malamud’s *The Natural* and screenplays focusing on athletes such as Martin Scorsese’s *Raging Bull* will be examined.

This course will examine different forms of storytelling in literature through analyzing biographies, autobiographies, screenplays and novels while focusing on themes such as perseverance, agony of defeat, competition, doubt and confidence. It will also seek to define what it means to be a hero in sports, how these sports heroes are the same or different from the archetypal heroes of classical literature, and how these athletes have wielded influence or inspired generations; it will also take a close look at their personal lives and the psyches in order to assess what made them great. During the third quarter, students will conduct research and write an essay on an athlete of their own choosing.

Modern Women Writers

14124

Grade Level: 12th

What does it mean to live, be, or feel as a woman? And how can literature help us better understand these particular experiences, joys, and challenges? To try to answer these questions, we will spend the year reading books written by women in the twentieth and twenty-first centuries. We will organize our reading by theme: friendship, pain, and love. Although we will primarily read fiction and write analytical essays, we will also read essays and memoirs which will shape and guide a personal writing project. Possible texts include *Sula* by Toni Morrison, *A Visit from the Goon Squad* by Jennifer Egan, *The Handmaid's Tale* by Margaret Atwood, *So Late in the Day* by Claire Keegan, *Between Two Kingdoms* by Suleika Jaouad, *A Room of One's Own* by Virginia Woolf, and *Americanah* by Chimamanda Ngozi Adichie.

Nature of Mind: Moments of Awakening in Global Literature

14058

Grade Level: 12th

“There’s lotsa keys, but only one door.”—Jack Kerouac, *The Dharma Bums*

Amidst the ambitions, anxieties, and desires of senior year, we find ourselves seeking and sometimes experiencing profound moments of transcendence—guided by curiosity, openness, wonder, and joy. This course will study moments of awakening in Eastern and Western literature, with a view to understanding the nature and habits of our minds more accurately. We will study relevant concepts in Eastern philosophy and compare insights from around the world. Texts may include: the poetry of Maria Rainer Rilke, the Sufi poet Rumi, and the English Romantic poets (William Blake, John Keats, Samuel Taylor Coleridge, William Wordsworth, and P.B. Shelley), as well as John Milton’s *Paradise Lost*, and Zen Koan poetry. In addition, we will read selections from *Nine Stories* by J.D. Salinger, *The Waves* by Virginia Woolf, and *Siddhartha* by Herman Hesse. The course will include units on contemporary screenplays by the Wachowskis—*The Matrix* (1999) and *Cloud Atlas* (2012)—music by Kendrick Lamar and John Lennon, and mindfulness meditation texts. From Descartes’ declaration of non-dual awareness, we will progressively sample from ancient and modern sources in order to reframe our concept of Enlightenment.

New York State of Mind (Expedition Course)

14041

Grade Level: 12th

Using the city in our backyard as our resource, this course will explore literature written about New York City and the writers who love it. We’ll take a look at New York through the lenses of its many cultural traditions. We’ll spend time with the Harlem Renaissance, with the Rat Pack and jazz, with immigrant stories, hip-hop, and responses to September 11. We’ll look at high society at the turn of the twentieth century, and at the squalor of tenement life with which it coexisted. We’ll cross the borders between boroughs from the Bronx to Brooklyn and in so doing, catch a glimpse of New York’s wild literary history. Through art, music, film, poetry, fiction, and nonfiction, we’ll aim to understand what it means to live in New York, to be a part of an urban community, and to capture the wonder and the loneliness of the greatest city of them all.

To contextualize our reading, we’ll also take several trips to New York throughout the year. Past expeditions have included: walking tours, The Moth StorySlam, documentary screenings, the 9/11 Memorial and Museum, scavenger hunts through Central Park and the NYC Subway, the Museum of the City of New York, and Off-Broadway theater.

Possible texts include *The Age of Innocence*, *Let the Great World Spin*, *Jazz*, *Death of a Salesman*, and *Breakfast at Tiffany’s*. We’ll likely look at the work of Langston Hughes, Frank O’Hara, Walt Whitman, Emma Lazarus, Jay-Z, Nas, Spike Lee, and Junot Diaz, among many others.

Students will be expected to go on several expedition field trips to New York City. Financial aid is provided for eligible students.

On the Road: A Journey Across America

14056

Grade Level: 12th

In *Travels with Charley*, a memoir about a road trip across America with his dog, John Steinbeck wrote that “Nearly every American hungers to move.” What is it about the propensity for travel—across our own country, in particular—that feels so inherently American? Is it a desire for freedom? And is the open road always able to provide the liberation, hope, and opportunity that it has come to represent in American mythology? These are just a few of the questions that we will consider as we journey together through American history and across its landscape. We’ll drive a jalopy to California with the Joads while reading *The Grapes of Wrath*. We’ll head down south with William Faulkner’s *As I Lay Dying* and Jesmyn Ward’s *Sing, Unburied, Sing*, and we’ll take a trip to a post-apocalyptic future in Cormac McCarthy’s *The Road*. We will also seek to challenge traditional road trip narratives by considering issues of forced migration, with texts like *Lost Children Archive*, a 2019 novel about the crisis at the U.S. border with Mexico.

Other possible texts include Jon Krakauer’s *Into the Wild*, Emily St. John Mandel’s *Station Eleven*, and Jade Chang’s *The Wangs vs. the World*. We will supplement our work by reading the poetry and essays of writers like Joan Didion, Walt Whitman, Henry David Thoreau, and Sarah Vowell, and by watching films that might include *Thelma & Louise*, *Almost Famous*, *Nomadland*, and *Little Miss Sunshine*.

In the past, this course has offered an optional trip. If a trip takes place, there will be additional costs. Financial assistance may be available for those who qualify.

Philosophy and Literature

14120

Grade Level: 12th

Though literature predates philosophy, there is nevertheless an important fraternal relationship between the two humanistic fields (though like some other siblings, their differences often lead to conflict). Philosophy asks the big questions upfront and tries to find solutions, often by rigorous and analytical argument; literature more often sees how human beings (or Neanderthals or Androids) manage to live with those same questions—sometimes rationally, sometimes passionately.

In this course, we’ll be considering some of the important philosophical questions: What is the good life? What is virtue? How are the human soul and the ideal political state best framed?

What is the function of art (literary, visual, musical)? We shall begin by reading Plato’s *Phaedo* as well as excerpts from several of his other major dialogues, examining his idealizing influence on subsequent philosophers and literature from the Romantic poets to Friedrich Nietzsche. We’ll also read Euripides’ *Bacchae* and Thomas Mann’s *Death in Venice* in light of Plato’s theory of idealized love.

Later, we will read and contrast the ethical systems of Immanuel Kant and David Hume, attempting to apply their concepts to both real world scenarios and plays by Tom Stoppard and William Shakespeare. During the spring we’ll consider the philosophical challenges posed by Existentialism, reading works by Jean-Paul Sartre and others. Finally, we’ll consider what it means to be human in an age of AI, considering both contemporary theories of intelligence as well as science fiction by Philip K. Dick and Kazuo Ishiguro

Poetry Seminar

14125

Grade Level: 10th-12th

Google “poetry,” and you won’t find a single definition that really makes sense. This course will be an experience of reading and writing this notoriously unwieldy genre, demystifying it while also delighting in its strangeness. Through a balance of both critical and creative work, we will begin with the foundations of poetic craft, exploring image, sound, line-making, metaphor, diction, and syntax. We will read curated selections of poems from a wide range of time periods, forms, and cultural traditions, including sonnets, blank verse, haiku, ghazals, pantoums, sestinas, and the avant-garde. Our writing practice will begin with play, lowering the barrier around the blank page with a series of generative prompts designed to detonate your expectations of what good poetry looks and sounds like. Then, in supportive, structured workshops, we will share and learn how to critique each other’s work in progress with specific, actionable feedback. Drawing from a mix of imitation and experimentation, you will leave the course with a printed chapbook of your original poems. Along the way, you’ll gain several practical methods to jumpstart and maintain your own writing practice while also developing your unique poetic voice.

This course may be taken in fulfillment of the 12th grade English requirement, or as an elective for students in 10th and 11th grades (concurrently with either English 10 or English 11).

Revolutionary Joy

14122

Grade Level: 12th

In this class, we’ll explore the idea of joy as a revolutionary act. We will look at the stories of people and communities who insist on expressing and reclaiming their joy as an act of resistance against the forces of oppression. The foundational unit for this course will be a deep dive into the creation of Hip-Hop as an art form and culture that prioritized pure, unapologetic fun in one of the poorest and most segregated communities in America. After that, we’ll explore everything from radical queer resistance in books such as *The House of Impossible Beauties* and films like *Paris is Burning* to the power of women celebrating each other in works such as *The Women of Brewster Place* and *Lemonade* by Beyoncé. By examining different genres of literature, music and art, we will seek to answer the following essential questions: what does joy look like in the face of seemingly insurmountable oppression? What is the relationship between expressions of anger and expressions of self love? And how can joy actually be used as a tool for liberation?

Russian Literature: The Soul on the Steppe

14046

Grade Level: 12th

Ian Frazier once humorously called Russia, “the greatest horrible country on earth” and Virginia Woolf likened reading Russian Literature to “seeing a naked man crawl from a train wreck”. How’s that for a starting point? Russia is an immense nation that has a habit of producing both brutal dictators and imaginative geniuses, often at the same time. Despite the adversity, it is difficult to find a period in history when another civilization produced an equal number of literary masterpieces as Russia’s “Golden Century” from 1815–1917. Russian literature burned hot: a hundred years of unparalleled brilliance and then, poof, it all went dark as Stalin rose to power in the wake of the Russian Revolution. We will focus on the literary giants Tolstoy, Dostoevsky, Gogol, Turgenev, Pushkin, and Chekov. We’ll travel to St. Petersburg to witness one of the most famous murders in all of literature, fall hopelessly in love in Yalta, stop in Moscow to meet a beautiful woman who pursues a disastrous affair, and drift across the Siberian steppe where Dostoevsky found both God and creative inspiration after a firing squad held a gun to his head.

Theatre on Both Sides of the Pond: Page to Stage

14033

Grade Level: 12th

This course will examine past and current American and British plays. The curriculum is determined by what is playing between New Haven and New York City. Students will study and go see a series of plays written on both sides of the Atlantic. Theater is a device to explore the collective conscience of a nation. Through the lenses of playwrights, we will look at the challenges and collective joys of the world around us. Comedies and tragedies abound in this class.

Playwrights we will be studying: Lin-Manuel Miranda, Stephen Sondheim, Tom Stoppard, Samuel Beckett, William Shakespeare, Tony Kushner, and Tennessee Williams, to name a few. Some of the plays we have seen: *Hamilton*, *Book of Mormon*, *Sleep No More*, *Hamlet*, *Fun Home*, *Into the Woods*, *Arcadia*, and many more.

**There will be an additional fee for tickets.

Twentieth-Century American Storytellers

14123

Grade Level: 12th

If you liked second semester sophomore year, this course is for you. We will study the writers, poets, and singers who tell stories about 20th Century America. Students will read a variety of genres, including novels, short stories, dramas, and poetry. In addition, we will consider stories told in films and songs.

Storytellers to be studied include Scott and Zelda Fitzgerald, Ernest Hemingway, Dorothy Parker, Robert Frost, William Faulkner, John Steinbeck, Arthur Miller, Ken Kesey, John Irving, Tim O'Brien, Woody Guthrie, Bob Dylan and Bruce Springsteen, among others.

MATHEMATICS—BRUNSWICK SCHOOL

The goal of the Brunswick Mathematics Department is to develop in every student a firm grounding in the basic facts and skills, to extend these skills to advanced topics, and to encourage the initiative required for the solution of mathematical problems. A wide range of courses is offered in order to accommodate all students, including those who need the challenge of high-level content.

In order to encourage the number sense required in everyday life and to prepare students for the no-calculator sections of future examinations, a substantial amount of pencil-and-paper and mental arithmetic is involved in every course. In addition, technology is used to reinforce concepts and to tackle problems that cannot be solved by other means. Thus, every student is expected to have an approved graphing calculator.

Algebra and Computational Geometry

28100

Prerequisite: Pre-Algebra

This course is designed for 9th grade students who have had difficulty in their previous Algebra I courses, or who have not yet taken Algebra I. The traditional Algebra I curriculum will be taught and consolidated during the year. Additionally, several areas from the standard geometry curriculum will be tackled, with students calculating angles, lengths, areas, and volumes using the most important theorems from the course. The aim is to equip the students to be successful in Geometry and Algebra II in their sophomore and junior years. Students will gain familiarity with mathematical notation and language, will further their understanding of the interchange between expressions written in sentence and mathematical forms, and will apply the ideas they are learning in both real-life and theoretical contexts. Most importantly, the inherent sense that lies behind all mathematical thought will be constantly reinforced.

Geometry

28099

Prerequisite: Algebra I

In this course students develop a detailed and analytical understanding of the ideas of shape and space to which they have been introduced in their middle school courses. Complex geometric situations are analyzed on a quantitative level, and the ideas of a cohesive argument in the form of mathematical proof are included in the course. Also, the students' algebra skills are maintained and developed through application to geometric problems. The topics in this course include parallel lines and angles, polygons, similarity, the Pythagorean Theorem, areas and volumes, and circle theorems.

Accelerated Geometry

28101

Prerequisite: Algebra I and Departmental Approval

This course offers a more extensive range of topics and a higher level of problem solving than that which is required in Geometry, while covering material less rapidly and to a slightly more accessible level than in the Honors Geometry course. All the topics covered in Geometry are included here, along with higher-level proofs and some more advanced theorems and techniques.

Honors Geometry

28102

Prerequisite: Algebra I and Departmental Approval

This course includes all the topics covered in Accelerated Geometry, with students frequently encountering more complex problems and proofs. In this way, a foundation in deduction and problem-solving is established for students who wish to do high-level mathematical work in future years.

Quantitative Geometry

28103

Grade Level: 10th

Prerequisite: Algebra and Computational Geometry

This is an accessible course covering the standard range of geometrical topics from a solely computational standpoint. Ample time is devoted to each area of study in order to securely establish the necessary concepts and instill the confidence required for tackling more complex problems. Additionally, essential techniques from Algebra I are reviewed and a substantial number of Algebra II topics are introduced in order to prepare students for that course the following year.

Algebra II with Trigonometry

28200

Prerequisite: Geometry

In this course the algebraic understanding established in Algebra I and in Geometry is extended to more advanced topics. The student develops an understanding of abstract ideas such as the nature of functions and through this enhances his powers of analysis and increases his problem-solving ability. The topics covered include algebraic modeling, functions and graphs, polynomials, exponential and logarithmic functions, trigonometry of right triangles, trigonometrical functions of all angles, sequences and series, and probability.

Accelerated Algebra II with Trigonometry

28205

Prerequisite: Geometry and Departmental Approval

This course offers a more extensive range of topics and a higher level of problem solving than that which is required in Algebra II, with material being covered less rapidly and to a slightly more accessible level than in the Honors Algebra II course. All the topics covered in Algebra II will be included here, along with a more thorough treatment in several areas, including trigonometry, exponential and logarithmic functions, curve sketching, conic sections, and sequences and series.

Honors Algebra II with Trigonometry

28202

Prerequisite: Accelerated Geometry and Departmental Approval

This course covers all the topics included in Algebra II and Accelerated Algebra II, with more complex problems being tackled at every stage. Additionally, some topics that are more advanced than those in the regular and Accelerated courses are covered, including trigonometrical equations and identities, exponential and log equations, graphs of rational functions, complex solutions of polynomial equations, equations of circles and other conic sections, and arithmetic and geometric sequences and series. By learning to solve demanding problems and covering the more advanced topics, students extend their minds toward the high level of thinking required in advanced mathematics courses.

Precalculus

28300

Prerequisite: Algebra II

This course offers a comprehensive foundation in the advanced mathematical skills and concepts needed to study calculus. New topics are introduced, and subject areas already encountered in Algebra II are covered in greater detail, with more complex problems being encountered at every stage. The topics covered include functions, trigonometrical equations and identities, polynomials, inequalities, exponential functions, logarithms, complex numbers, matrices, sequences and series, and probability.

Accelerated Precalculus

28301

Prerequisite: Algebra II and Departmental Approval

This course offers a more extensive scope of material and a higher level of problem solving than that which is required in Precalculus, while offering a greater accessibility and a less demanding range of topics than in the Honors Precalculus course. Students frequently encounter word problems, and at every stage are encouraged to think logically and analytically. Thorough attention is paid to the facts and skills required for the study of calculus.

Honors Precalculus

28302

Prerequisite: Accelerated Algebra II and Departmental Approval

This course is designed to provide students with effective preparation for Advanced Placement Calculus and future college-level mathematics and science courses. Throughout the course the development of the student's problem-solving ability is emphasized. The topics covered include functions, graphs, polynomials, exponential functions, logarithms, rational functions, trigonometry, parametric equations, conic sections, polar coordinates, systems of equations and inequalities, vectors (in two and three dimensions), sequences, series, mathematical induction, counting principles, and probability.

Statistics

28431

Grade Level: 12th

Prerequisite: Algebra II

This course is designed for students who have taken math in our regular track and will be pitched at a level accessible to all students who have passed Algebra II. Concepts will be tackled both on a descriptive and a quantitative level, with data sets being summarized using graphs and numerical measures. Statistical quantities will be evaluated both using basic arithmetical operations and using the more direct methods provided by technology. Throughout the course, interpretation of statistical quantities and graphs will be emphasized, and the concepts covered will be directly applied through surveys and other data-collection projects. Topics will include univariate data, correlation and regression, probability, random variables and probability distributions, sampling distributions, and statistical inference.

Calculus

28405

Prerequisite: Precalculus

This course introduces students to the methods of calculus and the ideas that lie behind them. Concepts are presented in an intuitive way and students develop their calculus skills in varying contexts and applications. The graphing calculator is used to clarify concepts and to produce solutions that cannot be found using paper-and-pencil methods. Topics include differentiation, applications of the derivative, techniques of differentiation, trigonometric functions, exponential and logarithmic functions, integration, techniques of integration, and differential equations.

Accelerated Calculus

28406

Prerequisite: Precalculus and Departmental Approval

This course covers all the topics included in Calculus, with more demanding problems being tackled within those topic areas. Additionally, some topics that are more advanced than those in Calculus are covered. This course offers a strong basis in the ideas required for college courses in calculus and other mathematical disciplines.

AP Calculus AB

28407

Prerequisite: Accelerated Precalculus and Departmental Approval

An Advanced Placement course in mathematics consists of a full academic year of work in calculus comparable to that undertaken in colleges and universities. Calculators are used for solving equations numerically, evaluating derivatives and integrals, and for demonstration of calculus concepts. The topics covered in the course include functions and graphs, limits and continuity, derivative formulas, the Mean Value Theorem, related rates of change, antiderivatives, differential equations, the Fundamental Theorem of Calculus, the trapezoidal rule, areas between curves, volumes of solids of revolution, and techniques of integration.

AP Calculus BC

28417

Prerequisite: Honors Precalculus and Departmental Approval

AP Calculus BC is a full-year course in the calculus of functions of a single variable. In addition to all the topics covered in the AP Calculus AB course, the BC course covers derivatives of vector functions and parametrically defined functions, the area bounded by polar curves, logistic growth functions, the length of a path, work as an integral, improper integrals, convergence of sequences and series, power series, and Taylor polynomials.

Honors Math: Multivariable Calculus

28501

Prerequisite: AP Calculus BC and Departmental Approval

This course is an equivalent of a college Calculus 3 course. The topics covered include functions of several variables, vector-valued functions, partial differentiation, multiple integration including changes of variables, the gradient of a scalar field, the divergence and curl of a vector field, line integrals, surface integrals, Green's theorem, the divergence theorem, and Stokes' theorem.

Honors Math: Linear Algebra

28502

Prerequisite: Multivariable Calculus and Departmental Approval

This course is equivalent to a college undergraduate Linear Algebra course. The topics covered include solution of systems of linear equations, Gaussian elimination, matrices and their inverses, linear independence and dimension, linear transformations, orthonormal bases, determinants, eigenvalues and eigenvectors, positive definite matrices, and the singular value decomposition.

Honors Math: Real Analysis

28504

Prerequisite: Multivariable Calculus and Departmental Approval

Mathematical analysis has as its goal the rigorous derivation of the results used in calculus. This is an undergraduate-level course such as might be taken by math majors in their second or third years of college, and it demands considerable mathematical maturity from the student. The material consists almost entirely of proofs, both in the theory covered in class and in the exercises assigned. Topics covered will include limits of sequences and of functions and sums of infinite series; continuity and the extreme-value and intermediate-value theorems; derivatives, the mean-value theorem, and Taylor polynomials; Riemann integrals and both forms of the fundamental theorem of calculus; and uniform convergence of sequences of functions. (The word "real" in "real analysis" specifies that functions of real numbers are considered, as distinct from "complex analysis," which deals with functions of complex numbers.)

Honors Math: Complex Analysis

28505

Prerequisite: Linear Algebra and Departmental Approval

Complex analysis is, essentially, the extension of calculus to the complex numbers. Specifically, it explores the derivatives of functions of complex variables and the integration of these functions along curves in the complex plane. This is an undergraduate-level course such as might be taken by math majors in their third or fourth years of college, and is reserved for students who have the extraordinarily high level of mathematical maturity required to successfully complete a course such as this in high school. Homework assignments and test questions will present a balanced combination of proof-based and computational problems. The topics covered will include analyticity and the Cauchy-Riemann equations, contour integrals and Cauchy's theorem, Taylor and Laurent Series, the residue theorem, the argument principle and Rouché's Theorem, and conformal mappings.

AP Statistics

28427

Grade Level: 11th–12th

Prerequisite: Honors/Accelerated Precalculus and Departmental Approval or A average in Honors Algebra II and Departmental Approval

This course consists of a full academic year of work in preparation for the Advanced Placement examination. Students study the techniques of data collection and learn how to analyze the results both qualitatively and quantitatively. The graphing calculator is used extensively both for data display and for the precise statistical tests used in business, industry, and science. The topics studied include sampling, experimental design, probability, the normal distribution, the t-distribution, the binomial distribution, the chi-square distribution, the central limit theorem, correlation and regression, confidence intervals, and hypothesis testing.

Stanford Advanced Mathematics

28430

Prerequisite: AP Calculus BC and Departmental Approval

The Online High School (OHSx) at Stanford University provides mathematics courses in a variety of college-level subjects including multivariable differential calculus, multivariable integral calculus, linear algebra, differential equations, and number theory. All of the courses offered correspond to courses regularly taught to Stanford University undergraduates. Students tackle written assignments topic by topic, and are assessed by means of examinations provided by the Stanford program. In addition to the resources provided by Stanford University, the Brunswick teacher supervising the course provides help with concepts and problem-solving. Those completing OHSx courses may be eligible to receive college credit.

MATHEMATICS—GREENWICH ACADEMY

The department of mathematics at Greenwich Academy is dedicated to helping young women acquire the confidence and the fundamental skills necessary to succeed in mathematics. Students are empowered within the classroom environment to develop literacy and proficiency in mathematics as well as a command of mathematical concepts and problem-solving strategies. With a curriculum grounded in algebra, geometry, calculus and statistics, students develop strong analytical skills that provide a strong foundation for further study in mathematics or math- related courses after high school.

Algebra I

26010

Prerequisite: Pre-Algebra

Algebra I introduces students to graphical and algebraic exploration of linear, quadratic, rational, and radical functions. Students learn various techniques for simplifying and solving linear, polynomial, rational, and radical equations both algebraically and graphically. Applications involving data analysis, geometry, and trigonometry are also included.

Geometry

26100

Prerequisite: Algebra I

Geometry helps students develop a strong spatial understanding as they explore two-dimensional shapes in Euclidean and Cartesian coordinate geometry. Parallel lines and planes, congruence, similarity, polygons and quadrilaterals, circles, and right triangle trigonometry are the core topics of this course. Deductive reasoning is motivated by investigation, and Algebra I skills are integrated into all applications of the concepts studied. Completion of this course fulfills the geometry diploma requirement.

Geometry Accelerated

26101

Prerequisite: Algebra I and Departmental Approval

Geometry Accelerated parallels Geometry, with topics covered in greater depth and at a faster pace. The course emphasizes the traditional elements of Euclidean geometry. Deductive reasoning is motivated by student investigation, done both individually and collaboratively. Students are expected to have strong Algebra skills and will be asked to do some of their learning independently as they test hypotheses and make conclusions based on their work. In addition to Euclidean geometry, students will study coordinate geometry, congruence, similarity, and right triangle trigonometry in depth.

Honors Geometry

26102

Prerequisite: Algebra I and Departmental Approval

Honors Geometry assumes that students are ready to think and work independently. This course leads students to investigate complex geometric concepts and proofs, and develop a foundation in deduction and problem-solving. In addition to Euclidean geometry, students investigate the Cartesian coordinate plane (linear functions and conic sections), transformations, sets, vectors, and right triangle trigonometry.

Algebra II

26200

Prerequisite: Geometry

The development of a strong fundamental understanding of polynomials, rational, radical, and trigonometric functions and expressions is the foundation of Algebra II. Students are expected to gain a working knowledge of polynomial, rational, radical, and trigonometric equations and inequalities, as well as develop a solid understanding and analysis of functions. Among the topics introduced are the basics of trigonometry, logarithmic and exponential functions and equations.

Algebra II Accelerated

26201

Prerequisite: Geometry Accelerated and Departmental Approval

In this course, the concepts established in Algebra I and Geometry are extended to more advanced topics. The development of a strong fundamental understanding and analysis of functions, with a focus on polynomial, rational, logarithmic, exponential, and trigonometric functions is the principal objective. Students use algebraic and graphical techniques to obtain numerical solutions to complex equations. The ability to work and learn independently is an integral part of Algebra II Accelerated and is expected for success in this course.

Honors Algebra II

26202

Prerequisite: Honors Geometry and Departmental Approval

Honors Algebra II exposes students to advanced algebraic concepts and problem solving. Students are expected to work with a great deal of independence as they master algebraic manipulation, graphical applications, and problem solving techniques. A thorough development of the polynomial, rational, trigonometric, and logarithmic functions and their inverses highlights the course. Students completing the course successfully are expected to take the SAT II Level I Subject test.

Precalculus

26300

Prerequisite: Algebra II

Precalculus is designed to give students a solid algebraic and graphic understanding of polynomial, rational, trigonometric, exponential, and logarithmic functions. New topics are introduced and subject areas already encountered in Algebra II are covered in greater detail, with more complex problems encountered at every stage. The graphing calculator is an important tool in this process. Upon successful completion of this course, juniors are expected to take the SAT II Level I Subject Test.

Precalculus Accelerated

26302

Prerequisite: Algebra II Accelerated and Departmental Approval

Precalculus Accelerated continues and further develops the study of functions begun in Algebra II, including polynomial, rational, trigonometric, logarithmic, and exponential functions. In addition, students are exposed to some discrete mathematics, conics, and the basic concepts of the limit, the derivative, and some simple derivative rules. The graphing calculator is an important tool in this process. Students are expected to take the SAT II Level I Subject Test following the completion of the course.

Precalculus with Statistics

26301

Prerequisite: Algebra II or Algebra II Accelerated and Departmental Approval

The first half of this course provides the student with a solid foundation in traditional precalculus topics including functions, their inverses, and their graphs with a focus on polynomial, rational, logarithmic, exponential, and trigonometric functions and equations. The second semester of this course provides the background for a college level AP statistics course. The topics include methods of data collection and graphical displays. Students learn how to choose appropriate methods for summarizing distributions of univariate data. Juniors are expected to take the SAT II Level I Subject Test upon successful completion of this course.

Honors Precalculus

26303

Prerequisite: Honors Algebra II and Departmental Approval

This course is designed to prepare students for Advanced Placement Calculus BC as well as further college level study in mathematics. The first semester continues with the study of functions begun in Algebra 2 Honors with an emphasis on the student's problem solving ability. Discrete mathematics is introduced including such topics as combinatorics and probability, polar coordinates and functions, vectors, parametric functions, matrices, and sequences and series. The second semester focuses on the study of differential calculus including all applications of limits, continuity, differentiation, and derivative applications.

Calculus

26404

Prerequisite: Precalculus and Departmental Approval

This is a senior elective course that provides an introduction to differential and integral calculus. This course deals with the rules of differentiation, the applications of the derivative to graphing, rates of change, and optimization. Students will investigate techniques of integration, focusing on the Fundamental Theorem of Calculus as applied to areas under the curve, between curves, volumes of solids, and accumulations functions.

Statistics

26405

Prerequisite: Algebra II and Departmental Approval

The goal of this senior elective is to help students understand numerical information and enable them to make decisions based on their interpretation of this information. This is an activity-based course that introduces statistical concepts and builds a foundation applicable to a wide variety of disciplines. The topics studied include data collection, graphical representation, normal distribution, bivariate data, and inference.

AP Calculus AB

26407

Prerequisite: Precalculus Accelerated and Departmental Approval

This is a college-level course in calculus requiring considerable time, effort, and motivation. The topics covered include functions and graphs, limits and continuity, derivative formulas, the Mean Value Theorem, related rates of change, antiderivatives, differential equations, the Fundamental Theorem of Calculus, areas between curves, volumes of solids and revolution, and techniques of integration. All students in this course will take the AB Calculus Advanced Placement Exam at year's end.

AP Calculus BC

26417

Prerequisite: Honors Precalculus and Departmental Approval

Calculus BC is a full-year college-level course in the study of calculus of functions of a single variable. Considerable effort and motivation are required for success in this course, as well as an ability to work and learn independently. The course begins with a review of the topics covered in Honors Precalculus including all applications of limits, continuity, and differentiation. Integration of polynomial, trigonometric, and logarithmic functions is introduced, and integration and differentiation techniques are applied to vector, polar, and parametrically defined functions. The BC course concludes with the study of differential equations, improper integrals, convergence of sequences and series, and Taylor polynomials. All students in this course will take the BC Calculus Advanced Placement Exam at year's end.

AP Statistics

26427

Prerequisite: Precalculus with Statistics and Departmental Approval

This course is a continuation of Precalculus with Statistics completing the AP Statistics curriculum. It is a college-level course in statistics requiring considerable time, effort, and motivation. After a quick review of univariate and bivariate data analysis, students then study simulation, probability, and statistical inference. All students in this course will take the AP Statistics Exam upon successful completion of this course.

AP Statistics (Y)

26428

Prerequisite: Algebra II and Departmental Approval

This course consists of a full academic year of work in preparation for the Advanced Placement examination. Students learn the techniques of data collection, conduct their own experiments and surveys, and learn how to analyze the results both qualitatively and quantitatively. The TI-84 calculator is used extensively both for data display and for the precise statistical tests used in business, industry, and science. The topics studied include sampling, experimental design, probability, the normal distribution, the t-distribution, the binomial distribution, the chi-squared distribution, the central limit theorem, correlation and regression, confidence intervals, and hypothesis testing.

Honors Seminar: Linear Algebra

26434

Grade Level: 11th–12th

Prerequisite: AP Calculus BC or Honors Precalculus with Departmental Approval

This course is equivalent to a university level course in Linear Algebra. Topics covered in the fall include introduction to matrices and matrix operations, vector spaces, linear transformations, and eigenvalues and eigenvectors. Developing strong proof-writing techniques is heavily emphasized. The spring will focus on applications of linear algebra to fields such as statistics, differential equations, and computer science. This course requires significant self-motivation and independent learning, and thus admission to the course is selective. Motivated and passionate math students might consider taking this course concurrently with AP Calculus BC or Honors Multivariable Calculus.

Honors Seminar: Multivariable Calculus

26435

Grade Level: 11th–12th

Prerequisite: AP Calculus BC and Departmental Approval

This course is a university-level course in Multivariable Calculus for functions of two or more variables. Course topics include a study of two- and three-dimensional vector space, vector-valued functions, surfaces in three dimensions, tangent and normal vectors, partial derivatives, continuity and differentiability of functions of two or more variables, directional derivatives, gradient vectors, and methods of calculating maxima and minima including Lagrange multipliers. Integral topics include double and triple integrals in all coordinate systems, surface areas of parametrically defined functions, change of variables and the Jacobian, vector fields, flux, and various other applications to physics, line integrals, Green's theorem, the divergence theorem, and Stokes' theorem. This course requires significant self-motivation and independent learning, and thus admission to the course is selective.

FALL SEMESTER COURSES

Honors Topics in Discrete Math and Topology (f)

26436

Grade Level: 10th–12th

Prerequisite: Algebra 2 Accelerated and Departmental Approval

This course will focus on building the fundamental logic and reasoning skills that are integral to higher level math courses through the lenses of discrete mathematics and topology. During the first half of the course, students will be introduced to logic and proof reasoning, do's and don'ts when writing a formalized proof, set theory, induction, and recursion. After establishing a solid foundation of proof writing strategies, we will then transition into a topological framework. Students will use what they learned in the first half of the course to explore topics that may include homeomorphisms, limit points, continuity, the fixed-point property, path connectedness, compactness, surfaces, plane models, and connected sums.

SPRING SEMESTER COURSES

Honors Combinatorics (s)

26437

Grade Level: 10th–12th

Prerequisite: Algebra 2 Accelerated and Departmental Approval

This course is an introduction to the field of combinatorics, proof writing, and developing a full line of mathematical reasoning. While taking Honors Topics in Discrete Math and Topology is recommended, as the methods of approaching problems will be similar, it is not a prerequisite and students may opt to solely take combinatorics. The topics covered may include tiling, magic squares, permutations, combinations, the pigeonhole principle, Ramsey's Theorem, Pascal's Triangle, the binomial theorem, the inclusion-exclusion principle, zero-sum games, payoff matrices, and Catalan numbers.

HISTORY AND SOCIAL SCIENCES

The Brunswick and Greenwich Academy History & Social Sciences Departments have developed a curriculum based on the premise that history and humankind are shaped by the past. Therefore, the examination of the past is paramount in preparing for the future. Furthermore, the study of history and the social sciences is critical to understanding the institutions and functioning of human society. At both Greenwich Academy and Brunswick, students develop historical thinking skills, learn how to analyze their own and others' opinions, and participate in civic and community life as active, informed citizens. Reading, writing, and speaking skills are promoted rigorously throughout the program.

Opportunities for pursuing history and/or social studies beyond the classroom are:

- Current Events Clubs at both Greenwich Academy and Brunswick School
- Debate teams at both Greenwich Academy and Brunswick School
- Participation in National History Bee and Bowl
- Participation in National History Day Competition
- Participation with other schools in the Model U. N. program and Harvard's Model Congress
- Louise Lehrman Visiting Fellow Lecture in American History

Modern World History

31002

Grade Level: 9th

Prerequisite: None

*Required course

Modern World History (1750–1945) is a required course that introduces core ideological concepts that define and dominate the modern era. The course is chronological, but explores recurring themes such as globalization and its impact, the origins of racial classification and prejudice, technology and demographic change over time, the development of social and economic systems of power imbalance within and across societies, and the influence of revolution and reform movements, both nationally and internationally. Throughout the course, students will consider the historical construction and development of human identity within and across societies and as drivers of modern world historical development. The class builds toward an understanding of the critical influence of historical events and ideologies on the present. Students will continue to develop their critical thinking skills with the use of primary and secondary sources, as well as the ability to synthesize and analyze historical events.

United States History

33000

Grade Level: 10th–12th

Prerequisite: None

*Required course

This course provides a comprehensive study of United States history, encouraging students to think, write and speak clearly about many of the fundamental issues in America's past. The scope is thematic, moving from the origins of settlement to world responsibilities and the pressures of modern times. Topics for study include: New England Puritanism, the meaning of the American Revolution, Constitutional issues, the causes of the Civil War, Industrialization, Immigration, the Gilded Age and Progressive reform, the Great Depression, the New Deal, U.S. responses to the Cold War, the Civil Rights Movement, including the lessons of Vietnam, and the eras of Carter, Reagan, Bush, and Clinton. With the help of maps and original and interpretive sources, students explore American politics, economics, society, and values. Class discussions and debates help develop communication skills and stimulate ideas to be pursued in required student research and writing.

ADVANCED PLACEMENT & HONORS

HISTORY

Advanced Placement Prerequisite Statement—APPS

Advanced Placement courses in History (European, United States, World and Art History), U.S. Government & Politics, Comparative Government, Psychology, Economics and Human Geography are highly demanding. Admission to these courses is dependent upon approval of both the Greenwich Academy and Brunswick History & Social Sciences Departments.

Minimum grade requirements for applying to a given course are as follows:

Current **Freshmen** should have an A- average and least three quarter grades of A- or higher.

Current **Sophomores** should have at least an A- in their current non-AP course or at least a B+ in their current AP History course to be considered for an AP course for the following year.

Current **Juniors** should have a B+ in their current non-AP History course or at least a B in their current AP History course to be considered for an AP course for the following year. AP Psychology and AP Economics may not be taken concurrently.

Please note: Rising Seniors are given placement preference over Rising Juniors, Rising Juniors over Rising Sophomores.

All interested students must first complete and submit an application form. The respective department heads evaluate these forms, analyzing both their quantitative and qualitative merits. The criteria for acceptance include the following: the recommendation of the student's most recent history teacher; history and other relevant course grades over the past two years, the student's overall G.P.A., total academic and co-curricular commitments, and demonstrated evidence of enthusiasm for the subject matter. The final decision is contingent upon successful completion of the candidate's present history course, and dependent on space, availability in course section.

Students enrolling in any AP course **must take** the AP Examination in that course—even if they have been accepted to college/university. In the first two quarters of the academic year, students who are performing below the normal standard for any given AP course may be asked to switch to a non-AP elective if their level of effort and/or achievement does not improve over time. Finally, students may not opt out of an AP **of their own accord** after the add/drop period has passed

Honors American Studies **

13200 & 36427

Grade Level: 10th

Prerequisite: Departmental Approval from both History and English departments (see APPS)

Honors American Studies offers passionate students of the humanities an opportunity to explore the culture and history of the United States through a rigorous interdisciplinary approach. This double credit course will dive deep into primary and secondary texts, including essential and challenging works of American literature, alongside the historical context in which the authors lived, and that the works depict. The course will establish a firm understanding of American history, and will enhance students' historical thinking skills, and historical research methods and primary source analysis. The course will seek to answer questions such as: What is the American story?, Who tells the American story?, and How did we get here?, and it will explore themes including Freedom and Democracy, Faith and Belief, and Community and the Individual. As a multi-disciplinary course it will explore art, film and music as expressions of American culture, and will include field trips to local institutions. This is a reading and writing intensive course, co—taught by English and history teachers.

In addition to recommendations from current English and History teachers, students will complete a written component in the course approval process.

**** Honors American Studies** comprises two distinct courses - *Honors American Studies: Literature* (#13200) and *Honors American Studies: History* (#36427) - that students will take in two separate blocks. Accepted students will satisfy their 10th grade English and 10th grade History requirements by taking the two courses. Acceptance into **Honors American Studies** requires enrollment into both *Honors American Studies: Literature* and *Honors American Studies: History*.

AP United States History

33070

Grade Level: 10th–12th

Prerequisite: Departmental Approval (see APPS)

*Fulfills departmental course requirement

The Advanced Placement course in U.S. History presents a college-level survey course to secondary school students. It differs from the regular American History course in that students are expected to perform more independently and analytically and be responsible for a heavier reading load. While the basic content and skills are the same, the course examines in greater depth such areas as political philosophy, intellectual and social movements, foreign policy, and historiography. More time is devoted to the study of primary and interpretive sources and the writing of expository essays. The course prepares students for the Advanced Placement examination in American History, given in May.

AP African American Studies

36426

Grade Level: 11th–12th

Prerequisite: Departmental Approval (see APPS)

*Fulfills departmental course requirement

AP African American Studies is an interdisciplinary course that examines the diversity of African American experiences through direct encounters with varied sources. Students explore key topics that extend from early African kingdoms to the ongoing challenges and achievements of the contemporary moment. Given the interdisciplinary character of African American Studies, students in the course will develop skills across multiple fields, with an emphasis on developing historical, literary, visual, and data analysis skills. This course foregrounds a study of the diversity of Black communities in the United States within the broader context of Africa and the African diaspora. AP African American Studies is organized by four thematic units that follow a chronological flow across the course. Throughout each unit, students build interdisciplinary analytical skills through deep encounters with a wide range of texts and sources.

AP Art History

36467

Grade Level: 11th–12th

Prerequisite: Departmental Approval (see APPS)

*Fulfills departmental course requirement

This course explores the global history of art from the Prehistoric period to the present and prepares students for the AP Art History exam in May. Art historians study works of art in their specific cultural contexts and analyze the role of art in society. The AP Art History course explores the political, economic, religious, intellectual, and social conditions that account for artistic production. We examine artifacts from Europe, the Near East, Asia (including China, Japan, and India), Africa, the Americas, and the Pacific region. The course is interdisciplinary in nature, including considerations of archeology, patronage, materials, and conservation. We begin with the question of what constitutes “art,” then move from a study of ancient Egyptian pyramids, Greek temples, and Renaissance painting to an examination of African sculptures, Mayan pyramids, and Chinese bronzes. Expansive in scope and time, the course concludes with a study of global contemporary art. Students engage in analytical writing, public speaking through Power Point and Podcasts, and a variety of creative projects. Field trips to the Metropolitan Museum of Art, the Museum of Modern Art, and other museums and galleries complement the curriculum.

AP Comparative Government & Politics

36420

Grade Level: 11th–12th

Prerequisite: Departmental Approval (see APPS)

*Fulfills departmental course requirement

AP Comparative Government and Politics will introduce the student to critical issues in contemporary and historical world politics. The course begins with a conceptual approach to political science through the introduction of themes such as power, political culture, and political organizations and institutions. Students use those themes to compare and to contrast the political experiences of specific nations. They examine Iran, Great Britain, Nigeria, Mexico, Russia and China and identify the characteristics of political systems that both distinguish and unite diverse countries. By the end of the course, students gain a stronger understanding of international issues of globalization, economic and political power, and political institutions, theories and movements.

This is a great class for someone who: Is interested in politics outside of America, likes to discuss current global events and wishes to get to the philosophical core of different political institutions, theories and movements.

AP European History

32007

Grade Level: 11th–12th

Prerequisite: Departmental Approval (see APPS)

*Fulfills departmental course requirement

This class is designed to mimic—in both its depth and breadth—an introductory college course in European history. The course content begins in the Renaissance and culminates with a study of post-Cold War Europe. Throughout the year students examine the political, economic, social, religious, intellectual, and artistic developments that played, and continue to play, a crucial role in shaping European society and the world beyond. The curriculum prepares students for the AP European History examination, which asks students to display a solid understanding of the principal themes in European history through multiple choice and free-response essay questions and an ability to work critically with historical documents.

AP Human Geography

36419

Grade Level: 11th–12th

Prerequisite: Departmental Approval (see APPS)

*Fulfills departmental course requirement

After taking AP Human Geography, students will have a much greater understanding of why the world looks and functions the way it does. This course studies the patterns of human activity on the earth's surface and the underlying processes that give rise to these patterns. For example, one can study coffee production in the world (pattern), but s/he must understand the history of colonialism, the role of multinational corporations, and increasing economic interdependence (processes) that influence the distribution of coffee growers in tropical regions. The main areas of study are population and migration, culture, political geography, agricultural and rural land use, industrialization, economic development and urban land use. Throughout the course, students will use a wide array of maps, charts and photographs to conduct geographic analysis which will allow them to make sense of the world around them.

AP United States Government & Politics

38417

Grade Level: 11th–12th

Prerequisite: Departmental Approval (see APPS)

*Fulfills departmental course requirement

This college-level course prepares students for the AP United States Government & Politics examination through exploration of both general concepts and specific case studies, providing a more thorough understanding of the institutions, groups, and beliefs that make up the nation's political reality. The curriculum includes: Philosophical underpinnings of American political culture; the study of the constitutional basis of the U.S. government; the role of public opinion, political ideology, political parties, elections, interest groups, and the media in our political system; the interaction of the three major branches of national government; the development of civil liberties and civil rights. Likewise, the types of exercises and assignments given are meant to enhance their test-taking skills, enabling the students to approach the exam with both confidence and a high degree of competence. Current events are also a critical part of the class program; each student will choose a story and present each semester during the course of the year on topics related to the AP-required units.

AP World History

38418

Grade Level: 11th–12th

Prerequisite: Departmental Approval (see APPS)

*Fulfills departmental course requirement

AP World History offers students a rich understanding of world historic patterns from 1000 CE to the present, as well as the opportunity to dig deep into primary and interpretive sources, conceptual thinking, and historiography. In depth and breadth it mimics an introductory college course, using chronology, geographic regions, and themes to bring clarity to the content. The class seeks to answer the questions of how and why political, social, and demographic dynamics exist as they do in the 21st century. Students will develop an understanding of religious, philosophical, and intellectual traditions, and the major events that have served as turning points in world history. Truly global in nature, the class will examine the regions of Asia, Africa, Europe, and the Americas and adhere to the AP emphasis on comparison, change over time, point of view, and historical context.

FALL SEMESTER COURSES

Criminal Justice (f)

36469

Grade Level: 11th–12th

Placement preference will be given to rising Seniors.

Prerequisite: None

*Fulfills departmental requirement

Why do so many people end up in jail? Look behind the headlines and analyze the historic foundations of the criminal justice system. Critically review the procedures related to how people end up in court (including police stops, interrogations, arraignments, trials, pleas, and sentencing) and examine the historic context of criminal laws, Constitutional protections for individuals, historic case law, statutes, police and court procedures. Delve into differences between state and federal law and how and why “justice” may vary for different individuals. Read and analyze key primary documents (the Constitution, statutes, trial documents, Supreme Court opinions). Learn legal terminology, constructs, and procedures. Examination of case studies, trial elements, and analytical and creative writing will be at the center of student led project work. Class discussions and participation are key to forming views about how historical choices have shaped our legal system. Weigh citizens’ rights against the tools at the prosecutors’ disposal in real life scenarios and cases. Analyze our current and past policies regarding imprisonment and sentencing. Develop your own view about what works or doesn’t in our criminal justice system.

Debating History: Using Case Study Method to Unpack Turning Points in American History (f)

33100

Grade Level: 11th–12th

Placement preference will be given to rising Seniors.

Prerequisite: US or AP US History

*Fulfills departmental requirement

Have you ever wondered, specifically, how complex historical events and decisions unfold in the heat of the moment? Looking back at any particular episode through a historical lens can cause an aura of over simplification by nature of our hindsight. However, the realities of the time are usually far more nuanced, chaotic and undetermined for those that lived through the moment. Join peers in an exercise of historical case study inquiry—a type of historical role playing—to dive deep into a series of weighty turning points in American history. This semester-long class will focus on 20th century American moments with added emphasis on recency. Case studies may include such topics as the role of the Federal Government in Food Safety, Civil Rights, Gerrymandering, Campaign Finance, Labor Rights, and more. The class will require substantial student discussion and debate as a way to understand the complexity of the case. In essence, we’ll be doing history “in the present tense”.

Film Studies: Hollywood (f)

36404

Grade Level: 10th–12th (For 10th graders, concurrent with U.S. History)

Placement preference will be given to rising Juniors and Seniors.

Prerequisite: None

*Fulfills departmental requirement

This course will celebrate the art, history, and cultural impact of Hollywood studio films. The course is intended to familiarize students with the particulars of film history as well as to provide them with the vocabulary to analyze film as an art form. Through readings, screenings, and demonstrations, we will examine the craft, meaning, and impact of some of the great films of the past 100 years. We will explore the roles of the producer, writer, and director in developing the script. We will learn how cinematographers, production designers, and editors shape images and sounds. We will look into the varying methods that produce performances that move us. We will discuss the criticism and business practices that define the tension between the art and commerce of moving pictures. Our work will always consider the historical context of how films impact and reflect cultural landmarks of the day.

History of Warfare: Strategy and Tactics in the Ancient and Medieval World 765 BCE-1500 CE (f)

38501

Grade Level: 10th–12th (For 10th graders, concurrent with U.S. History)

Placement preference will be given to rising Juniors and Seniors.

Prerequisite: None

*Fulfills departmental requirement

This course will focus on understanding the development of warfare from classical antiquity and into the later half of the Middle Ages. Students will be introduced to the most basic, core fundamentals of the ways in which armies fight, and the political, economic, and social elements that are inevitably tied to the concept of war. Specifically, students will become familiar with both the ancient and medieval world, with an emphasis on the ways in which societies conducted war and why. The course will begin with the Persian and Peloponnesian Wars, followed by a look at the Roman world. Then, students will see how warfare devolved into regional conflicts involving Normans, Saxons, and Vikings during the medieval era, culminating with a return to organized warfare in the form of the Crusades. The semester will end with a look at warfare during the Later Middle Ages, particularly the Hundred Years War. Students should expect both primary and secondary source readings, film and documentary clips, and game based learning models in which they’ll be asked to play strategy games in connection with the course material.

Modern Middle East (f)

36413

Grade Level: 10th–12th (For 10th graders, concurrent with U.S. History)

Placement preference will be given to rising Juniors and Seniors.

Prerequisite: None

*Fulfills departmental requirement

While countries in the Middle East are often the subject of dire headlines, the context for those headlines is often unexplained or misunderstood. This semester course provides students with a foundation in the 20th century history of the Middle East and North Africa, in order to explore contemporary events in the region in greater depth. The class is organized around country case studies, while providing a chronological understanding of the region's history. Topics of study include religious and ethnic identities, independence movements and democratization, the economics of oil, the rise of terrorism, and regional wars and revolutions. In addition to historical texts, students will engage with film, contemporary art, and music to better understand the region. This class is discussion and project based, with emphasis on critical thinking skills.

Race and Cinema in Modern America (f)

38430

Grade Level: 10th–12th (For 10th graders, concurrent with U.S. History)

Placement preference will be given to rising Juniors and Seniors.

Prerequisite: None

*Fulfills departmental requirement

In a 2017 interview, Jordan Peele explained the concept behind his horror film *Get Out* by reflecting, “Society is the scariest monster.” This course critically examines American Society by analyzing *Get Out* and the way Peele drew on past films to comment on race and racism while also creating the horror that defines his iconic film. Organized thematically, it places *Get Out* in dialogue with films that feature blackface/yellowface/whiteface: *Jazz Singer* (1927), *Mask of Fu Manchu* (1933), *Bamboozled* (2001), and explore integration through interracial romance: *Guess Who's Coming to Dinner* (1968), *West Side Story* (1961/2021), *Krimson Kimono* (1959). It explores how the depiction of Black/African Americans, members of the LatinX community, Asian Americans, and White Ethnics (Jewish-Americans/Italians/Irish) have changed over time in response to shifting historical contexts and the changing racial attitudes of theater audiences. Assignments will include short critical reflection papers, video essays, and in-class writing assignments.

Songs of Freedom: A World History of Music and Social Change (f)

36480

Grade Level: 11th–12th

Prerequisite: U.S. and Modern World History

*Fulfills departmental requirement

Why are social reform movements so often associated with particular genres of music? In what ways have these musical genres both expressed and inspired interest in social change? What role have musical compositions played in historical movements that have shaped contemporary societies? These and other related questions about the relationship between music and social reform will be the subject of “Songs of Freedom: A World History of Music and Social Change”. In this semester elective, students will listen to music from different global regions and various historical periods and consider the relationship between this music and the social reform movements in which it emerged. In the process of studying music in association with past and present countercultural movements in the Americas, Europe, Africa, and Asia, students will gain appreciation of the historic and contemporary interaction of music and social change.

The World at War (f)

38502

Grade Level: 11th–12th

Placement preference will be given to rising Seniors.

Prerequisite: None

*Fulfills departmental requirement

The years 1914–1945 were the crucible that formed the modern world. These years marked the fall of many great empires (Russian, German, Ottoman, and Austro-Hungarian), the demise of Great Britain and France in addition to the rise of the United States and Soviet Union as the dominant world powers. Encompassing two world wars, the worst economic crisis in world history, a global pandemic, the Holocaust, and culminating in the rise of the Atomic Age, this period was in many ways the defining period of the 20th century. The course will begin with a review of the factors that led to the start of the Great War and finish with the implications of the U.S. decision to use the atomic bombs on Japan. Special attention will be given to the historical theory that regards this period as one long war (the second Thirty Years War) rather than two separate conflicts. We will also examine the impact of these wars on both America and the world and how they combined to help create the world we live in today.

SPRING SEMESTER COURSES

Debate: How to Save Democracy while Winning an Argument with your Parents (s)

39041

Grade Level: 10th–12th (For 10th graders, concurrent with U.S. History)

Placement preference will be given to rising Juniors and Seniors.

Prerequisite: None

*Fulfills departmental requirement

This course introduces students to the practice of oral argumentation as a way of further investigating various modern and historical contentious issues. Students come to understand the basic structures and tools of argument construction while addressing problems of the modern world, such as racial inequality in the United States, criminal justice and police action, environmental policy, and biomedical ethics. Special emphasis is taken to provide meaningful historical/political context for applicable topics, as this is a course that meets the history requirement. Debate is a shared journey toward truth that brings debaters closer together, even when they represent opposing sides of an issue or come from vastly different perspectives. There are two primary goals of this course. The first is to teach you how to debate and hone all the skills associated with such a talent, not the least of which is being a confident public speaker. The second is to examine local and global issues of the day through the lens of oral argument, which necessarily requires historical context. In so doing, debate fosters the essential democratic values of free and open discussion. In taking this class you literally might be helping save democracy.

This is a great class for someone who: Wants to improve their public speaking and debate skills while digging into both fun and polarizing topics of the day.

Environmental History (s)

38422

Grade Level: 10th–12th (For 10th graders, concurrent with U.S. History)

Placement preference will be given to rising Juniors and Seniors.

Prerequisite: None

*Fulfills departmental requirement

Why are certain landscapes more appealing than others? Are national parks a good idea? What is environmental justice? What are the causes and effects of climate change in the U.S.? These and other related questions will be the focus of Environmental History – an interdisciplinary elective course that explores the interaction between people and environments from prehistory to the present. The course will consist of five units, each of which will trace the evolution of human engagement with the environment from the standpoint of a different topic. In the process of reading about the environment, engaging in scientific exploration outside, debating past and present American environmental policy, and traveling to a variety of natural settings, students in Environmental History will gain both an awareness of the ways in which human culture and the environment have shaped one another over time and an appreciation of the natural and cultural forces that have formed the world around them.

Film Studies: Beyond Hollywood (s)

36450

Grade Level: 10th–12th (For 10th graders, concurrent with U.S. History)

Placement preference will be given to rising Juniors and Seniors.

Prerequisite: None

*Fulfills departmental requirement

This course will celebrate the art, history, and cultural impact of films produced beyond the gates of the Hollywood studios. The course is intended to familiarize students with the particulars of film history as well as to provide them with the vocabulary to analyze film as an art form. Through readings, screenings, and demonstrations, we will examine the craft, meaning, and impact of some of the great films of the past 100 years. We will explore the roles of the producer, writer and director in developing the script. We will learn how cinematographers, production designers, and editors shape images and sounds. We will look into the varying methods that produce performances that move us. We will discuss the criticism and business practices that define the tension between the art and commerce of moving pictures. Our work will always consider the historical context of how films impact and reflect cultural landmarks of the day.

History of Warfare: Development of Linear Warfare 1700-1900 CE (s)

38504

Grade Level: 10th–12th (For 10th graders, concurrent with U.S. History)

Placement preference will be given to rising Juniors and Seniors.

Prerequisite: None

*Fulfills departmental requirement

This course will focus on understanding the development of linear warfare from the era of Frederick the Great up until its obsolescence during the First World War. Students will consider the rapid development of technology and its corresponding impact—or lack thereof—on typical military doctrines of the time. We will discuss how and why armies fought the way they did, how strategy and tactics were developed, the theories behind war in the 19th and early 20th century, and how warfare evolved and modernized. Topics include warfare in the “Age of Reason”, the Napoleonic world, the industrial wars of the late 19th century, and will culminate in a study of the campaigns of 1914. Students should expect both primary and secondary source readings, film and documentary clips, and game based learning models in which they’ll be asked to play strategy games in connection with the course material.

Leaders, Leadership, and Strategy (s)

38425

Grade Level: 10th–12th (For 10th graders, concurrent with U.S. History)

Placement preference will be given to rising Juniors and Seniors.

Prerequisite: None

*Fulfills departmental requirement

What defines a leader? How do leaders create winning teams? How do leaders effectively manage organizations to achieve long term goals and end-states? Students in this semester course will explore the different principles and styles of leadership, using examples from the military, political, business, and sports worlds. We will examine the character traits that contribute to successful leadership, as well as those traits that can cause leaders to fail. In addition, students will learn to understand the nature of strategy and study leaders who have developed and executed successful strategies. We will employ a variety of media, including texts, films, case studies, etc. as we seek to understand the different styles and domains of leadership and strategy. Assessments will include blog and response activities, a research paper analyzing the leadership of a chosen figure, as well as cumulative unit assessments.

Racial Struggle on Film (s)

38431

Grade Level: 10th–12th (For 10th graders, concurrent with U.S. History)

Placement preference will be given to rising Juniors and Seniors.

Prerequisite: None

*Fulfills departmental requirement

This course critically examines the representation of race in American Cinema from the rise of Blaxploitation in the early 1970s through the release of Jordan Peele’s Horror Masterpiece *Get Out* (2017). It seeks to understand the conflicting visions for a multi-racial/multi-cultural society through the shifting cinematic portrayals of racial unrest/protest, white backlash, and the rise of a global economy. In the process, it documents the insurgent influence of BIPOC as directors, actors, screenwriters, and producers. Assignments will include short critical reflection papers and video essays, and students will use economic data from the 1970s and 1980s to understand the structural changes occurring in American Society and use this research to critically analyze the depiction of race in several films from the period.

The Global Cold War (s)

38503

Grade Level: 11th–12th

Placement preference will be given to rising Seniors.

Prerequisite: None

*Fulfills departmental requirement

The Cold War dominated both American and global politics for much of the 20th century. This course will examine the origins, events, strategies, and consequences of the Cold War in not just the United States and the Soviet Union, but also in places such as Europe, Africa, and Asia. Special attention will be paid to the development of mechanisms in both the Soviet Union and the U.S. to manage this conflict of ideas in each country. The course will conclude with a review of how the Cold War wound down and its implications for the 21st century relationship between U.S., Russia, and China.

FULL-YEAR HISTORY ELECTIVES

Honors Civil Rights Seminar (Expedition Course)

33010

Grade Level: 11th–12th

Prerequisite: Departmental Approval (see APPS)

*Fulfills departmental course requirement

This course examines the origins and advancements of 20th century civil rights history in the United States. Students will examine the history of legalized segregation, the fight for voting rights and the modern civil rights struggle with specific emphasis on the writings and example of Rev. Dr. Martin Luther King, Jr. Several case studies will be provided in order to critique and evaluate the effectiveness of nonviolence as a tool for advancing civil rights and peace nationally and internationally. Students will complete a historical research project and are expected to participate in a one week trip to Georgia, Alabama and Tennessee as part of this course.

Honors Seminar: A History of Women and Power

36425

Grade Level: 11th–12th

Prerequisite: Departmental Approval (see APPS)

*Fulfills departmental course requirement

Have you ever asked why institutions like GA and Brunswick teach math separately? Have you noticed the little sections in history textbooks that address the historical experiences of women separately, as if women are not integrated into “regular” history? Or have you wondered why there hasn’t been a woman president of the United States? This course will interrogate the complex history of women’s roles and their access to power from both an American and global perspective. This journey will take you from ancient civilizations to the modern era, examining the impact of cultural, social, and political factors on women’s empowerment, and the impact women have had on their societies. Discover the stories of influential women who have wielded power in various ways, both within and outside formal power structures. Engage in thoughtful discussions about contemporary issues related to women and power, such as the gender gap in leadership and economics, the role of women in social movements, and the impact of media representation on women. Through critical analysis of historical data, primary and secondary sources including art, film and music, students will interpret and synthesize information and hone their historical thinking skills. Students will complete independent historical research projects in both semesters.

Honors Seminar: Humanities and Social Science Research

36424

Grade Level: 11th–12th

Prerequisite: Departmental Approval (see APPS)

*Fulfills departmental course requirement

The Humanities and Social Science Research Seminar offers students the opportunity to conduct advanced research similar to that of professional historians and social scientists. This year, the course will focus on the post war world from 1945 to 1970. In the first semester, students will be introduced to a range of analytical tools and research methodologies through a series of individualized projects structured around major themes and global events of the period. In the second semester, students will work independently on staged assignments leading up to a research paper of approximately 5,000 words (~20 pages). During this time, students will not only design and execute their own project but will actively engage with the research of their peers through workshops and peer review. If appropriate, the completed projects might lend themselves to publication or conference presentation.

ECONOMICS AND PSYCHOLOGY

The Brunswick and Greenwich Academy History & Social Sciences Departments have developed a curriculum based on the premise that history and humankind are shaped by the past. Therefore, those courses that provide students with both significant history content and historical thinking skills count toward the history requirement. The courses listed below are social science courses that do not take the past as the foundation of inquiry or develop additional skills associated with the discipline of history. While they count as full academic classes, they do not fulfill the history requirement. Also note that AP Psychology and AP Economics may not be taken concurrently.

ECONOMICS

Microeconomics and Macroeconomics

38409

Grade Level: 11th–12th

Prerequisite: None

This full-year course covers both micro- as well as macroeconomic principles. Over the course of the year we will examine the motives behind the economic actions of individuals, firms, and governments through the introduction of basic economic theories and concepts, including classical and Keynesian models, budget and trade deficits, unemployment issues, growth and inflation trade-offs, and international capital, money, and product flows. Students are introduced to theories about the law of supply and demand, competitive and monopolistic markets, legal structures of firms, stock and bond markets, and personal finance management concepts. Daily discussions about current economic events and participation in a stock market simulation exercise help relate the theoretical to real life situations. Other course requirements include group and individual presentations, quizzes and tests, a major term paper, and daily, active class participation.

AP Economics

38407

Grade Level: 12th only

Prerequisite: Departmental approval (see APPS)

This college-level course is a survey of both macroeconomics (fall) and microeconomics (spring).

Macroeconomics teaches those principles that apply to an economic system as a whole. The curriculum includes a study of the broad measurements of economic performance, including trends in gross domestic product, inflation, and unemployment. It analyzes the role of money and banking, the workings of monetary and fiscal policies, the federal budget and national debt, and international economics. Microeconomics concentrates on those principles that relate to the functions of individual decision-makers in our economy. It explores concepts of opportunity costs, the forces of supply and demand, different market structures such as pure competition, oligopolies, and monopolies, and the degree and effect of government intervention in our market-based economy.

In May, students take the two-hour AP examination on Microeconomics and another two-hour AP examination on Macroeconomics.

FALL SEMESTER COURSES

Economics: Personal Finance & Investment (f)

38403

Grade Level: 10th–12th

Placement preference will be given to rising Juniors and Seniors.

Prerequisite: None

If you don't want to spend all of your life working for money, learn the skills necessary to make your money work for you. This course will explain the basics of personal financial management. It will begin with an overview of budgeting, borrowing, and saving principles. It will cover personal cash management, mortgages, buying versus leasing, credit scoring, personal income tax issues, and retirement investment opportunities. Students will get an overview of portfolio theory, stock valuation, fixed income investments (including CDs, bonds, and annuities), and mutual funds. Group projects, presentations, and real-world research will bring the curriculum together and help students develop skills that will help them in college and beyond.

Everyday Economics (f)

36471

Grade Level: 10th–12th

Placement preference will be given to rising Juniors and Seniors.

Prerequisite: None

This course is designed to give students a foundation in the most important economic concepts. Topics include the following: how economics makes us better decision makers, the forces behind the prices that we pay for things, the government's role in stabilizing the economy, and the role of innovation and incentives in a free market. All topics will be taught with a focus on the United States economy. Some semester highlights include: spending some time every week looking at Econ in the news and in pop culture, reading selected chapters from the trilogy of the best selling *Freakonomics* books, watching the *Freakonomics* documentary, reading the weekly Sunday *New York Times* "Economic View," and creating our own YouTube videos that will help other students understand important economic concepts. This class will make future Econ courses taken at the college level much easier to digest!

Impact of Technology: An Economic Perspective (f)

38412

Grade Level: 10th-12th

Prerequisite: None

Technology advances drive commercial growth in the global economy. This course begins with a brief historical review of how major technological advances have shaped our economy. Each student will explore the impact of one of these advances in depth (examples range from the microprocessor to modern steel production).

A substantial majority of the course looks forward in time. Many future technology advances are likely to have a disruptive impact on the present economic environment. Our objective is to engage students in thinking about the future – and explore how these technologies will influence growth. Students will select a technology of focus, research its potential impact, and present their findings to the class. Future technologies of interest include augmented reality, big data in a commercial setting, and various aspects of artificial intelligence. The class will engage in formal and vigorous debate on a number of relevant topics.

SPRING SEMESTER COURSES

Behavioral Economics (s)

36472

Grade Level: 10th–12th

Placement preference will be given to rising Juniors and Seniors.

Prerequisite: Everyday Economics or taken in conjunction with AP Economics

Behavioral Economics is a fascinating and growing field of economics that incorporates psychology with standard economic theory. Whereas traditional economics assumes we are all rational decision makers, behavioral economics challenges that fundamental tenet. We will explore parts of some recent current best selling books on the subject, like *Predictably Irrational*, *Thinking, Fast and Slow*, and *Nudge*. Students will also design and conduct their own experiment in order to test hypotheses, based on recent findings in the field of Behavioral Economics, on the GA/Brunswick population. There is a reason that this sector of Economics is growing! Experience the excitement for yourself!

Economics: Entrepreneurship (s)

38404

Grade Level: 10th–12th

Placement preference will be given to rising Juniors and Seniors.

Prerequisite: None

Do you think that someday you would like to be your own boss? Do you have a business idea that you are sure will be a winner? Or maybe you don't have the idea yet, but want to know how to launch your business once you find it? This class will help you answer these questions and possibly avoid being part of the 50% of companies who fail after their first five years. You will learn the same methodology taught by the top business schools in America—such as Stanford and Harvard—called the Lean Startup. Thus, you will develop your own business models, test and revise them, and decide if they are worth pursuing. Also, you will improve your collaboration, presentation and analytical skills by looking at case studies and real-world business start-ups.

PSYCHOLOGY

Abnormal Psychology

38860

Grade Level: 11th-12th

Prerequisite: None

This class explores one of the most interesting and important topics in psychology - mental illness. By examining case studies and peer-reviewed journal articles through the lens of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), students will explore what it means to be “abnormal” and become familiar with a variety of mental conditions, including depression, anxiety, bipolar, obsessive-compulsive, psychotic and trauma-related disorders. It will include theoretical, clinical, and experimental perspectives of the study of psychopathology. Emphasis is placed on terminology, classification, causation, assessment, and treatment of the major disorders. Upon completion, students will be able to distinguish between normal and abnormal behavior patterns as well as promote a greater awareness and knowledge of psychopathology in hopes that we can reduce the suffering and stigma associated with mental disorders.

AP Psychology

38867

Grade Level: 12th only

Prerequisite: Departmental approval (see APPS)

This course is a standard college introductory psychology course, and it prepares the student for the AP Psychology examination in May. Topics include perception, learning, child development, personality, and group behavior. The course features much lab work, a range of computer simulations, and a chance for students to design and perform their own psychological experiments. A strong background in biology and/or human physiology is highly recommended—many of the concepts covered in this course resemble those seen in high-level biology classes.

FALL SEMESTER COURSES

Psychology of Positivity and Happiness (f)

38475

Grade Level: 11th–12th

Placement preference will be given to rising Seniors.

Prerequisite: None

The course will allow students to learn what it means to lead meaningful and fulfilling lives, to cultivate what is best within themselves, and to enhance their experiences of love, work, and play. Through an exploration of the psychology of positivity and happiness, this class will focus on the history of the subject, people's positive subjective experience, and how to cultivate positive individual traits that can lead to happiness. Additionally, this course explores positive institutions, what it means to be happy, mindfulness, mind-body connection, and the six pillars of personal well-being: positive emotion, engagement, relationships, meaning, accomplishments, and health.

Sport Psychology (f)

38479

Grade Level: 10th–12th

Placement preference will be given to rising Juniors and Seniors.

Prerequisite: None

Sport Psychology is a field of study in which the principles of psychology are applied in a sport setting, and are often utilized to enhance athletes' individual and team performance. The course is designed to provide students with a basic understanding of the theories and concepts involved in the psychology of sport, while also looking at how past and current research has been applied to propel the field forward. Some of the concepts that will be covered in this course include achievement motivation, goal-setting, and mental toughness. We will also look at some applications such as coping with anxiety in sport and effective use of imagery techniques. We will explore case studies, analyze articles, engage in discussions about research, create our own sport journals, and even watch some famous sports movies to learn and apply the concepts. The field of sport psychology is still continuing to evolve so, although this course will not cover everything, it will lay a solid foundation for those interested in the course material.

SPRING SEMESTER COURSES

Cognitive Psychology (s)

38477

Grade Level: 10th–12th

Placement preference will be given to rising Juniors and Seniors.

Prerequisite: B in Biology

How do we remember things? What is intelligence? How do we learn? How do we get smarter? We go to school to learn about a variety of subjects, from the humanities to the sciences. This course takes a step back and investigates how all this learning occurs. To understand how knowledge is shared and developed in the classroom, we will look at how our minds interpret and make sense of what we hear and what we see. In addition, we will investigate the importance of social interaction to learning. Students will participate in web-based cognition experiments and discussion blogs, create and carry out their own psychological experiments with informed and willing participants, and develop a final research project relevant to the course topics. Finally, this course covers many of the same topics as AP Psychology and provides for a great conceptual foundation before taking that course.

Psychology of Positivity and Happiness (s)

38476

Grade Level: 11th–12th

Placement preference will be given to rising Seniors.

Prerequisite: None

The course will allow students to learn what it means to lead meaningful and fulfilling lives, to cultivate what is best within themselves, and to enhance their experiences of love, work, and play. Through an exploration of the psychology of positivity and happiness, this class will focus on the history of the subject, people's positive subjective experience, and how to cultivate positive individual traits that can lead to happiness. Additionally, this course explores positive institutions, what it means to be happy, mindfulness, mind-body connection, and the six pillars of personal well-being: positive emotion, engagement, relationships, meaning, accomplishments, and health.

SCIENCE

Students are urged to study science during each of their Upper School years and required to complete work in the basic sciences of biology, chemistry, and physics prior to graduation. The goal is to create and inspire students to become scientifically literate and critical thinkers. Through interactive, investigative study students learn to use the scientific method to answer questions which further serves to promote and develop creative problem solving applicable across all disciplines. The program seeks to develop skills in scientific observation, data collection, analysis, and the drawing of conclusions as well as to provide opportunities for students to explore their own scientific interests through a wide offering of science electives and independent studies. These opportunities serve to foster a sense of curiosity, show the applicability of science in daily life, and provide students with the background needed to make informed decisions in a world increasingly affected by science and technology.

Biology

51000

Grade Level: 9th

Prerequisite: None

Placement will be determined by the department.

This course will help to develop an appreciation for the beauty, complexity, and diversity of living systems. The focus of the course is on both the juxtaposition and similarity of the physiological processes present in all living things and how these connections help us understand natural selection and other evolutionary processes. The course is taught as a unified subject rather than disconnected units, and through classroom and laboratory experiences, students will accumulate a set of concrete proficiencies from which they can draw in future science courses.

Honors Biology

51020

Grade Level: 9th

Prerequisite: Science: A- in 8th Grade Science; Math: Honors Math or Accelerated Math concurrently.

Placement will be determined by the department.

This course offers a comprehensive investigation of high school biology. Although the course strives to develop an appreciation for the beauty, complexity, and diversity of living systems, each topic is explored in-depth. Students are exposed to significantly more vocabulary and detailed processes, and an emphasis is put on the development of scientific-inquiry skills that will enable students to become more sophisticated in conducting investigations and explaining their findings. Topics include: ecology, evolution, genetics, biochemistry, cell biology, as well as animal and plant physiology.

Chemistry

52000

Grade Level: 10th–12th

Prerequisite: Biology

Placement will be determined by the department.

Students will have an overview of the fundamental principles of chemistry. The course examines the composition of various substances and the changes they can undergo. Major topics are introduced via classroom work as well as laboratory experiments and include: atomic theory, chemical bonding, stoichiometry, properties of solutions, gas laws, thermodynamics, redox, equilibrium, and acid-base reactions. The course features both qualitative and quantitative analyses of the relationships between variables associated with chemical reactions. Inquiry-based laboratory experiences are included throughout the year.

Honors Chemistry

52020

Grade Level: 10th–12th

Prerequisite: Science: B+ in Honors Biology recommended; Math: B+ in Honors Geometry, or A- in Geometry Accelerated, or B in any level Algebra II.

Placement will be determined by the department.

This course offers a comprehensive introduction to the fundamental principles of chemistry. Topics include: atomic theory, chemical bonding, stoichiometry, properties of solutions, gas laws, thermodynamics, redox, equilibrium, and acid-base reactions. These areas are covered through classroom work as well as laboratory experiments. Inquiry-based laboratory experiences are included throughout the year. The course stresses a more quantitative approach to the major topics covered. Upon completion of the year, the student is well positioned for more advanced courses within the discipline.

Physics

53000

Grade Level: 10th–12th

Prerequisite: Biology

Placement will be determined by the department.

This course presents students with an overview of the fundamental principles of Physics. The course examines the physical world around us and how it works. Major topics include mechanics, thermodynamics, electricity, electromagnetism, sound and light. The course leans more toward the quantitative analysis to show mathematical relationships between variables of the equations. This course is designed to be a hands-on approach with emphasis on practical application on the concepts and theories. Laboratory experiments are an integral part of the course.

Honors Physics

53020

Grade Level: 10th–12th

Prerequisite: Science: B+ in Honors Biology or A in Biology and/or B+ in Honors Chemistry, or A in Chemistry; Math: Minimum of B+ in Accelerated or Honors Math.

Placement will be determined by the department..

Honors Physics is a full-year foundations class designed to prepare students for more advanced work in physics. The course content centers around the basic core topics in physics, including but not limited to kinematics, Newton's Laws, sound, light, electricity, and magnetism. Each topic is accompanied by a lab exercise(s) and demonstration(s) meant to exhibit and reinforce the math and concepts covered. Both the class content and lab work require strong algebra skills and some trigonometry. The goal of the combination of class and lab is to foster the necessary analytical skills required at this level as well as permitting advancement in the subject.

AP Biology

51070

Grade Level: 10th–12th

Prerequisite: Science: B+ in Honors Biology or A in Biology and B+ in Honors Chemistry or A- in Chemistry; Rising 10th graders must have A in Honors Biology and take Honors Chemistry concurrently.

AP application and department approval required in all cases.

This is a rigorous survey course covering major biological topics, including biochemistry, cell biology, genetics, molecular biology, animals and evolution. Emphasis is placed on thematic relationships between the major topic areas. Sophisticated, college-level laboratory experiences are an integral part of the course. This course prepares students for the AP Biology exam taken in May.

AP Chemistry

52070

Grade Level: 11th–12th

Prerequisite: Science: B+ in Honors Chemistry; Math: B in Honors Algebra II, or B+ in Accel. Algebra II or A- in Algebra II, or B+ in any level Pre-Calc.

AP application and department approval required in all cases.

This intensive college level course pursues in greater depth those topics studied in first-year chemistry. In addition, quantitative analysis is included as a significant segment of the full-year laboratory program. This course prepares students for the AP Chemistry exam taken in May.

AP Environmental Science

58178

Grade Level: 11th–12th

Prerequisite: Science: B in Honors Biology or B+ in Biology and B in Honors Chemistry or B+ in Chemistry, or Honors Chemistry concurrently.

AP application and department approval required in all cases.

This AP course is designed to give college-level treatment to the understanding of interrelationships within the natural world, to identify and analyze environmental problems and their relative risks, and to examine potential solutions. Topics include: ecosystem structure and function, population dynamics, renewable and nonrenewable resources, and air, water, and soil pollution. The course is designed to prepare for the AP Environmental Studies exam.

AP Physics 1

58171

Grade Level: 11th–12th

Prerequisite: Science: A- in Honors Chemistry; Math: A- in Accelerated or Honors Math.

AP application and department approval required in all cases.

AP Physics 1 is an algebra-based, full-year physics course and is the equivalent of a first-semester college course in algebra-based physics. The course is organized around seven foundational big ideas in physics: Newtonian mechanics (including rotational dynamics and angular momentum), work, energy, and power, and mechanical waves and sound. It will also introduce electric circuits. The ability to develop and use physics knowledge by applying it to the practice of scientific inquiry and reasoning through increased experimentation and analysis is the core of this course. It will be an engaging and rigorous experience.

AP Physics 2

58172

Grade Level: 11th–12th

Prerequisite: Science: B+ in AP Physics 1

AP application and department approval required in all cases.

AP Physics 2 is an algebra-based, full-year physics course and is the equivalent of a second-semester college course in algebra-based physics. This class should be taken as a second-year course by students who have already completed AP Physics 1. The course is organized around seven foundational big ideas in physics and covers fluid mechanics, thermodynamics, electricity and magnetism, optics, and atomic and nuclear physics. As with AP Physics 1, the ability to develop and use physics knowledge by applying it to the practice of scientific inquiry and reasoning through increased experimentation and analysis is the core of this course. It is another challenging, lab-based physics class for those students who enjoy the study of physics.

AP Physics C

58170

Grade Level: 11th–12th

Prerequisite: Science: A- in Honors Physics or A- AP Physics 1

AP application and department approval required in all cases.

This is actually two one-semester courses, culminating in a separate AP exam for each at the end of the year: Mechanics, and Electricity and Magnetism. Both semesters employ introductory calculus in problem solving and are designed to build on and expand on some of the topics covered in Honors Physics. Topics in Mechanics include kinematics, conservation of energy, rotational dynamics, and angular momentum. Second semester topics include electric fields, Gauss's Law, electric potentials, magnetism and electromagnetic induction. Upon completion of the course, students will be prepared for both AP Physics C exams as well as having the foundations for engineering in college.

Honors Science Research–Brunswick School

59100

Grade Level: 10th and 11th

(10th graders must take concurrently with a core science course)

Prerequisite: Science: A- in Biology.

Application and department approval required in all cases.

This course is designed to expose students to a variety of laboratory techniques, as well as teach students how to conduct scientific research. Over the course of two years students will investigate and experiment with lab techniques used in various science disciplines using both traditional and state-of-the-art protocols. Students will also be taught the process of research by exploring topics of interest, designing an original project, completing that project with an accompanying paper, and submitting that project to a scientific competition. Student work will be published in Brunswick's Journal of Scientific Research. It is expected/required that each student enrolled in the class will also participate in summer science work as an intern, a scholar/participant in a reputable college summer science program, or attend a two-week, field-research trip with the class. Summer placement is instructor-assisted and individualized based on student commitments.

Honors Seminar: Science Research (GA)

56037

Grade Level: 11th-12th

(Placement preference will be given to rising Seniors)

Prerequisite: AP Biology or AP Chemistry recommended either previously or taken concurrently.

Application and department approval required in all cases.

The objective of this course is to train students in designing and executing a research project. The classroom is actually a research lab, and the class is a research group. The focus of the research is the isolation and initial characterization of soil microbes that exhibit antimicrobial properties. We have partnered with The Small World Initiative/Tiny Earth—organizations that are focused on the search for new antibiotics through the methods we will use in this course. Each student will be the director of their individual project while at the same time contributing to the understanding and work of the entire group. Students will be assessed on their understanding of the project, their work related to the broader goal, as well as the underlying microbiology concepts and techniques they are performing.

FALL SEMESTER COURSES

Biology of Human Health (f)

58036

Grade Level: 10th–12th

(10th graders must take concurrently with core science course)

Placement preference will be given to rising Juniors and Seniors.

Prerequisite: Science: Biology

What are opioids, how do they affect the body, and what are we doing, as a society, about the current opioid epidemic? How does your immune system protect you from various bacterial and viral infections? How do antibiotics and vaccines aid your body's fight against these pathogens? Should vaccines be mandated by the government? Biology of Human Health will investigate these modern health issues in addition to discussing the science behind cancer, neurological disorders, and the current research being done to help understand and fight these diseases. Coursework includes case studies, research presentations, laboratory exercises, and debates.

Chemistry of the Cosmos and Earth (f)

58046

Grade Level: 11th–12th

Placement preference will be given to rising Seniors.

Prerequisite: B in Honors Chemistry, B+ in Chemistry

What processes formed the elements? What makes a planet capable of supporting life? This course aims to address these questions and more by building on chemistry concepts learned in the regular and honors chemistry classroom. Topics of investigation will reach into the cosmos to discover how the elements are formed and fall back to Earth to explain its habitability. An overarching goal is to study the world, and outer space, around us through field trips, projects, analysis of actual scientific data, and a mix of quantitative and conceptual classwork. Students will leave this course with an appreciation for and ability to make stronger connections between chemistry and the world around us.

Culinary Science I (f)

56041

Grade Level: 10th–12th

Placement preference will be given to rising Seniors)

Prerequisite: Biology and Chemistry (concurrently for 10th grade students)

Good science is the backbone of good cooking. In this course, we'll use GA's state of the art culinary lab to bring the scientific method into the kitchen. Students will be asked to design experiments to improve the taste, texture, and aroma of food. We'll apply basic principles of biology and chemistry learned in previous courses to perfect our recipes. As we attempt to achieve food nirvana, we'll tackle everything from breakfast to dessert. Students who elect to take this course should have an adventurous palette, a healthy appetite, and an enthusi-

asm for science. By the end of the course, students will have a strong foundation in various cooking techniques and will be on their way to becoming lifelong learners in the kitchen.

Engineering I (f)

58039

Grade Level: 12th only

Prerequisite: Science: Two years of science

This course will introduce students to the practical application of science through the completion of various engineering-build projects. Students will improve critical thinking skills through project-based challenges while learning about basic engineering disciplines and various software programs, and by utilizing the fabrication machines and tools within the engineering shop. Students will be required to work in groups and demonstrate strong teamwork and communication skills. This course will allow students to be creative and innovative while applying math and science concepts to solve specific challenges.

Forensic Science (f)

58032

Grade Level: 10th–12th

(10th graders must take concurrently with core science course).

Placement preference will be given to rising Juniors and Seniors.

Prerequisite: Science: Biology

Beginning with a historical look at the development of forensics and modern techniques, we will learn the basis for forensic study and tools as well as utilizing the methods ourselves in laboratory investigations. Topics that we will cover include, but are not limited to, fingerprinting, blood analysis, direct and microscopic investigation of crime scenes, DNA collection and analysis, ballistics, and toxicology. Famous cases and famous forensic investigators are studied as a backdrop for learning the scientific steps beyond modern forensic advancements.

Honors Organic Chemistry (f)

56033

Grade Level: 11th–12th

Prerequisite: B+ in Honors Chemistry or Departmental Approval

Carbon-containing molecules form the basis for art, medicine, and life. This fall semester course studies the nature of these molecules and how to build them. We will expand upon concepts of chemical bonds and stability to explore foundational reactions involving organic compounds. The course is only an introduction to organic chemistry, designed to be engaging and accessible while also rigorous and meaningful. By the end of the semester, students will be able to predict multi-step syntheses and will conduct their own syntheses in the lab.

Human Physiology I (f)

58030

Grade Level: 10th–12th

(10th graders must take concurrently with core science course).

Placement preference will be given to rising Juniors and Seniors.

Prerequisite: Science: B in Biology

The overall theme of this course is the human body, its organization, and its physiology. This course is designed as a further study of biology and biochemistry for those students wishing to expand their biological experience and who are possibly considering a pre-medical course of study in college. Beginning with a re-introduction to the body, a navigation of the basic biochemistry of cells and tissues is undertaken to lay a foundation for studying the various systems of the body individually. Systems to be studied include the integumentary, musculoskeletal, nervous (including special senses), and cardiovascular. This is a laboratory course with experiments and experiences using students themselves as laboratories in addition to dissection opportunities.

Marine Biology (f)

58038

Grade Level: 11th–12th

Placement preference will be given to rising Seniors.

Prerequisite: Science: B in Biology and two years of science (second year can be concurrent)

This one semester course provides an introduction to oceanography and marine biology. During the first part of the course students will investigate oceanography including units on marine research, the sea floor, chemical and physical properties of seawater, and the world's oceans. During the second part of the course students will learn about marine organisms including prokaryotes, those that photosynthesize, multicellular invertebrates, and a brief survey of marine vertebrates. Evolution and marine ecology will be emphasized in each unit. Students will be assessed on content, varied lab experiences, and a major presentation. Sophomores are able to register for this course, but must take chemistry or honors chemistry concurrently.

SPRING SEMESTER COURSES

Astrophysics (s)

58173

Grade Level: 10th–12th

(10th graders must take concurrently with core science course).

Placement preference will be given to rising Juniors and Seniors.

Prerequisite: Math: Algebra II prior or concurrently

This course will dive into current topics in cosmology while using physics as a background. All of the necessary physics will be taught within the course, and will not require math beyond Algebra II. Topics will include the nature of light and gravity, and how those topics link to most everything we know about our universe. We will discuss stellar formation, energy generation, and lifecycles. We will introduce relativity and other more modern topics in astronomy including (but not limited to) dark matter and energy, the physics of the big bang, and extra-solar planets. We will also spend time learning the nuts and bolts of observational astronomy.

Culinary Science II (s)

56042

Grade Level: 10th–12th

Placement preference will be given to rising Juniors and Seniors.

Prerequisite: Biology and Chemistry (concurrently for 10th grade students)

Pizza is undoubtedly one of the world's best foods. However, most of the pizza that we eat is mediocre at best. There is a lot that can go wrong when making pizza at home or even in a restaurant for that matter. Careful attention must be paid to ingredients, technique, and most importantly, the science behind what really makes an excellent pie. In this course, we'll apply basic principles of biology and chemistry along with the scientific method to the pizza-making process. Using GA's state of the art culinary lab and outdoor pizza oven, students will attempt styles like deep-dish, thin-crust, and everything in between. Want to know the difference between Detroit, New York, and New Haven style pizza? Even better, want to learn how to make really good versions of all three at home? Students who elect to take this course should have a healthy appetite, an adventurous palette for different toppings, and an enthusiasm for science. By the end of the course, students will have a strong foundation in making/shaping dough, selecting/preparing toppings, and sliding pies in and out of the oven. Pizza mastery takes years to achieve, but with the skill set learned in this course, pizza may eventually become part of your culinary wheelhouse.

Engineering II (s)

58040

Grade Level: 12th only

Prerequisite: Two years of science

This course will introduce students to the practical application of science through the completion of various engineering-build projects. Students will improve critical thinking skills through project-based challenges while learning about basic engineering disciplines and various software programs, and by utilizing the fabrication machines and tools within the engineering shop. Students will be required to work in groups and demonstrate strong teamwork and communication skills. This course will allow students to be creative and innovative while applying math and science concepts to solve specific challenges.

Environmental Science and Sustainability (s)

58042

Grade Level: 10th–12th

(10th graders must take concurrently with core science course).

Placement preference will be given to rising Juniors and Seniors.

Prerequisite: Biology (current or past APES students are not eligible for this course, but APES is potentially an option after the completion of this course)

This course (modeled after an academic major at Cornell University) seeks to advance students' ability to understand and address real world environmental problems, manage social ecological systems in a sustainable manner, and affect decisions involving environmental policy, resource management, and biodiversity conservation. Although categorized as an environmental science, this course delivers an interdisciplinary and integrated experience that provides both breadth and depth about the causes, consequences, and management or remediation of environmental problems ranging from local to global. Although challenging, the curriculum leaves students flexibility to pursue greater depth in specific areas of environmental science and sustainability, and to expand their knowledge outside of a core curricular course.

Forensic Science (s)

58033

Grade Level: 10th–12th

(10th graders must take concurrently with core science course).

Placement preference will be given to rising Juniors and Seniors.

Prerequisite: Science: Biology

Beginning with a historical look at the development of forensics and modern techniques, we will learn the basis for forensic study and tools as well as utilizing the methods ourselves in laboratory investigations. Topics that we will cover include, but are not limited to, fingerprinting, blood analysis, direct and microscopic investigation of crime scenes, DNA collection and analysis, ballistics, and toxicology. Famous cases and famous forensic investigators are studied as a backdrop for learning the scientific steps beyond modern forensic advancements.

Human Physiology I (s)

58034

Grade Level: 10th–12th

(10th graders must take concurrently with core science course).

Placement preference will be given to rising Juniors and Seniors.

Prerequisite: Science: B in Biology

The overall theme of this course is the human body, its organization, and its physiology. This course is designed as a further study of biology and biochemistry for those students wishing to expand their biological experience and who are possibly considering a pre-medical course of study in college. Beginning with a re-introduction to the body, a navigation of the basic biochemistry of cells and tissues is undertaken to lay a foundation for studying the various systems of the body individually. Systems to be studied include the integumentary, musculoskeletal, nervous (including special senses), and cardiovascular. This is a laboratory course with experiments and experiences using students themselves as laboratories in addition to dissection opportunities.

Marine Biology (s)

58037

Grade Level: 11th–12th

Placement preference will be given to rising Seniors.

Prerequisite: Science: B in Biology and two years of science (second year can be concurrent)

This one semester course provides an introduction to oceanography and marine biology. During the first part of the course students will investigate oceanography including units on marine research, the sea floor, chemical and physical properties of seawater, and the world's oceans. During the second part of the course students will learn about marine organisms including prokaryotes, those that photosynthesize, multicellular invertebrates, and a brief survey of marine vertebrates. Evolution and marine ecology will be emphasized in each unit. Students will be assessed on content, varied lab experiences, and a major presentation. Sophomores are able to register for this course, but must take chemistry or honors chemistry concurrently.

FULL-YEAR SCIENCE ELECTIVES

Building Science: Creating real-life representations of scientific principles

58047

Grade Level: 10th–12th

Placement preference will be given to rising Juniors and Seniors.

Prerequisite: Algebra I

This course will explore fundamental science concepts through both on-paper and in-real-life problem solving. Students will use traditional problem-solving techniques to support the planning and execution of projects that demonstrate the magic of science. Several projects will include the use of the Engineering & Design Lab. What are the principles of electronic circuits? Let's build one! What principles govern solubility and concentration? Let's tap trees and make maple syrup. This is a full-year course, and students should expect to build – literally and figuratively – a better understanding of the world around us!

WORLD LANGUAGES

In the modern language classroom, emphasis is placed on developing communication skills and cultural competence. In accordance with national standards, all classes are conducted primarily in the target language—use of English is kept to a minimum. Students learn to interact linguistically and culturally in real-world situations and contexts. Additionally, we provide our students with a strong foundation so that they can pursue their study of language in college and beyond.

Students learn to listen, speak, read, and write by exploring thematic units and interacting with authentic materials. Multimedia resources are used frequently in the classroom throughout the program to strengthen students' language skills, to provide them with practical experiences, and to promote cultural understanding. Classes are intended to provide optimal learning experiences for all students.

Upon completion of Level III or III honors as required at GA or three years of Upper School study as required at BWK, students are encouraged to pursue their language studies through more advanced courses. Students may elect to study more than one language on either campus.

Brunswick School and Greenwich Academy sponsor a variety of study abroad options, which give students the opportunity to discover new cultures and, in most cases, speak the foreign language they study in full immersion with homestay programs. The Brunswick Summer School is also an option for those wishing to gauge their interest in a new language. Please consult the schools' websites for more information on these exciting educational opportunities.

Expectation for Honors/Advanced Class Placement

Beyond the minimum grades threshold as noted below, honors students demonstrate a genuine passion for learning the target language; consistently fulfill and exceed course expectations; engage and participate positively in class (in the target language); are eager to work at an accelerated pace; and follow Course Policy Syllabi provided by teachers.

Additionally, at this level it is expected that students understand that attention to detail and linguistic accuracy are necessary components for developing true competency in the target language.

Advanced Placement classes in the modern languages are highly demanding. Admission to these courses is dependent upon approval of both the Greenwich Academy and Brunswick Language Departments.

Minimum grade requirements are as follows:

- Current Level IV Honors students maintaining at least a B+, and/or with permission of the Department, may proceed to the AP level.
- Students enrolled in Level III Honors, maintaining grades of at least A, and/or with permission of the Department, may petition to enter the AP language course by completing an application and sitting for a formal assessment, which is administered in the spring.
- For these students, a committee evaluates these forms, analyzing both their quantitative and qualitative merits. The criteria for acceptance include the following: the recommendation of the student's most recent language teacher and their language grades over the past two years. The student's total academic and co-curricular commitments will also be taken into consideration. The final decision to admit is contingent upon continued success in the student's current language course. Department chairs communicate with the students at the end of the process. Some summer work may be required.

ARABIC

Arabic I

49100

Grade Level: 9th–11th

Prerequisite: None

This beginning course is an introduction to Modern Standard Arabic, using a curriculum based on the Al-Ki-taab series. Students learn the fundamentals of Arabic such as the alphabet, handwriting, and correct pronunciation of Arabic letters. Students become familiar and comfortable with the sounds and the structure of the language and later are introduced to the ancient art of Arabic calligraphy. A variety of activities are used to develop the four language skills: listening, speaking, reading, and writing. Cultural aspects are presented through authentic materials such as articles, videos, and Internet materials.

Arabic II

49200

Prerequisite: Arabic I and Departmental Approval

Students in this course continue to develop their foundational skills in Modern Standard Arabic. More complex aspects of the language are introduced by developing listening and reading comprehension and building oral proficiency skills. In addition to using the textbook, students are introduced to a variety of Arabic language resources such as videos, radio programs, newspapers, and Internet sites allowing for greater cultural understanding of the different aspects of the Arab world.

Honors Arabic II

49201

Prerequisite: Minimum grade of A- in Arabic I and Departmental Approval

This fast-paced course continues to develop the students' foundational skills in Modern Standard Arabic. While studying topics related to daily life communicative skills, students progress in their oral and written proficiency. They experience real-life situations through interdisciplinary and cross-cultural classes with distinct schools in the US and abroad. Units on Arabic culture, as well as additional audio and video clips in Modern Standard Arabic and colloquial, are incorporated in the lessons to help students develop a broader insight into the region and an appreciation for their study of the Arabic language.

Arabic III

49300

Prerequisite: Arabic II and Departmental Approval

This course expands the students' foundation of the Arabic language and culture as they continue to develop their oral proficiency and reading/listening comprehension. Students apply more complicated language structures in Modern Standard Arabic to a variety of topics related to a real-life situation, and develop their ability to write in Arabic with an introduction to modern and classic Arabic poetry. Students also gain a deeper understanding of the world around them by using social, environmental, and historical issues to further their Arabic language and culture studies.

Honors Arabic III

49301

Prerequisite: Minimum grade of B+ in Arabic II Honors and Departmental Approval

Students continue to develop and refine their proficiency in all four language skills, with an emphasis on developing fluency in speaking and in writing. Students apply new complex language structures in Modern Standard Arabic to a variety of topics related to a real-life situation, and develop the ability to move from concrete to abstract concepts. At this level, students comprehend the main ideas of authentic materials that they read and listen to, while also identifying salient details. Students learn a deeper understanding of the world around them, using social, environmental, economic, and historical issues to further their Arabic language and culture studies.

Arabic IV

49400

Prerequisite: Arabic III and Departmental Approval

Students continue to develop and refine their proficiency in all four language skills, with an emphasis on developing fluency in speaking and in writing. Students apply new complex language structures in Modern Standard Arabic to a variety of topics related to a real-life situation, and develop the ability to move from concrete to abstract concepts. At this level, students comprehend the main ideas of authentic materials that they read and listen to, while also identifying salient details. Students learn a deeper understanding of the world around them, using social, environmental, economic, and historical issues to further their Arabic language and culture studies.

Honors Arabic IV

49401

Prerequisite: Minimum grade of B+ in Arabic III Honors and Departmental Approval

The aim of this advanced course is to improve students' overall language ability in Arabic while honing on their critical thinking skills. Students solidify their knowledge of spoken and written Arabic, both in colloquial and Modern Standard Arabic through interactive lessons with distinct schools in the U.S. and abroad. They compare and contrast problems and solutions to issues in the Arab world versus their own surroundings and they engage in the three modes of communication (interpretative, interpersonal, and presentational) to develop cultural competencies through hands-on theme-based instruction. The students continue to improve their language proficiency while enhancing their understanding of the cultural nuances as well as current socio-economic, scientific, and environmental issues. The curriculum covered in this class prepares students to enter the NEWL Arabic Language and Culture class.

NEWL Arabic Language and Culture

49420

Prerequisite: Minimum grade of B+ in Arabic IV Honors and Departmental Approval

(See **Advanced Placement Prerequisite Statement at the beginning of the World Languages section**)

The NEWL Arabic Language and Culture course conforms to the standards and expectations of an intermediate mid to high university Arabic language course. It is designed to provide students with ongoing and varied opportunities to further develop their proficiency skills for active communication within the cultural framework of the Arabic language and the many cultures that speak it. This course uses authentic texts to develop vocabulary and grammar and to introduce them to frequently used colloquial language. This proficiency-based exam is designed to assess students' skills in the Arabic language deemed critical by government and business in the 21st century. Students enrolled in this course take the NEWL exam which is targeted for traditional foreign language learners and heritage learners. The NEWL exam produces AP-style score reports and students can use it to apply for college credit and/or placement. This examination is administered in the spring.

CHINESE

Chinese I

47100

Grade Level: 9th–11th

Prerequisite: None

This course is an introduction to Chinese language and culture designed for students with no previous background in Chinese. The course aims to introduce the beautiful Chinese language by utilizing culturally relevant topics and words. The main goal of the course is to reveal to students the opportunities to immerse themselves in the language, instill the confidence to study Chinese further, and learn basic conversational Mandarin so they can address the realities of Chinese culture and traditions. Students learn proper pronunciation and tones, the foundation of spoken Mandarin, basic strokes, stroke order, radical and phonemes, and the foundation of written Chinese. Vocabulary, basic sentence patterns, and other fundamentals of listening, speaking, reading, and writing are all taught within the context of practical communication, and within the context of real-life application, using primarily simplified Chinese characters. The pinyin Romanization tool is also taught and employed as an aid to developing speaking and reading skills. Students learn to write approximately 250 words and to read an additional 250 characters by the end of the year.

Chinese II

47200

Prerequisite: Chinese I and Departmental Approval

This course aims at further developing the skills that were established in Chinese I. Basic material is reviewed and expanded upon, enabling students to advance their knowledge of Chinese grammar in the cultural context of daily life in China. Speaking and listening skills continue to be stressed, and writing in Chinese characters is mandatory. Chinese word processing enables students to read and express themselves in writing in Chinese.

Honors Chinese II

47201

Prerequisite: Minimum grade of A- in Chinese I and Departmental Approval

This rigorous course is for linguistically strong students who are ready and eager to develop their Chinese language skills at an accelerated pace. New grammar and vocabulary are introduced using a wide variety of instructional techniques and material. Speaking, listening, reading, and writing skills are solidified as students develop their interpretive, interpersonal, and presentational communication skills. With contemporary Chinese societies serving as a cultural backdrop, reading and writing skills are developed to provide students with insights into the rich diversity of the Chinese-speaking world. As their level of Chinese language sophistication increases, the students produce incrementally more complex projects on the cultures they study.

Chinese III

47300

Prerequisite: Chinese II and Departmental Approval

This course expands and refines the students' foundation in Chinese language and culture. New grammar, vocabulary, and characters are introduced and then extensively practiced in class, using a wide variety of instructional techniques and materials. The continued use of word processing in Chinese provides students with a useful tool to express themselves with greater ease when preparing written assignments. The development of stronger listening and speaking skills remains a priority.

Honors Chinese III

47301

Prerequisite: Minimum grade of B+ in Chinese II Honors and Departmental Approval

This course gives students the vocabulary and structures they need to enable them to further advance their knowledge of spoken and written Chinese. Students develop reading strategies to comprehend and discuss materials composed in formal written Chinese and develop enough independence in the language to write some guided stories. Authentic resources including newspapers, magazines, and television programs are used throughout the course. Deeper insights into Chinese culture are fostered through the use of Chinese films.

Chinese IV

47303

Prerequisite: Chinese III and Departmental Approval

This course enables students to solidify their foundation as they move forward expanding their knowledge of Chinese language and culture. By working with varied vocabulary and more complex structures students will be able to use the language in more complex situations. The textbook is supplemented with authentic materials, such as newspapers and magazines, to provide a springboard for listening, speaking, reading and writing activities. Insight into Chinese culture, an integral part of the course, is additionally fostered by the use of Chinese films.

Honors Chinese IV

47401

Prerequisite: Minimum grade of B+ in Honors Chinese III and Departmental Approval

In this accelerated course, linguistically strong students are encouraged to hone their reading, writing, word processing, listening, and speaking skills in Chinese. Writing assignments involving both writing and typing are given frequently in order to help students communicate constructively and creatively. Previously learned concepts and textbook materials are significantly expanded through introductory expository speaking that begins the process of mastering new grammar patterns and creative ways of describing realistic situations, people, character, locations, etc. Varied aspects of Chinese culture and history are used as topics for reading and class discussion.

Chinese V

47502

Prerequisite: Chinese IV and Departmental Approval

This course aims at further developing the skills that were established in intermediate Chinese. Students advance their knowledge of Chinese grammar within the cultural context of daily life in China. Emphasis is placed on the spoken language. Students discuss practical, social, and cultural topics with the aid of spoken language materials such as Chinese movies, plays, daily news, etc. More conversational strategies and the stylistic features of conversation are explored.

AP Chinese Language and Culture

47602

Prerequisite: Minimum grade of B+ in Chinese IV

Honors and/or Departmental Approval

(See **Advanced Placement Prerequisite Statement at the beginning of the World Languages section**)

This course conforms to the standards and expectations as described in the College Board curriculum for AP Chinese Language and Culture. Its aim is to provide students with ongoing and varied opportunities to further develop their proficiencies across the full range of language skills within a cultural frame of reference reflecting the richness of Chinese language and culture. The course introduces students to frequently used formal and idiomatic expressions as well as popular and colloquial phrases. Students study Chinese poetry and prose, and they experience culture through the study of Chinese history, art, traditions, newspaper articles, and current events. They also prepare essays on a wide range of topics. This course culminates in the Advanced Placement Chinese and Culture Exam given in May, which must be taken by all students enrolled in this class.

AP Chinese Language and Culture—Expedition Course

47603

Prerequisite: Minimum grade of B+ in Chinese IV

Honors and/or Department Approval

(See **Advanced Placement Prerequisite Statement at the beginning of the World Languages section**)

This course conforms to the standards and expectations as described in the College Board curriculum for AP Chinese Language and Culture. Its aim is to provide students with ongoing and varied opportunities to further develop their proficiencies across the full range of language skills within a cultural frame of reference reflecting the richness of the Chinese language and culture. The course introduces students to frequently used formal and idiomatic expressions as well as popular colloquial phrases. Students study Chinese poetry and prose, and they experience culture through the study of Chinese history, religion, and art. They read newspaper articles, discuss current events, and write on a wide range of topics. This course culminates in the Advanced Placement Chinese and Culture Exam given in May, which must be taken by all students enrolled in the class.

A required Expedition will augment this course. Financial aid is available for eligible students.

Language and Culture Expedition

(Dates TBD, expedition will take place during the school year)

As part of the course, students will travel to China. During the expedition component of the course students will have many opportunities for real-life practice with the language. They also will have many opportunities to gain first-hand knowledge of Chinese cultural practices, products, and perspectives, especially as related to the AP topics that they will be exploring in this course: global challenges, science and technology, contemporary life in China, personal and public identities, family and communities, and beauty and aesthetics.

FRENCH

French I

44100

Grade Level: 9th–11th

Prerequisite: None

This course is for those students who wish to begin their study of French in the Upper School. It is designed to provide students with foundational skills in reading, writing, speaking and understanding spoken French. A basal text provides grammar and cultural studies, while reading and writing skills are developed through the use of a variety of documents (poems, surveys, and passages from magazines and newspapers) and media (videos, short clips, and movies).

French II

44201

Prerequisite: French I and Departmental Approval

Students in this course continue to develop their foundational skills in French. New grammar and vocabulary are presented then extensively practiced in class, using a wide variety of instructional techniques and material. Speaking, listening, reading, and writing skills are solidified as students develop their interpretive, interpersonal, and presentational communication skills. Additionally, reading and writing skills are developed in contexts that provide students with insights into the richly varied cultures of the French-speaking world.

Honors French II

44202

Prerequisite: Minimum grade of A- in French I and Departmental Approval

This rigorous course builds upon the skills established in French I. It is for linguistically strong students who are ready and eager to work at an accelerated pace. New grammar and vocabulary are introduced using a wide variety of instructional techniques and material. Speaking, listening, reading, and writing skills are solidified as students develop their interpretive, interpersonal, and presentational communication skills. Additionally, reading and writing skills are developed in contexts that provide students with insights into the rich diversity of the French-speaking world. As their level of French language sophistication increases, the students are asked to produce incrementally more complex projects on the Francophone cultures they study.

French III

44300

Prerequisite: French II and Departmental Approval

This course expands and refines the students' foundation in French language and Francophone culture. New grammar and vocabulary are introduced then extensively practiced in class, using a wide variety of instructional techniques and material. Speaking, listening, reading, and writing skills are solidified as students role play, do group work, prepare oral presentations or work with on-line or local digital resources, and read short stories and/or articles on current events. In addition to the language, students will study customs, traditions and histories of French-speaking nations and regions so that their knowledge of French is embedded in cultural understanding.

Honors French III

44301

Prerequisite: Minimum grade of B+ in French II Honors and Departmental Approval

This course is designed to begin perfecting the language skills necessary for highly proficient oral and written communication. The finer points of grammar are reviewed, strengthened, and clarified. Discussions and compositions, which provide opportunities for self-expression, are based on Francophone current events and literature through a range of possibilities: online and local digital resources, newspaper articles, extracts, short stories, and more. Students develop their listening and speaking skills through the frequent use of recorded activities as well as through a wide variety of class activities. Students further broaden their cultural foundation through Internet projects and exploration.

Honors French IV

44402

Prerequisite: Minimum grade of B+ in French III Honors and Departmental Approval

In this pre-AP language course, the finer points of French grammar are reviewed, strengthened, and clarified. Students discuss examples of contemporary Francophone cultural and social issues. Discussions and compositions based on current publications provide the students with opportunities for independent self-expression. Students develop their listening skills through the frequent use of recorded activities. Students make recordings and do a wide variety of class exercises to improve their speaking ability. Films and online or local digital resources enhance listening skills and culture study.

AP French Language & Culture

44607

Prerequisite: Minimum grade of B+ in French IV Honors or A in French III Honors and/or departmental approval (See Advanced Placement Prerequisite Statement at the beginning of the World Languages section)

The goals of this course conform to the standards and expectations described in the College Board curriculum for Advanced Placement French Language and Culture. Students will be prepared to demonstrate their level of proficiency in French across three communicative modes (interpersonal, interpretive, and presentational) and the five goal areas outlined in the Standards for Foreign Language Learning in the 21st Century (communication, cultures, connections, comparisons, and communities). Films, literature, articles on current issues, and Internet-based activities serve as a springboard for discussions, debates, compositions, and presentations. Students also endeavor to broaden their active vocabulary and to become comfortable using a variety of tenses and idiomatic expressions both when writing and speaking in a variety of contexts. This course culminates in the Advanced Placement French Language Exam given in May, which must be taken by all students enrolled in this class.

Honors Seminar: French Studies

44617

Grade Level: 11th–12th

Prerequisite: Departmental Approval

This discussion-based course is designed as a seminar for students with a high proficiency in French, who want to continue to explore and discuss cultural themes throughout the French-speaking world. This challenging class is conducted in French to further improve fluency and comprehension. Students will work with authentic materials such as current event articles as well as literature, movies, and art that develop the overall understanding of the francophone world. This course is designed to be interactive, with frequent instructor feedback about student presentations, debates, and written responses, and provides a venue for students to become life-long learners of French.

FALL SEMESTER COURSES

Diverse Cultures in the Francophone World (f)

44513

Grade Level: 10th–12th

Prerequisite: French III and Departmental Approval

In this intermediate course, students will explore different regions of the francophone world. Through the use of articles, short stories, and videos, and the completion of individual projects, students will investigate the customs and traditions that make up the many different French-speaking cultures and identities across the globe. Ultimately, students should leave the course feeling confident in their abilities to navigate both the written and spoken language. A key factor for success in this highly interactive class is each student's commitment to full engagement in their learning experience.

SPRING SEMESTER COURSES

French Studies using Bandes Dessinées (s)

44512

Grade Level: 10th–12th

Prerequisite: French III and Departmental Approval

The graphic novel format of storytelling is a long-standing tradition in France and Belgium: classics include *Les Aventures de Tintin* and, more recently, *Persépolis*. In this intermediate course, students will continue to develop their French language skills through the use of contemporary graphic novels. We will explore themes ranging from historical and contemporary life, to environmental issues, to technology and global awareness. Through readings and videos students will hone their interpretive comprehension skills. By creating and sharing their own visual stories, they will further develop their written and interpersonal communicative skills. A key factor for success in this highly interactive class is each student's commitment to full engagement in their learning experience.

ITALIAN

Italian I

42100

Grade Level: 9th–11th

Prerequisite: None

This course is for those students who wish to begin their study of Italian. Students make use of a complete program, supported by audio, video and computer resources, that enables them to develop a strong foundation in the language and culture of Italy. Meaningful communication and the establishment of a strong grammatical foundation in Italian are the goals of this course. Additionally, reading and writing skills are developed in contexts that provide students with insights into Italian culture.

Italian II

42200

Prerequisite: Italian I and Departmental Approval

Students in this course continue to develop their foundational skills in Italian. New grammar and vocabulary are presented, then extensively practiced in class, using a wide variety of instructional techniques and material. Speaking, listening, reading, and writing skills are solidified as students develop their interpretive, interpersonal, and presentational communication skills. Additionally, reading and writing skills are developed in contexts that provide students with insights into the richly varied cultures of the Italian-speaking world.

Honors Italian II

42201

Prerequisite: Minimum grade of A- in Italian I and Departmental Approval

This rigorous course builds upon Italian I. It is for students who have strong linguistic ability and who are eager to work at a rapid pace. The goal of the program is to develop students' communication skills with conversation, role-plays, written assignments, readings, and listening comprehension exercises to enable the student to develop strong skills. The relationship between Italian language and culture is integral to the course.

Italian III

42300

Prerequisite: Italian II and Departmental Approval

This course expands and refines the students' foundation in Italian language and culture. New grammar and vocabulary are introduced then extensively practiced in class, using a wide variety of instructional techniques and material. Speaking, listening, reading, and writing skills are solidified as students role-play, do group work, prepare oral presentations using on-line or local digital resources, and read short stories and/or articles on current events. In addition to the language, students will study specific customs, traditions, and history of Italy so that their knowledge of Italian is embedded in cultural understanding.

Honors Italian III

42301

Prerequisite: Minimum grade of B+ in Italian II Honors and Departmental Approval

This course is designed to begin perfecting the language skills necessary for highly proficient oral and written communication. The finer points of grammar are reviewed, strengthened and clarified. Discussions and compositions, which provide opportunities for self-expression, are based on Italian current events and literature through a range of possibilities: online and local digital resources, newspaper articles, extracts, short stories, and the like. Students develop their listening and speaking skills through the frequent use of taped and recorded activities as well as through a wide variety of class activities. Students further broaden their cultural foundation through Internet projects and exploration.

Italian IV: Language & Culture

42400

Prerequisite: Italian III and Departmental Approval

This is a conversation and culture course. Communication skills are developed via the exploration of the rich Italian culture. Films, on-line and local digital resources, short stories, and other documents all provide the basis for vocabulary expansion and class discussions. The core curriculum concerning grammar review and expansion is augmented by a wide variety of topics relevant to Italy, past and present. A key factor to success in this highly interactive course is the student's commitment to active participation in all class activities.

Honors Italian IV

42401

Prerequisite: Minimum grade of B+ in Italian III Honors and Departmental Approval

In this advanced language course, the finer points of Italian grammar are reviewed, strengthened, and clarified. Students discuss contemporary cultural and social issues in Italy basing that work on current publications and media. Students develop their listening skills through the frequent use of taped activities. Students make recordings and do a wide variety of class exercises to improve their speaking ability. Films, online, and local digital resources enhance listening skills and culture study.

AP Italian Language & Culture

42500

Prerequisite: Minimum grade of B+ in Italian IV Honors or A in Italian III Honors and/or Departmental Approval (See **Advanced Placement Prerequisite Statement at the beginning of the World Languages section**)

The goals of this course conform to the standards and expectations described in the College Board curriculum for AP Italian Language and Culture. Students will be prepared to demonstrate their level of Italian proficiency across three communicative modes (interpersonal, interpretive, and presentational) and the five goal areas outlined in the Standards for Foreign Language Learning in the 21st Century (communication, cultures, connections, comparisons, and communities). Films, literature, articles on current issues, and Internet-based activities serve as a springboard for discussions, debates, compositions, and presentations. Students also endeavor to broaden their active vocabulary and to become comfortable using a variety of tenses and idiomatic expressions both when writing and speaking in a variety of contexts. This course culminates in the Advanced Placement Italian Language and Culture Exam given in May, which must be taken by all students enrolled in this class.

SPANISH

Spanish I

43100

Grade Level: 9th–11th

Prerequisite: None

This course is for those students who wish to begin their study of Spanish in the Upper School. Students make use of multimedia resources—as well as the textbook—to explore general cultural themes and learn basic grammar and vocabulary. These first steps in the Spanish language are supported by a variety of written and oral-aural exercises. Meaningful communication is the natural goal of the course, with strong emphasis on the mastery of basic grammar needed to progress in the language. Reading and writing are developed in contexts that provide students with insights into the cultures of the Spanish-speaking world.

Spanish II

43200

Prerequisite: Spanish I and Departmental Approval

Students in this course continue to develop their foundational skills in Spanish. New grammar and vocabulary are introduced then extensively practiced in class, using a wide variety of instructional techniques and material. Speaking, listening, reading, and writing skills are solidified as students develop their interpretive, interpersonal, and presentational communication skills. Additionally, thematic lessons provide students with insights into the cultural richness of the Hispanic world.

Honors Spanish II

43201

Prerequisite: Minimum grade of A- in Spanish I and Departmental Approval

This rigorous course builds upon the skills established in Spanish I. It is for linguistically strong students who are ready and eager to work at an accelerated pace. The program continues to introduce new grammar and vocabulary through a wide variety of instructional techniques and material. Speaking, listening, reading, and writing skills are solidified as students develop their interpretive, interpersonal, and presentational communication skills. Additionally, thematic lessons provide students with insights into the rich cultural tapestry of the Spanish-speaking world. As their level of Spanish language sophistication increases, the students are asked to produce incrementally more complex projects on the cultures they study.

Spanish III

43300

Prerequisite: Spanish II and Departmental Approval

This course expands and refines the students' foundation in Spanish language and Hispanic culture. The first quarter is a review of material studied in the first two years. New grammar and vocabulary are introduced thematically then extensively practiced in class, using a wide variety of instructional techniques and material. Speaking, listening, reading, and writing skills are solidified as students develop their interpretive, interpersonal, and presentational communication skills. Additionally, thematic lessons help students to explore the written language through level-appropriate literary selections and newspaper articles. In addition to the language, students will study customs, traditions, and histories of Spanish-speaking nations and regions so that their knowledge of Spanish is embedded in cultural understanding.

Honors Spanish III

43301

Prerequisite: Minimum grade of B+ in Spanish II Honors and Departmental Approval

This course is designed to begin perfecting the language skills necessary for highly proficient oral and written communication through the exploration of cultural themes. The finer points of grammar are reviewed, strengthened, and clarified. Discussions and compositions, which provide opportunities for self-expression, are based on current events, short films, and literature from the Hispanic world through sources such as online and local digital resources, newspaper articles, extracts, and short stories. Students develop their listening and speaking skills through the frequent use of multimedia sources as well as through a wide variety of class activities. Students further broaden their cultural foundation through Internet projects and exploration.

Spanish IV

43401

Prerequisite: Spanish III and Departmental Approval

This is a conversation and culture course. Earlier language skills are reviewed and expanded with renewed emphasis on broad cultural themes within the Spanish-speaking world. Films, Podcasts, research on the Internet, short stories, and other documents all provide the basis for vocabulary expansion and class discussions. The core curriculum concerning grammar review and expansion is augmented by a wide variety of topics relevant to the Spanish-speaking world. A key factor to success in this highly interactive course is the student's commitment to active participation in all class activities.

Honors Spanish IV

43402

Prerequisite: Minimum grade of B+ in Spanish III Honors and Departmental Approval

In this Pre-AP course, students are encouraged to delve into issues such as science, politics, contemporary life, and history. In addition, they examine how art and literature reflect these themes. Speaking, listening, reading, and writing skills are solidified as students develop their interpretive, interpersonal, and presentational communication skills. We study a range of literary texts as well as film and music. The curriculum covered in this class prepares students to enter either the AP Spanish Language and Culture class or the AP Spanish Literature class.

Honors Spanish for Heritage Speakers

43560

Grade Level: 9th–10th

Prerequisite: Departmental Approval

This course is for students with fluent speaking ability and experience with Spanish through informal and family situations rather than in a traditional classroom setting. The course is designed to meet the unique linguistic needs of these students. Focus will include issues common to heritage speakers such as spelling, punctuation, specific grammatical points, and broadening of vocabulary. This work, along with readings and discussion of literature and articles about Hispanic Culture, will help students become more advanced and effective formal communicators in terms of both writing and speaking. The course is open to students in grades 9 and 10 by permission of the Department, with placement test, writing sample, and interview. Successful completion of the course may lead to placement in an Advanced Placement course the following year, with the permission of the Department.

AP Spanish Language & Culture

43507

Prerequisite: Minimum grade of B+ in Spanish IV Honors or A in Spanish III Honors and/or Departmental Approval
(See **Advanced Placement Prerequisite Statement at the beginning of the World Languages section**)

The goals of this course conform to the standards and expectations described in the College Board curriculum for AP Spanish Language and Culture. Students will be prepared to demonstrate their level of proficiency in Spanish across three communicative modes (interpersonal, interpretive, and presentational) and the five goal areas outlined in the Standards for Foreign Language Learning in the 21st Century (communication, cultures, connections, comparisons, and communities). Films, literature, articles on current issues, and Internet-based activities serve as a springboard for discussions, debates, compositions, and presentations. Students also endeavor to broaden their active vocabulary and to become comfortable using a variety of tenses and idiomatic expressions both when writing and speaking in a variety of contexts. This course culminates in the Advanced Placement Spanish Language Exam given in May, which must be taken by all students enrolled in this class.

AP Spanish Literature & Culture

43517

Prerequisite: Minimum grade of A- in Spanish IV Honors or AP Spanish Language and/or Departmental Approval
(See **Advanced Placement Prerequisite Statement at the beginning of the World Languages section**)

Following the prescribed Advanced Placement syllabus, this course offers the advanced Spanish student a remarkable overview of Spanish and Hispanic literature from medieval times through present day. The list of approximately 40 works from more than 35 authors, containing poems, plays, short stories and novels, is demanding. Students are required to participate actively in class discussions as well as write frequent essays in literary analysis, comparisons between literature and art or music, and cultural connections between the history of the Hispanic world and its interpretations in literature. Students in this course are required to take the AP Spanish Literature and Culture Exam given in the spring.

FALL SEMESTER COURSES

Español en Vivo—Spanish in the Community (f)

43505

Grade Level: 11th–12th

Prerequisite: Spanish III, Spanish IIIH or above. Heritage speakers may take this course with Departmental Approval

May be taken concurrently with another Spanish course, level IV or higher

Take advantage of this opportunity to show how relevant your study of Spanish truly is! This community-based class takes you out of the classroom and into the Spanish-speaking community in and around Greenwich. This course emphasizes independent and group work, conversation, journal writing, language skill building, and community outreach through local agencies. Every student is required to attend 3–4 community outings and one service project. Preparation for and visits to different agencies take place during class time and help to develop your communication skills.

La Cocina Hispana: An exploration of Hispanic culture through food (f)

43524

Grade Level: 10th–12th

Prerequisite: Spanish III, Spanish IIIH or above. Heritage speakers may take this course with departmental approval.

May be taken concurrently with another Spanish course, level IV or higher

Take advantage of this opportunity to show how relevant your study of Spanish truly is! This community-based class takes you out of the classroom and into the Spanish-speaking community in and Food provides a fundamental connection to cultural heritage and identity. In this course, we will use GA's state-of-the-art culinary lab to bridge language and cultural studies. Students will study how recipes and their ingredients relate to cultural components of the Spanish-speaking world. They will explore the history, literature, geography, and traditions of different regions in Hispanic countries. Through the immersive approach of the course, learners will become more skilled and sophisticated Spanish-language communicators, in both writing and speaking. Note: This class is conducted in Spanish and includes 2-3 off campus classes.

Origins of Hispanic Culture in Europe (f)

43522

Grade Level: 11th–12th

Prerequisite: Spanish III, Spanish IIIH or above. Heritage speakers may take this course with departmental approval.

May be taken concurrently with another Spanish course, level IV or higher

What makes Spain, Spain? What is Hispanic Culture and how did it come to be? Spain has played a unique and pivotal role in Western civilization. It has historically stood at the crossroads of human migration, cultures, religions, ideas, and trade. This course will explore the origins of Hispanic culture through the study of the history, art, literature, and culture of the Iberian Peninsula and its many inhabitants throughout the centuries. From the seminal Celtiberian populations, to its birth as a Roman colony, to its period as a Muslim Caliphate, through the Reconquest, the Renaissance and Spain's "Golden Age", the Iberian Peninsula's many inhabitants have all contributed to what is the Hispanic Culture of today. This course will examine the impact of this rich past on literature, art, architecture, music, food, ideas, and customs on Hispanic Culture. The course will be taught in Spanish, and will have a hands-on, practical approach. The curriculum will create connections to the culture of today's Spain, as we practice the three modes of communication and all language skills: speaking, writing, listening, and reading.

SPRING SEMESTER COURSES

Español de Negocios—Business Spanish (s)

43506

Grade Level: 11th–12th

Prerequisite: Completion of Spanish III, Spanish IIIH or above. Heritage speakers may take this course with Departmental Approval.

May be taken concurrently with another Spanish course, level IV or higher

This course will familiarize students with the world of finance in the Hispanic world, including a survey of the culture and the basic vocabulary used in business, through hands-on work and projects that look to a direct application of the students' language skills. Themes to be studied include marketing and advertising in the Hispanic world, issues of international leadership, the metric system and foreign exchange, and matters of transportation and foreign travel.

The goal of the course is to enrich students' awareness and understanding of the social and political issues currently confronting Latin-America. With that in mind, the students will do research on various aspects of the economy of the Spanish-speaking world, follow news that pertains to economics and policy, and discuss economic relations between Latin America and the USA.

La Cocina Hispana: An exploration of Hispanic culture through food (s)

43525

Grade Level: 10th–12th

Prerequisite: Spanish III, Spanish IIIH or above. Heritage speakers may take this course with departmental approval.

May be taken concurrently with another Spanish course, level IV or higher

See course description under fall electives.

Origins of Hispanic Culture in Europe (s)

435223

Grade Level: 11th–12th

Prerequisite: Spanish III, Spanish IIIH or above. Heritage speakers may take this course with departmental approval.

May be taken concurrently with another Spanish course, level IV or higher

See course description under fall electives.

CLASSICS

In Levels I through Advanced Placement, the goal of the Classics program is to encourage Latin and Greek students to become involved first-hand with the Classics by acquiring the ability to read standard Latin and Greek authors with competence and appreciation. Understanding of the social and political history of the ancient Romans, along with related topics in Greco-Roman mythology, religion, and literature, is developed. The Classics Department promotes the additional benefits gained from the study of Latin and Greek, such as a sharper insight into the grammar of other languages including English, and the acquisition of English vocabulary.

The Classics program emphasizes a reading approach to the study of the language: students begin reading simple Latin or Greek passages immediately upon starting the first year. Continuous attention to derivatives enables students to develop their vocabulary. Due emphasis on grammar, memorization of forms, and word study equips the students with the necessary tools to understand and appreciate classical literature. As their facility with the syntax and vocabulary of the language increases, they develop their ability to translate original texts and read authentic pieces of Latin or Greek literature of increasing complexity.

LATIN

Latin I

45100

Grade Level: 9th–11th

Prerequisite: None

This course is a standard introductory course to Latin. The emphasis will be on learning basic forms and grammatical concepts. There will be applications of what is learned in grammar to translation of simple passages from Latin to English. An introduction to Latin composition will round out the course.

Latin II

45200

Prerequisite: Latin I and Departmental Approval

This course has two primary objectives: first, to solidify the student's foundation of Latin grammar; and second, to build upon it a broader structure for the reading of Latin authors. Advanced grammatical concepts to be introduced in this course include indirect statement and the forms and uses of both participles and the subjunctive. Continued emphasis is placed on the enhancement of sight translation skills and the development of an awareness of the historical context for the language itself. Throughout the year, students will use this knowledge to read adapted passages of Latin prose and poetry.

Honors Latin II

45201

Prerequisite: Minimum grade of A- in Latin I and Departmental Approval

This rigorous course builds upon the skills established in Latin I. It is intended/designed for students ready and eager to work at an accelerated pace. New grammar and vocabulary are introduced and solidified as students develop their interpretive and analytical skills in Latin. The spring is devoted to advanced grammar topics and authors such as Eutropius and Caesar.

Latin III

45300

Prerequisite: Latin II and Departmental Approval

This course expands and solidifies the student's understanding of the Latin language through grammar and syntax reviews and by providing the foundation for the students to read a variety of classical authors such as Caesar, Catullus, and Cicero. In addition to discussion of meaning and writing style, students also learn about Roman history and culture. They are encouraged to explore political, philosophical, and ethical issues at play and relate them to issues that face the modern world.

Honors Latin III

45302

Prerequisite: Minimum grade of B+ in Latin II Honors and Departmental Approval

This rigorous pre-AP Latin course focuses on developing and expanding students' translation skills, using classical Latin authors such as Cicero, Catullus, Ovid, Apuleius, and Horace. In addition to translating, students are introduced to textual, stylistic, and metrical analysis. Discussions of translations include aspects of Roman culture and history and their influence on the intellectual history of the West. The curriculum of this course prepares students to enter the AP Latin course the following year.

Latin IV

45400

Prerequisite: Latin III and Departmental Approval

This course is for students who want to continue their study of Latin but need additional consolidation of grammar and translation skills before the AP Latin course. The readings will vary from year to year and may include authors from the classical tradition such as Ovid, Caesar, Vergil, and Livy, as well as the literature of later Latin. Class discussions about the readings form an integral part of this course and explore the humanistic culture of the West. Grammar review of special topics is also included in the course.

Honors Latin IV

45401

Prerequisite: Minimum grade of B+ in Latin III Honors or A- in Latin III, and Departmental Approval

For students who want to continue a rigorous study of Latin but are not yet ready for the schedule and demands of AP Latin, this course provides the opportunity to improve semantic and syntactic fluency while reading both Roman prose and poetry authors in depth. The curriculum combines the consolidation of fundamentals with the practice of translating and analyzing authentic literary texts by authors such as Caesar, Cicero, Vergil, and Ovid. Class discussions explore the history and cultural context of relevant works as well as the distinctive style of each author. Assessments are designed with preparedness for the AP course in mind.

AP Latin

45602

Prerequisite: Minimum grade of B+ in Latin IV Honors or A- in Latin III Honors or A in Latin IV, and Departmental Approval

AP Latin is a rigorous course that promotes reading Latin poetry and prose with historical and literary sensitivity. Students are encouraged to develop linguistic skills by engaging in multiple activities, including translating poetry and prose precisely and literally; reading passages of poetry and prose with comprehension; and analyzing literary texts in clear, coherent written arguments, supported by textual examples. The course focuses upon selections from Caesar's *De Bello Gallico* and Vergil's *Aeneid*, but includes other classical authors of prose and poetry.

Honors Seminar: Latin Studies

45505

Prerequisite: Departmental Approval

Honors Latin Studies is a fourth-year Latin course for those who have successfully completed an AP Latin course. Readings from several Latin authors will make up the text of the course with a concentration on Classical authors such as Cicero, Catullus, and Tacitus while also drawing from medieval and renaissance texts. In addition to tests and exams, seminar presentations and a major paper will be required. Entrance into this course requires the recommendation of the student's AP instructor.

FALL SEMESTER COURSES

Latin V: Reading Latin Poetry (f)

45410

Prerequisite: Latin IV and departmental approval

This semester course provides the opportunity for students to explore major themes in epic poetry from the Roman Empire. While reading selections from works such as Ovid's *Metamorphoses*, students will learn more about the rhetorical and literary devices, style, and meter of influential Latin poetry. Studying the texts in the original and via scholarly articles, students will strengthen linguistic skills and think critically while translating and considering both historical and cultural context. Grammar will be reviewed in the context of readings as needed.

GREEK

Greek I

45700

Prerequisite: Departmental Approval

This class is a standard introductory course to classical Greek. It will combine a study of basic Attic grammar and syntax with efforts to gain a reasonable facility in reading Greek prose and in translating from English to Greek. By springtime, students will gradually come to read adapted excerpts from Greek prose (namely Herodotus and Xenophon).

Greek II

45702

Prerequisite: Greek I and Departmental Approval

This course builds upon the grammatical foundation and basic translation skills learned in Greek I. It will expand the study of basic Attic grammar and syntax. In the fall students will read selections from Herodotus and Xenophon. In the spring students will read selections from Plato's dialogues. Throughout the year students will learn an appreciation for the cultural, moral, and artistic values that distinguish the ancient Greek culture and literature.

Honors Greek II

45704

Prerequisite: Minimum grade of B+ in Greek I and Departmental Approval

This rigorous course builds upon the grammatical foundation and translation skills learned in Greek I. It will seek to reinforce important and increasingly sophisticated grammatical and syntactical principles. In the fall, students will read selections from Xenophon's *Anabasis* and *Memorabilia*. In the spring students will read selections from Plato's *Apology* and *Crito*. Throughout the year students will learn an appreciation for the cultural, moral, and artistic values that distinguish the ancient Greek culture and literature.

Greek III

45703

Prerequisite: Greek II and Departmental Approval

The third year of the Regular Greek track presupposes an acceptable grasp of all the essentials of Attic morphology, syntax, and vocabulary. Building on this foundation, it takes as its primary author Homer, who stands at the very beginning of Western literature. Students will read at least 500 lines of Homer's poetry, and will develop a familiarity with the syntactic and morphological peculiarities of the epic dialect, while at the same time immersing themselves in the culture and philosophy of Homer's heroic world. Time permitting, Greek texts of other periods and genres will be studied, including history, philosophy, drama, and the New Testament.

Honors Greek III

45705

Prerequisite: Minimum grade of B+ in Greek II Honors and Departmental Approval

The third year of the Honors Greek track presupposes a firm grasp of all the essentials of Attic morphology, syntax, and vocabulary. Building on this foundation, it takes as its primary author Homer, who stands at the very beginning of Western literature. Students will read well over 1,000 lines of Homer's poetry, and will develop a strong control over the syntactic and morphological peculiarities of the epic dialect, while at the same time immersing themselves in the culture and philosophy of Homer's heroic world. Time permitting, Greek texts of other periods and genres will be studied, including history, philosophy, drama, and the New Testament.

VISUAL AND PERFORMING ARTS

Participation in the Arts encourages us to react to, record and share our impressions of the world. The goal of the Arts Departments of Brunswick School and Greenwich Academy is to enable students to experience, understand, and enjoy the Visual and Performing Arts, including studio art, dance, music and theater.

The program encourages individual creative expression, the development of specific skills in each area, communication with the public through exhibitions and performances, and appreciation of all art forms. Courses provide recognition of the role of the Arts in history and in the culture of our world.

The departments require of all students a minimum of one year's participation in any of the Arts areas. In addition, students are welcome to participate in a variety of co-curricular dance, music and theater performances, and arts clubs.

VISUAL ARTS

In studio art classes, students are guided to fulfill their individual potential by acquiring and developing skills and techniques in a variety of media, including the resources of new kinds of technology, while solving problems and thinking creatively. They learn to communicate their ideas and emotions in an original, personal style. Aesthetics, art history, art criticism, and contemporary developments are introduced in classes and through field trips, visiting artists, and exhibitions by professionals or by the students themselves.

Art I

61000

Grade Level: 9th

Prerequisite: None

This course emphasizes the fundamentals of fine art techniques including drawing, painting, printmaking, computer graphics, ceramics and sculpture. Important art concepts as composition, perspective, and color theory are introduced. The course challenges each student to think critically and creatively, be original, and to experiment with a variety of materials. Students work from observation, memory, imagination, and personal expression toward styles that express their own vision. They are exposed to historical and contemporary art through visits to museums and galleries, slide presentations, and visits from professional guest artists. A sketchbook for developing designs and a portfolio review are part of the course. Students who have successfully completed this course will be approved for an AP course the following year.

Honors Art II

68400

Grade Level: 10th–11th

Prerequisite: Art I or Departmental Approval

This course offers a varied development of broad range art techniques and processes. The course covers all the major disciplines in art which may include drawing, design, painting, computer graphics, ceramics, textiles, printmaking, and a wide range of sculptural techniques. The projects and themes are very open, leaving as much scope for individual learning as possible. Students are encouraged to develop their own personal themes and topics. A sketchbook for developing design ideas, guest artists and a portfolio review are important aspects of the course. Students will develop works in this course that may be included in the Advanced Placement 2D Design and Drawing portfolios.

Honors Portfolio Prep & Open Studio (GA)

66620

Grade Level: 11th–12th

Prerequisite: Departmental Approval

This is a course designed for students of all levels who would like to explore ideas, methods, materials and skill building in the art studio. This course is intended for students who would like to bolster their art portfolio and create a website for their college applications. In the fall, students will work with the teacher to create portfolios tailored to the requirements of their list of colleges to see where enrichment and additions are needed and pursue art projects that enhance that portfolio.

In the spring, students will work independently on projects that interest them. The teacher will work one on one with students to build skills in areas of interest, including drawing, painting, printmaking, collages, photography, digital art and collaborations with video, the engineering and design lab and ceramics.

AP Studio Art: 2-D Design Portfolio (BR)

68505

Grade Level: 10th–12th

Prerequisite: Departmental Approval

The two-dimensional design portfolio is intended to address a very broad interpretation of two-dimensional (2-D) design issues. This type of design involves purposeful decision-making about how to use the elements and principles of art in an integrative way. The elements of design (line, shape, illusion of space, illusion of motion, pattern, texture, value, and color) are like a palette of possibilities that artists use to express themselves. The principles of design help guide artists in making decisions about how to organize the elements on a picture plane in order to communicate content. In addition to general work in 2-D design, a concentration is required for the course. A sustained investigation is a body of related works based on an individual's interest in a particular idea expressed visually. It focuses on a process of investigation, growth, and discovery. This portfolio can include the use of advanced technology, digital photography, computer art, computer graphics, graphic design, collage, typography, product design, fabric design, weaving, illustration, drawing, painting, and printmaking.

AP Studio Art: 2-D Design Portfolio (GA)

66490

Grade Level: 10th–12th

Prerequisite: Departmental Approval

At Greenwich Academy, individual ideas are prized and all methods and materials are acceptable in making art for the AP 2-D Design portfolio. Students pose a personal question and then answer it through visual means. There is no preferred content or style. Students generate questions related to their experiences. They select materials, processes, and ideas to investigate, guided by their questions. They make work through practice, experimentation, and revision using selected components, developing skills in connecting materials, processes, and ideas within their work.

Methods and materials cover the gamut of art making. Everything from graphic design, digital imaging, photography, collage, fabric design, weaving, painting, and printmaking are among the possibilities for portfolio submission.

AP Studio Art: Drawing Portfolio (BR)

68500

Grade Level: 10th–12th

Prerequisite: Departmental Approval

The drawing portfolio is designed to address a broad interpretation of drawing issues and media. Light and shade, line quality, rendering of form, composition, surface manipulation, and illusion of depth are drawing issues that can be addressed through a variety of means. Many works of painting, printmaking, and mixed media as well as abstract, observations, and inventive works may qualify. The goal of the class is to address drawing issues, and also to develop a concentration—which is a body of related works based on an individual's interest in a particular idea expressed visually. It focuses on a process of investigation, growth, and discovery.

AP Studio Art: Drawing Portfolio (GA)

66500

Grade Level: 10th–12th

Prerequisite: Departmental Approval

At Greenwich Academy, individual ideas are prized and all methods and materials are acceptable in making art for the AP Drawing portfolio. Students pose a personal question and then answer it through visual means. There is no preferred content or style. Students generate questions related to their experiences. They select materials, processes, and ideas to investigate, guided by their questions. They make work through practice, experimentation, and revision using selected components, developing skills in connecting materials, processes, and ideas within their work.

The AP Drawing course focuses on the use of mark-making to render ideas. Students will use a variety of mark-making techniques, lines, textures, surface, space, light and shade, and composition using all the drawing materials and processes that are available. There is no preferred content or style. Drawing, painting, printmaking, and mixed media work are all acceptable methods of making art.

Students will create a portfolio of work for submission.

AP Studio Art: 3-D Design Portfolio (BR)

68510

Grade Level: 10th–12th

Prerequisite: Departmental Approval

The three-dimensional design portfolio is intended to address a broad interpretation of sculptural issues in depth and space. These may include mass, volume, form, plane, light, and texture. Such elements and concepts may be articulated through additive, subtractive, and/or fabrication processes. A variety of approaches to representation, abstraction, and expression may be part of the student's portfolio. These might include traditional sculpture, laser cut design sculpture, architectural models, ceramics, three-dimensional fiber arts, or metal work, among others. A sustained investigation of works based on an individual's interest in a particular idea expressed visually is required.

AP Studio Art: 3-D Design Portfolio (GA)

66489

Grade Level: 11th–12th

Prerequisite: Ceramics I, Honors Ceramics II and Departmental Approval

The three-dimensional design portfolio is for students who intend to create a body of work for submission to the College Board. This portfolio is focused on an inquiry of the student's choosing and includes finished 3-D work as well as written submissions detailing the process through which the work was conceived and created. Students opting to enroll in this 3-D Design Portfolio will focus on work in clay; this may include both sculptural and utilitarian objects. While the course focus is on ceramic fabrication processes, students are encouraged and supported in incorporating other media into their portfolio (wood, cardboard, laser cutting, 3-D printing, fiber arts, metal and more). In addition to scheduled class time, AP Studio Art students are expected to invest additional time into the creation of their portfolio throughout the year.

Ceramics I

62000

Grade Level: 9th–12th

Prerequisite: None

This course will introduce students to the core techniques of working with clay. We will cover handbuilding (pinch, coil, and slab construction) and wheel-throwing, as well as a variety of surface decoration processes. Assignments will encourage students to explore new ideas and methods, while giving them the creative freedom to create exciting and unique work.

Honors Ceramics II: Ceramic Sculpture (BR)

68142

Grade Level: 10th–12th

Prerequisite: Art I, Ceramics I or Departmental Approval

This course is designed for second-year Ceramics students to advance their range of ceramic techniques and processes, including throwing and hand building, slips, glazes and decoration styles, and firing. They also explore working with different mediums like wire, wood, and plaster with their clay elements. The students are asked to be more independent in the choosing of the themes and topics of the works. The course is built as a lead-in to the Advanced Placement studio courses. Assessment is based on the breadth and quality of the portfolio.

Honors Ceramics II: Skills (GA)

66402

Grade Level: 10th–12th

Prerequisite: Art I, Ceramics I or Departmental Approval

In this course, students will advance their technical skills while finding their voice in the medium. We will investigate ceramics through sculptural and utilitarian applications inspired by historical and contemporary works. Projects will prompt individual problem-solving and interpretation with a focus on craftsmanship and individual expression.

Honors Ceramics III: Voice (GA)

66407

Grade Level: 10th–12th

Prerequisite: Art I, Ceramics I, or Departmental Approval

This third year Honors Ceramics course supports students' deeper inquiry of the medium. We will learn more about ceramic materials, glaze chemistry, loading, and firing work—giving students greater access to the multi-stage process of bringing their ideas to fruition. Students will continue to use a mix of handbuilding and wheel-throwing to develop their creative voice through self-chosen lines of inquiry.

Computer Graphics I

68150

Grade Level: 9th–12th

Prerequisite: None

This course offers the opportunity for students to develop and explore the unlimited design and visual communication possibilities that computers have to offer. The class will cover the use of computers and cameras as tools of the artist, photographer, graphic designer, product designer, and web designer. The goal of the class is to explore computer technology and use it to foster creative thinking as an artist's tool and as a way to enhance the visual clarity and style of any design work. Students will be working with a variety of modern design software, and will adapt to the frequent changes occurring in the fields of computers and interactive media. Hardware includes computers, slide and flatbed scanners, digital cameras, color laser printers, and the Internet. There may be some cross-curricular exploration with other arts classes as well. Students who have successfully completed this course will be approved for an AP course the following year.

Honors Computer Graphics II

68250

Grade Level: 10th–12th

Prerequisite: Computer Graphics I

This course offers the opportunity for students who have already taken the computer graphics class to explore this art form at a more advanced level. Students will be working with a variety of modern design software and will adapt to the frequent changes occurring in the fields of computers and interactive media. The class will cover the use of computers and cameras as tools of the artist, photographer, graphic designer, product designer, and web designer. Hardware includes computers, slide and flatbed scanners, digital cameras, color laser printers, and the Internet. There may be some cross-curricular exploration with other arts classes as well. By the end of this class, students will be expected to produce work meant for a college portfolio or an Advanced Placement concentration. The concentration is a focused body of work exploring a personal, central interest as intensively as possible.

Film Production I

66501

Grade Level: 9th–12th

Prerequisite: None

This course focuses on the development of introductory film production skills. Students will work collaboratively through a series of creative challenges and assignment prompts to develop strong creative problem-solving skills in the film studio. They will learn to write, storyboard, shoot, and edit footage—creating several short films over the course of the year. Students will produce work using digital cameras (Canon HD XA10s) and edit in Final Cut Pro. Discussion and application of techniques such as camera frame, continuity, coverage, and montage will be addressed. We will also explore new and emerging technology and experimental camera apps. Both feature and short films will be screened as related to assignments.

Honors Film Production II

66502

Grade Level: 10th–12th

Prerequisite: Film Production I

The Honors Film Production II class offers students the opportunity to further develop their film creation, production, and editing skills while exploring new genres and techniques of filmmaking. The focus will be on more advanced levels of editing within Final Cut Pro. Additional time will be spent exploring the range of manual operations on the camera including white balance, exposure, and shutter speed. Students will develop, script, and produce several short films each semester. We will also explore new and emerging technology and experimental camera apps. Both feature and short films will be screened as related to assignments.

Honors Film Production III (BR)

68520

Grade Level: 10th–12th

Prerequisite: Honors Film Production II or Departmental Approval

As a continuation from the build blocks set forth in Film I and II, students will take a more independent journey into video production. Stylistic freedom will be given to the Honors student in the evolution of their content, from conceptual ideas, production advancement, to the final film rendering. Peer groups will be formed to assess and edit ideas as a final script is formed. Students will determine their own shooting schedules and will be assessed weekly on the content they create. Both student and teacher evaluations will be conducted throughout the production process. Collaboration with the Recording Studio and Acting classes will also take place for cross-curricular amelioration. Students will work with DSLR cameras to maximize the quality of their shoots and will edit in Final Cut Pro. Students will also view and critique professional and independent films in the journey to better understand their own work.

Honors Film Production III (GA)

66504

Grade Level: 10th–12th

Prerequisite: Honors Film Production II or Departmental Approval

This class will provide an opportunity for students who are serious about filmmaking to continue to produce work at a higher and more personal level. Each student will determine the direction, production calendar, and goals for his/her individual creative pursuit. Students will produce work on Canon 5D Mark III cameras and edit in Final Cut Pro. They will be required to assist each other in writer's room, during critiques, while screening professional and festival films, and as crew for each other during production blocks. Time will be dedicated to developing script arcs, beat sheets, storyboarding, and ultimately translating ideas to screen. Preparation of individual film reels for college review will be ongoing throughout the year.

Honors Film Production IV (GA)

66506

Grade Level: 12th

Prerequisite: Honors Film Production III

In this class, students will be given the opportunity to conceive, develop, and produce completely independent, upper-level film projects. Students' work can be created as either single, long form films, or as a series of shorts sharing ideas, focus, or content. Students may work individually or in collaborative teams pending teacher approval. Screenings, critiques, and new equipment workshops will be used throughout the year. This is a highly self-driven, process and product based, upper-level, creative class.

Honors Engineering and Design I: Inventor's Workshop

36402

Grade Level: 10th–12th

Prerequisite: Departmental approval and pre-course survey

*This course is offered jointly through the Engineering and Computer Science and Visual Arts Departments and will be listed under both Departments

While Inventor's Workshop focuses on design, building, digital fabrication, creative coding, programming microcontrollers, and electronics, it is not your typical engineering course. In this course you will be able to bring your personal design and engineering ideas to life. Held in GA's Engineering & Design Lab and built around a collection of core projects, this course is designed to bring out the creative potential in every student. Our lab work is grounded in experimentation, possibilities, and documenting the process, as students narrow down their ideas towards a finished product. This honors level course will prepare students with all of the technical tools and problem solving skills needed for Engineering and Design II, as well as advanced design, interactive, and new media possibilities in the visual arts.

Honors Engineering and Design II: Inventions that Make Life Better

36403

Grade Level: 11th–12th

Prerequisite: Honors Engineering and Design I or any AP Art course

*This course is offered jointly through the Engineering & Computer Science and Visual Arts departments and will be listed under both departments.

This course is designed for students who have experience working with 2D and 3D design, digital fabrication, electronics, and microcontrollers and would like to apply these skills to engineering problems of their design. Students will engage with the cyclical engineering design process to come up with solutions to real-life problems. Greenwich Academy's Engineering and Design Lab offers state-of-the-art fabrication machines and tools for building and prototyping their designs. Over the course of the year, students will have the opportunity to present their work and receive feedback from community members and professionals working in the fields of art, design, and engineering.

FALL SEMESTER COURSES

Architecture & Design I (f)

68143

Grade Level: 9th–12th

Prerequisite: None

This is an introductory course in which basic fundamentals of architectural design are examined and perfected. Using a combination of problem solving, drawing, and construction techniques students will be introduced to how an idea develops from concept to construction. Students will be introduced to the computer program Google SketchUp which allows the development of design ideas and presentation. This course culminates with a series of three-dimensional explorations using a variety of materials and techniques. A laser cut project using Adobe Illustrator will allow students to develop an architectural concept using the latest technology.

Art and Design I (f)

68147

Grade Level: 9th–12th

Prerequisite: None

The course emphasizes the fundamentals of fine art techniques including drawing, painting, printmaking, computer graphics, ceramics, and sculpture. Important art concepts as composition, perspective, and color theory are introduced. The course challenges each student to think critically and creatively, be original, and to experiment with a variety of materials. Students work from observation, memory, imagination, and personal expression toward styles that express their own vision. They are exposed to historical and contemporary art through visits to museums and galleries, slide presentations, and visits from professional guest artists. Students who have successfully completed this course will be approved for an AP course the following year.

STEAM-101: The Coding Palette (f)

78610

Grade Level: 12th

Prerequisite: None

Note: This interdisciplinary course fulfills the requirement of a semester of Computer Science OR Art

Fusing Art and Code, this course is positioned squarely at the intersection of Computer Science and Visual Arts, carefully blending problem-solving ability with artistic creativity. It guides students not only how to code and solve problem sets, but also articulate their personal artistic vision with digital tools.

You'll dive into the world of creating art through technology with MIT Media Lab's Processing language — a user-friendly and simpler alternative to Java. We'll explore the works of 6 to 8 iconic artists, challenging you to emulate their work digitally and then render them into a variety of physical media. From learning coding fundamentals to creating art inspired by the greats, you'll develop, prototype, and showcase projects that blend digital innovation with artistic tradition. Simply put: this is the class where code meets art, bringing masterpieces to life

SPRING SEMESTER COURSES

Architecture & Design II (s)

68145

Grade Level: 9th–12th

Prerequisite: None

This course is a practical look at architecture through drawing, design, and construction using a variety of different media. It is structured to develop an understanding and ability to use representational media to visualize, document, investigate, and present intentions within the graphic language of architectural communication. Students will be introduced to computer programs AutoCad and Rhino, which will allow for the development of design ideas and presentation. This course culminates with a series of three-dimensional explorations. A laser cut project using Adobe Illustrator will allow students to develop an architectural concept using the latest technology.

Art and Design II (s)

68148

Grade Level: 9th–12th

Prerequisite: None

The course emphasizes the fundamentals of fine art techniques including drawing, painting, printmaking, computer graphics, ceramics, and sculpture. Important art concepts as composition, perspective, and color theory are introduced. The course challenges each student to think critically and creatively, be original, and to experiment with a variety of materials. Students work from observation, memory, imagination, and personal expression toward styles that express their own vision. They are exposed to historical and contemporary art through visits to museums and galleries, slide presentations, and visits from professional guest artists. Students who have successfully completed this course will be approved for an AP course the following year.

STEAM-101: The Coding Palette (s)

78611

Grade Level: 12th

Prerequisite: None

Note: This interdisciplinary course can fulfill the requirement of a semester of Computer Science OR Art

Fusing Art and Code, this course is positioned squarely at the intersection of Computer Science and Visual Arts, carefully blending problem-solving ability with artistic creativity. It guides students not only how to code and solve problem sets, but also articulate their personal artistic vision with digital tools.

You'll dive into the world of creating art through technology with MIT Media Lab's Processing language — a user-friendly and simpler alternative to Java. We'll explore the works of 6 to 8 iconic artists, challenging you to emulate their masterpieces digitally and then render them into a variety of physical media. From learning coding fundamentals to creating art inspired by the greats, you'll develop, prototype, and showcase projects that blend digital innovation with artistic tradition. Simply put: this is the class where code meets art, bringing masterpieces to life.

PERFORMING ARTS

The Music Departments of Brunswick School and Greenwich Academy offer students the opportunity to perform in a variety of ensembles, both choral and instrumental. Non-performance classes are also available, including AP Music Theory and Recording Studio.

INSTRUMENTAL MUSIC

There are a number of opportunities for instrumental musicians at the Academy and Brunswick. Brass, woodwind, guitar and percussion students may play in large and small ensembles, from chamber music to auditioned jazz groups such as the Blue Notes. Private lessons are offered on all instruments as well as in piano and voice.

Band I

68352

Grade Level: 9th

Prerequisite: None

This course is designed for all incoming 9th graders who wish to continue playing an instrument in an ensemble. This class offers varied instruction to all levels. It is open to all instrumentation including, brass, woodwinds, percussion, drum kit, bass (upright or electric), guitar (acoustic or electric), keyboard, and strings. The primary goal is to foster a love of music and proficiency on their instrument. Students will learn music theory and improvisational skills through studying a varied repertoire of artists and styles including pop, rock, funk, blues, jazz, etc. This course will also help prepare each student for upper level ensembles.

Guitar I

68149

Grade Level: 9th–12th

Prerequisite: None

This course is designed to help students increase their guitar playing knowledge and ability. Students will also learn how to play in a group setting. Students will cover a variety of styles including rock, classical, and popular music songs. We will also be covering basic chords, (barre and open) notes on the guitar neck, and reading notes and rhythm. This class will perform at our three major concerts in the fall, winter, and spring.

Recording Studio I

68154

Grade Level: 9th–12th

Prerequisite: None

This course teaches students how to use the recording, mixing, and engineering program Logic Pro. Students need no prior experience or other music courses to participate in this class. During the year, students will learn the basic techniques necessary to record instruments and vocals. They will also learn basic piano theory along with rhythmic studies. Programming loops and original drum beats will help them in the composition of their own projects. There are also numerous opportunities for collaborative projects. Students will be able to present their work to the school community several times throughout the year.

Honors Band II

68353

Grade Level: 10th

Prerequisite: None

Band 2 is open to all instrumentation, including brass, woodwinds, percussion, electric bass and guitar, keyboard, and strings. This course will further the student's knowledge of chord structure, scale usage, rhythm, and form by studying various jazz styles and genres such as the blues, R&B, funk, swing, Latin, and pop. Members of this band will continue to develop their own musical vocabulary and become more skilled at applying them to improvised solos and jazz technique.

Honors Guitar II

68249

Grade Level: 10th–12th

Prerequisite: Guitar Ensemble I or Departmental Approval

Honors Guitar II is offered to students on both campuses who wish to increase their guitar playing skills beyond what is learned in Guitar I. Instruction includes advanced chords, power chords, finger-style picking, and reading tablature. All students will have the opportunity to learn to play bass guitar along with improving techniques and skills on electric guitar and acoustic guitar.

Honors Recording Studio II

68254

Grade Level: 10th–12th

Prerequisite: Recording Studio I

This course is a continuation of the skills and techniques learned in Recording Studio I. This course will offer a number of project opportunities for students, such as recording CDs, creating background music and sounds for movie and theatrical productions, recording and engineering CDs for fellow classmates, and becoming more advanced in the technical knowledge in this cutting edge technological field. Previous recording experience (or Recording Studio) is a prerequisite for this course.

Honors Music Improv I

68157

Grade Level: 10th–12th

Prerequisite: Band I or Departmental Approval

Popular Music Education is becoming more and more popular in schools around the world because it provides the musician with a number of skills necessary to understand and directly apply musical concepts in a collaborative environment. At Brunswick, our Music Improv classes provide just that. Students work together with their instructor to pick repertoire that best showcases their abilities and talent. Through learning a varied repertoire of songs, students will better understand how to apply their knowledge of diatonic harmony and improvisational skills. All instrumentation are welcome! Students will have the opportunity to perform at all major concerts and functions throughout the year.

Honors Music Improv II

68257

Grade Level: 11th–12th

Prerequisite: Audition or Departmental Approval

Honors Music Improv II builds on the same foundation as Honors Music Improv I but explores repertoire that is slightly more demanding in terms of musical complexity. Students will have a better grasp on soloing and understand how to use modes as a springboard to improvisation. Rhythm sections will “lock” and groove with greater ease. Our Honors Music Improv bands are featured both in and out of school. They have been asked on several occasions to play at The Greenwich Town Party, sharing the bill with Eric Clapton and Santana, to name a few.

The Blue Notes

68351

Grade Level: 10th–12th

Prerequisite: Audition or Departmental Approval

The Blue Notes provides an opportunity for students to perform in a traditional jazz big band. Strong sight-reading skills play a major role in this class. Students will develop the skills necessary to perform a varied repertoire with a focus on jazz. This group employs the traditional instrumentation of four trumpets, four trombones, five saxophones, piano, bass, and drums. Members of the band will learn about the history of jazz as well as explore the melodic, harmonic, and rhythmic concepts used to “speak” the language. Frequent playing tests (both individually and as a section) are used to measure the success of each member and section. Auditions are held in the spring for the following school year.

VOCAL/CHORAL MUSIC

In the choral groups, the goal is to educate students in the rudiments of music in order to be literate and proficient in reading and performing from various historical periods and musical styles. The vast choral repertoire for male, female, and mixed voices is explored.

Gospel Choir

66201

Grade Level: 9th–12th

Prerequisite: None

Gospel choir is open to students in both Brunswick and Greenwich Academy. Participating members will receive one half-credit for the year towards their arts requirement. Students will have the opportunity to explore the various styles of gospel music, both contemporary and traditional. Emphasis will be placed on strengthening vocal technique and part singing ability. Singers will perform as an ensemble with solo opportunities throughout the school year. No audition is necessary. Rehearsals are held during the Clubs time on Fridays with some additional rehearsals scheduled as needed. Students will perform for concerts and assemblies during the school year.

Morning M.O.B.

68320

Grade Level: 9th–12th

Prerequisite: Audition will take place the first week of school

Men Of Brunswick is an audition-based class designed for singers that can recognize pitch, tone color, and rhythms by hearing, and then demonstrating that through singing and performance. In this advanced choir, students will learn advanced skills of singing and reading music. This class offers opportunities for students to develop team-building and leadership skills while performing various styles of music such as pop, gospel, classical, and musical theater. Students will perform at our three major concerts in the fall, winter, spring, and also include football games and various events throughout the school year. The ensemble will be limited to 20–25 members and will meet three mornings per week.

Bel Canto

66100

Grade Level: 9th–10th

Prerequisite: None

This course is open to any GA student who is interested in singing. The focus of the class is to build a healthy vocal technique for each singer, whether her goal is to perform in school musicals or audition for Madrigal Singers. Singers will perform as an ensemble in school concerts throughout the year, studying treble literature of all styles, from classical to popular music. Bel Canto (from the Italian, beautiful singing) is a style that emphasizes beauty of tone throughout the full range of the voice. Students will also concentrate on improving sight-singing skills through solfege study and basic music theory.

Bel Canto is a prerequisite course for Madrigal Singers.

Madrigal Honors Ensemble

66300

Grade Level: 10th–12th

Prerequisite: Bel Canto; Audition Required

This course is designed to offer the most advanced level of choral music training at Greenwich Academy. The Madrigal Singers study treble literature of all periods, from the Renaissance through contemporary music. Their schedule includes several performances during the year for school and community events and other performances outside of school.

Musical excellence is achieved by emphasis on ear training, vocal/choral techniques, and study of the highest quality literature written for women's voices. Students are assessed through regular singing tests in solfege and in the performance repertoire. Auditions are held in the spring for the following school year. Students with other choral experience or voice training may audition with the permission of the instructor.

As part of the course, Madrigals participate in an international tour every two years. The next tour is scheduled for June of 2026

THEATER

The Theater Arts Department offers classes in both performance and technical studies. The program is structured for students who are serious about their craft as well as those who want to take a class for the joy of it. With creativity and collaboration students learn the process of bringing a production from conception through performance. By heightening individual skills, students become a part of the collective whole. Theater students are encouraged to supplement their class work by participating in any of the numerous productions mounted each year.

Acting I

68410

Grade Level: 9th–10th

Prerequisite: None

This full year course is designed for anyone who is interested in acting. Students will develop essential performance skills, including strong diction, confident stage presence, and the ability to portray a character effectively. Actors will learn to tackle a wide variety of material, from mastering challenging Shakespeare monologues to performing truthfully in contemporary scenes from modern plays and films. In addition to our in-class stage performances, we will work in collaboration with the film class to create short, filmed scenes. The course will be taught jointly by faculty from Greenwich Academy and Brunswick. Classes will be held on both campuses: one semester at Brunswick and one semester at Greenwich Academy.

Honors Acting II

68430

Grade Level: 10th–12th

Prerequisite: Acting I or Departmental Approval

Students will explore a variety of different acting techniques through vocal and movement exercises and in depth scene study. The course will also study how theater has questioned and challenged cultural norms of each generation as we consider the social, political, and psychological reasoning for different approaches to acting. We will work to find the acting techniques that resonate best with each individual student by looking at some of the most influential innovators, such as Stanislavski, Meisner, and Strasberg. The course will be taught jointly by faculty from Greenwich Academy and Brunswick. Classes will be held on both campuses: one semester at Brunswick and one semester at Greenwich Academy. Students need to have taken Acting I or have permission from one of the instructors.

Honors Acting III

68433

Grade Level: 11th–12th

Prerequisite: Honors Acting II and Departmental Approval

This course—for both the actor and director—investigates tools to create a character on stage. Students will take turns between acting and directing scenes after a thorough analysis of the material. Through advanced scene study students will focus on process as well as product. Course projects will include showing one's work as both actor and director to an audience.

Honors Playwriting and Directing

66424

Grade Level: 11th–12th

Prerequisite: Honors Acting or Departmental Approval

This course gives students the opportunity to write their own short scenes and one-act plays and develop them into a theatrical production. Members of the class serve as actors and directors for one another. Students will help bring original student works to life by providing input from these different perspectives so that everyone can experience the advantage of thoughtful collaboration in the creation of a new play. Each student's final script will be entered in the Stamford Young Playwright competition.

Theatrical Design and Stage Craft I

68421

Grade Level: 9th–12th

Prerequisite: None

Students are introduced to the elements of basic stagecraft in this open-level course. Utilizing the state-of-the-art resources in the Baker and Black Box Theaters, students focus on the professional conventions used today in set construction, scene painting, costumes, lighting, and sound. Students have the opportunity to learn experientially using cutting-edge stage, lighting, and sound equipment as crew members for the various productions that happen throughout the year.

Honors Theatrical Design and Stage Craft II

68423

Grade Level: 10th–12th

Prerequisite: Theatrical Design and Stage Craft I or Departmental Approval

Students continue their education in stage technology and design in this second year course. Advanced study in set construction, lighting, and sound combines with an introduction to the Color Kinetics LED lighting system in the Baker Theater. Students also continue study in set, lighting, and sound design principles through a partnership with the Acting II class wherein they will plan, design, and execute small theater projects. Technical design using the computer drafting program AutoCAD, basic set design sketching, lighting plot design, and sound design principles are also introduced.

Honors Design and Stage Craft III

68424

Grade Level: 10th–12th

Prerequisite: Theatrical Design and Stage Craft II or Departmental Approval

Requiring the foundational skills gained through Theatrical Design and Stage Craft II, this class focuses coursework on one to two chosen areas of specialized study within the technical theater realm. Honors students may elect to pursue advanced projects in the following areas: set design/construction, light design/electrics, sound design/audio engineering, and/or technical direction. Practicums are required for various concerts and special events during the academic year. These experiential projects are used as training exercises in anticipation of Brunswick's fall play, winter musical, and spring comedy, for which students will be assigned management-level production posts in their chosen area(s).

Costume Design I

66411

Grade Level: 9th–12th

Prerequisite: None

Students will be introduced to the fundamentals of costume design in this open-level course. They will have the opportunity to learn every element, from the initial design concept to the final garment, while gaining hands-on experience. Students will explore styles (including wig, makeup, and accessory design) and their historical contexts from ancient civilization to today. Show budgeting and basic sewing skills will be taught throughout the course, with a culminating project: designing the Group V play.

Honors Costume Design II

66413

Grade Level: 10th–12th

Prerequisite: Costume Design I

This course offers an opportunity for students to develop further skills learned in Costume Design I. Students will experience new approaches to Costume design by creating wearable art and exploring different methods of creating garments through technology. In addition, students will continue to build on their knowledge of historical styles, budgeting, and garment construction. In the culminating project, students will design costumes for the Group VII play, beginning with the initial concept and moving on to the finished garments.

SPRING SEMESTER COURSES

Honors Costume Design III: Portfolio (s)

66414

Grade Level: 11th–12th

Prerequisite: Costume Design I and Honors Costume Design II

This half-year course allows students to assemble a portfolio of their work from Costume Design I and Honors Costume Design II for their college application process. In this advanced design course, students will learn the essential steps of producing a photo shoot and creating artist statements while continuing to add new work to their digital portfolio.

DANCE

The goal of the dance program is to provide an artistic, technical, and creative physical outlet for our students. Dance classes (which are offered as an alternative to PE) and the performing companies at GA emphasize sophisticated, versatile training through exposure to a variety of contemporary and classical dance forms with professional faculty and visiting guest artists. Options exist for students ranging in experience from advanced dancers to those who have never formally studied dance before. A balanced emphasis on technique and composition ensures a unique opportunity for our students to develop as dancers and choreographers.

Junior Dance Corps

66361

Grade Level: 9th–12th

Prerequisite: Audition

Junior Dance Corps (JDC) is the preparatory company for the Greenwich Academy Dance Corps. Once selected from an audition process during pre-season, JDC members are invited to participate for the duration of their time at the Academy, or they may wish to audition again for admittance to Dance Corps. JDC is composed of students in grades 9–12 who have exhibited a love of dance and a desire to build upon their creative and technical abilities. JDC meets every Thursday after school in the PAC. Members are required to perform in both Winterfest and the Spring Dance Concert and to attend at least one trimester of Dance classes as an alternative to P.E. JDC members may be invited to showcase their choreography during their time in the company.

Dance Corps

66360

Grade Level: 9th–12th

Prerequisite: Audition

The Greenwich Academy Dance Corps is our resident dance company composed of students from grades 9–12 who have been selected for their technical ability, interest in creative expression, and commitment to dance. Once selected from an audition process during pre-season, Dance Corps members are invited to participate for the duration of their time at the Academy. Dance Corps members must take at least two trimesters of Dance classes as an alternative to P.E. during the school year. A commitment to Dance Corps includes rehearsal on Monday evenings and most Sunday afternoons to prepare for Winterfest and the Spring Dance Concert. These concerts feature dances from a variety of dance styles and techniques, many of which are choreographed by Dance Corps members. Dance Corps members also have the opportunity to work with professional faculty and guest choreographers as part of our Upper School dance residency—an experience which broadens their understanding of movement and of the dance field.

COMPUTER SCIENCE—BRUNSWICK SCHOOL

Brunswick School’s computer science curriculum reflects our philosophy that computer science is an extraordinarily important skill that is essential for every student’s future success. Studying computer science fosters a strong and lasting foundation of critical thinking and problem-solving skills that are transferable across disciplines.

We have taken a bold initiative to make a semester of computer science mandatory as a graduation requirement for the class of ‘23 onwards, underlining our recognition that an education built upon a STEM foundation is vital for academic success and life beyond high school.

Computer Science is more than just engaging and fun — it measurably enhances skills in problem-solving, creativity, perseverance, and teamwork. Brunswick is committed to broadening access to exceptional Computer Science courses, ensuring our students are well-equipped to thrive in the fiercely competitive and A.I. driven job market of today’s digital economy, bolstering their career and creative pursuits.

FALL SEMESTER COURSES

CS-101: Introduction to Creative Computing (f)

78111

Grade Level: 9th–12th

Prerequisite: None

Note: Fulfills the graduation requirement of a semester in Computer Science

Unlock the world of computer science without the stress of traditional text-based coding languages! This course uses innovative platforms and visual programming languages to make learning computer science concepts not just accessible, but also incredibly engaging.

Through hands-on projects using applications like Scratch, Tynker, Microsoft MakeCode, and MIT’s App Inventor, students explore the fundamentals of computing, from logic and design to problem-solving and digital creativity. Whether it’s animating stories, designing games, or building simple apps, CS-101 offers a wide range of activities that highlight the creative potential of technology.

The course provides a supportive environment where every student can discover their passion for computer science. No prior coding experience? No problem! CS-101 is your first step into a world where technology meets imagination.

CS-102: Introduction to Web Design and Development (f)

78112

Grade Level: 9th–12th

Prerequisite: None

Note: Fulfills the graduation requirement of a semester in Computer Science.

Bring your creativity and passion and we’ll teach you the skills you need to become a web designer. Starting with a gentle introduction to web technologies needed to design and prototype web-based User Interfaces (UI), students will go on to make increasingly sophisticated websites using scripting and markup languages such as HTML, CSS, JavaScript, Python, jQuery, and much more.

The course focuses on simplicity and straight-forward learning, with detailed guidance to effectively teach you how to build a modern website in line with industry best practices. Heavily hand-on and project-based, students will learn the latest front-end development and coding skills, ready to create their very own modern, responsive websites that are pixel-perfect across a wide range of devices. The culminating project will be developing their own professional blog or site, with special features to fit the content across devices and attract more visitors.

CS-103: Introduction to Computer Science (f)

78113

Grade Level: 9th–12th

Prerequisite: None

Note: Fulfills the graduation requirement of a semester in Computer Science. Prerequisite for taking AP Computer Science Principles.

Behind every mouse click or touch-screen tap, there is a computer program that makes things happen. Brunswick’s CS-103 course introduces the fundamental building blocks of text-based programming and teaches you how to write fun and useful programs in Python. With its easy-to-learn syntax and powerful automation capabilities, Python is the perfect starting point for budding coders.

This course aims to develop a thorough understanding of fundamental computing ideas that transcend particular programming languages or computing technologies. Our overriding objective is to teach computational thinking — not just how to code — so students become better thinkers and communicators, while honing their critical-thinking and problem-solving skills.

STEAM-101: The Coding Palette (f)

78610

Grade Level: 12th

Prerequisite: None

Note: This interdisciplinary course fulfills the requirement of a semester of Computer Science OR Art

Fusing Art and Code, this course is positioned squarely at the intersection of Computer Science and Visual Arts, carefully blending problem-solving ability with artistic creativity. It guides students not only how to code and solve problem sets, but also articulate their personal artistic vision with digital tools.

You’ll dive into the world of creating art through technology with MIT Media Lab’s Processing language — a user-friendly and simpler alternative to Java. We’ll explore the works of 6 to 8 iconic artists, challenging you to emulate their work digitally and then render them into a variety of physical media. From learning coding fundamentals to creating art inspired by the greats, you’ll develop, prototype, and showcase projects that blend digital innovation with artistic tradition. Simply put: this is the class where code meets art, bringing masterpieces to life.

SPRING SEMESTER COURSES

CS-101: Introduction to Creative Computing (s)

78121

Grade Level: 9th–12th

Prerequisite: None

Note: Fulfills the graduation requirement of a semester in Computer Science.

Unlock the world of computer science without the stress of traditional text-based coding languages! This course uses innovative platforms and visual programming languages to make learning computer science concepts not just accessible, but also incredibly engaging.

Through hands-on projects using applications like Scratch, Tynker, Microsoft MakeCode, and MIT's App Inventor, students explore the fundamentals of computing, from logic and design to problem-solving and digital creativity. Whether it's animating stories, designing games, or building simple apps, CS-101 offers a wide range of activities that highlight the creative potential of technology.

The course provides a supportive environment where every student can discover their passion for computer science. No prior coding experience? No problem! CS-101 is your first step into a world where technology meets imagination.

CS-102: Introduction to Web Design and Development (s)

78122

Grade Level: 9th–12th

Prerequisite: None

Note: Fulfills the graduation requirement of a semester in Computer Science.

Bring your creativity and passion and we'll teach you the skills you need to become a web designer. Starting with a gentle introduction to web technologies needed to design and prototype web-based User Interfaces (UI), students will go on to make increasingly sophisticated websites using scripting and markup languages such as HTML, CSS, JavaScript, Python, jQuery, and much more.

The course focuses on simplicity and straight-forward learning, with detailed guidance to effectively teach you how to build a modern website in line with industry best practices. Heavily hand-on and project-based, students will learn the latest front-end development and coding skills, ready to create their very own modern, responsive websites that are pixel-perfect across a wide range of devices. The culminating project will be developing their own professional blog or site, with special features to fit the content across devices and attract more visitors

CS-103: Introduction to Computer Science (s)

78123

Grade Level: 9th–12th

Prerequisite: None

Note: Fulfills the graduation requirement of a semester in Computer Science.

Prerequisite for taking AP Computer Science Principles.

Behind every mouse click or touch-screen tap, there is a computer program that makes things happen. Brunswick's CS-103 course introduces the fundamental building blocks of text-based programming and teaches you how to write fun and useful programs in Python. With its easy-to-learn syntax and powerful automation capabilities, Python is the perfect starting point for budding coders.

This course aims to develop a thorough understanding of fundamental computing ideas that transcend particular programming languages or computing technologies. Our overriding objective is to teach computational thinking — not just how to code — so students become better thinkers and communicators, while honing their critical-thinking and problem-solving skills.

STEAM-101: The Coding Palette (s)

78611

Grade Level: 12th

Prerequisite: None

Note: This interdisciplinary course can fulfill the requirement of a semester of Computer Science OR Art.

Fusing Art and Code, this course is positioned squarely at the intersection of Computer Science and Visual Arts, carefully blending problem-solving ability with artistic creativity. It guides students not only how to code and solve problem sets, but also articulate their personal artistic vision with digital tools.

You'll dive into the world of creating art through technology with MIT Media Lab's Processing language — a user-friendly and simpler alternative to Java. We'll explore the works of 6 to 8 iconic artists, challenging you to emulate their masterpieces digitally and then render them into a variety of physical media. From learning coding fundamentals to creating art inspired by the greats, you'll develop, prototype, and showcase projects that blend digital innovation with artistic tradition. Simply put: this is the class where code meets art, bringing masterpieces to life.

FULL YEAR COURSES

CS-201: AP Computer Science Principles

78605

Grade Level: 10th–12th

Prerequisite: Prerequisite: CS-103: Introduction to Computer Science. Departmental Approval required.

AP Computer Science Principles is a college-level Computer Science course that seamlessly builds upon the learning curve of students who've taken CS-103 Introduction to Computer Science. Based on the curriculum developed by the College Board, AP CSP introduces foundational concepts of Computer Science and challenges students to explore the impact of computing and technology on the world.

The course covers essential “big ideas” in Computer Science, including creativity, programming, abstraction, algorithms, data management, the Internet, cybersecurity, and computing’s worldwide impact. It offers students a chance to tackle real-world issues with technological solutions, emphasizing creativity and real-world relevance.

With a project-based approach, AP CSP goes beyond mere coding to deepen students’ understanding of computational principles. It aims to cultivate critical-thinking and creativity, guiding students to produce computational artifacts and a digital portfolio. Through simulations and creative projects, students can explore their interests, making the abstract concepts of Computer Science tangible and engaging.

CS-202: AP Computer Science A

78606

Grade Level: 11th–12th

Prerequisite: CS-201 AP Computer Science Principles. Departmental Approval required.

AP Computer Science A (CSA) is a college-level course designed to provide students with a thorough understanding of object-oriented programming and logical problem-solving techniques.

Using the Java programming language, AP CSA covers essential topics such as algorithms, variables, control structures like conditional and iterative statements, data structures including strings, arrays, and ArrayLists, along with advanced concepts like data encapsulation, class and method structures, inheritance, recursion, and the intricacies of searching and sorting algorithms.

Throughout the course, students are encouraged to sharpen their logical thinking and problem-solving capabilities by crafting effective programming solutions to solve real-world problems. They’ll also refine their coding techniques, learning to write code that is not only functional but also well-organized and efficient, unlocking the vast potential of object-oriented programming.

CS-301: Advanced Honors Seminar: Data Science & Machine Learning

78607

Grade Level: 11th–12th

Prerequisite: CS-201: AP CSP or CS-202 AP CSA. Departmental Approval required.

One of the hottest fields in tech, Data Science has virtually limitless potential, spanning across industries, roles, and functions. Data science provides a set of methods and tools for assembling, scrubbing, analyzing and extracting insights from big data sets that may be highly structured or unstructured.

This course provides a comprehensive introduction to Data Science and Machine Learning using tools such as Jupyter Notebook, NumPy, and Pandas to analyze real-world datasets; to identify patterns and relationships in data with statistical modeling techniques such as linear and logistic regression, decision trees, and random forests. The curriculum is designed to enhance computational and inferential thinking while emphasizing collaborative teamwork for building projects that are based on real-life Data Science problems. The class will explore Data Science and Machine Learning; its diverse applications; common terminologies; core, descriptive and inferential statistics; correlation; hypothesis testing; confidence intervals and margin of error; pattern recognition via supervised and unsupervised learning, and much more!

Students will craft a personalized portfolio featuring open-source GitHub projects, leveraging both standard and custom data types to develop expressive, computationally powerful Data Science projects. They will also create predictive machine learning models utilizing Python and Scikit-learn, showcasing their skills in handling complex data analysis and forecasting tasks.

ENGINEERING AND COMPUTER SCIENCE— GREENWICH ACADEMY

The GA Upper School Engineering and Computer Science Department works to build on the foundation of creating, designing, and computing that students developed during their time in Lower and Middle Schools. The studies of engineering and computer science strengthen problem solving, designing with a purpose, building to specification, and algorithmic thinking, all while promoting both collaborative work and independent resourcefulness. We provide our students an understanding of how these tools can be used in the real world and believe that possessing the ability to design objects and software, and to write software prepares students for the problems and opportunities of the 21st century. We offer courses for those who are new to writing code and the process of physical computing so they can not only understand foundational engineering principles and computer science but also become better thinkers. We also offer coursework for those who would like to pursue advanced work through the AP curriculum and beyond.

The fall semester Introduction to Computer Science courses serves as the entry point to all the more advanced Computer Science courses offered at Greenwich Academy.

FALL SEMESTER COURSES

Introduction to Computer Science (f)

76601

Grade Level: 9th–12th

Prerequisite: None

This course is designed to build a student’s competence in computer science fundamentals within the context of other courses. Students will progress through a series of units that will build skill and understanding of core programming concepts, including data types, conditional and loops, data structures, and functions.

Each project will connect a set of computer science concepts to other disciplines. Whether we are building code for the web, using code to help solve math problems, or using code to investigate the central dogma of biology, students will build a strong foundation in computer science and in problem solving. Assessments will be varied, including both projects and more traditional pen-and-paper work.

This entry level course will prepare students well with all of the coding, problem solving, and debugging skills needed for AP Computer Science A.

SPRING SEMESTER COURSES

Introduction to Computer Science (s)

76621

Grade Level: 9th–12th

Prerequisite: None

See course description under fall electives.

FULL YEAR COURSES

AP Computer Science Principles

76620

Grade Level: 9th–12th

Prerequisite: 9th graders must be in Accel Geometry or above

AP Computer Science Principles is designed for students with little or no programming experience and serves as an introduction to the field of computer science and programming. Students will learn the fundamentals of programming while strengthening their problem solving skills. They will learn to think like a computer scientist by applying logic and creativity to the design of programs for a variety of problems. They will learn to dismantle problems and approach them systematically on their own and in a collaborative environment—two essential skills. While this course is a springboard for the future study of computer science and engineering, its lessons will be applicable to a much broader set of fields.

This course focuses on a much more diverse set of issues than just coding, including the use of programs to analyze data, the internet, the impact of technology on society, and a more in-depth discussion of algorithms. These topics allow students to engage with technology in an entirely different way than they are used to!

AP Computer Science A

76600

Grade Level: 10th–12th

Prerequisite: B+ in GA's Introduction to Computer Science or AP Computer Science Principles, GA's 3-week summer intensive, or concurrent enrollment in BC Calculus.

GA's AP Computer Science course is for the student who likes to think about and tackle problems. The curriculum for this course is based on the syllabus developed by the College Board. Our focus is on problem solving and algorithm development using the AP Java Language Subset as our tool kit. You will study programming methodology, algorithms, data structures, procedural and data abstraction, and object orientation.

Students will leave the course with a solid understanding of computer science as a field of study, the skills to write programs in Java and significant experience with problem solving and debugging—all essential skills for the 21st century, no matter what you decide to study!

Honors Engineering Principles and Computing

76605

Grade Level: 11th–12th

Prerequisite: B+ in AP Computer Science A

This class is designed for students who enjoyed AP Computer Science A or their time in the Engineering & Design lab and want to go further. This year-long, heavily project-based course will focus on applying skills students have gained in the introductory computer science courses to a variety of engineering topics while also learning Python. The course will feature four quarter-long modules. Topics rotate and include image and audio processing, physical computing, machine learning, optimization, and boolean algebra with each module introducing students to a fundamental engineering concept.

Honors Engineering and Design I: Inventor's Workshop

36402

Grade Level: 10th–12th

Prerequisite: Departmental Approval and Pre-Course Survey

***This course is offered jointly through the Engineering and Computer Science and Visual Arts departments and will be listed under both departments**

While Inventor's Workshop focuses on design, building, digital fabrication, creative coding, programming micro-controllers, and electronics, it is not your typical engineering course. In this course you will be able to bring your personal design and engineering ideas to life. Held in GA's E+D Lab and built around a collection of core projects, this course is designed to bring out the creative potential in every student. Our lab work is grounded in experimentation, possibilities, and documenting the process, as students narrow down their ideas towards a finished product. This honors level course will prepare students with all of the technical tools and problem solving skills needed for Engineering and Design II, as well as advanced design, interactive, and new media possibilities in the visual arts.

Honors Engineering and Design II: Inventions that Make Life Better

36403

Grade Level: 11th–12th

Prerequisite: Honors Engineering and Design I or AP Art

***This course is offered jointly through the Engineering & Computer Science and Visual Arts departments and will be listed under both departments.**

This course is designed for students who have experience working with 2D and 3D design, digital fabrication, electronics and microcontrollers and would like to apply these skills to engineering problems of their design. Students will engage with the cyclical engineering design process to come up with solutions to real-life problems. Greenwich Academy's Engineering and Design Lab offers state-of-the-art fabrication machines and tools for building and prototyping their designs. Projects will include: product design for a school-wide pop-up store in collaboration with Honors Engineering Principles and Computation, the repair and restoration of furniture, as well as a passion project of their design..

Honors Seminar: Engineering & Computer Science

76602

Grade Level: 11th–12th

Prerequisite: B+ in AP Computer Science A

This is an advanced topics course for those who love programming (or maybe just like it a lot), have completed AP Computer Science A and are interested in going further. In this course, students will build upon their Java knowledge to learn about data structures and algorithms. This course mirrors a second-semester college course and students will have the opportunity to apply their learning to traditional assessments and large projects.

GENERAL ELECTIVES

The courses listed below are developed from the traditional disciplines of Art, English, Classics, History, World Languages, Math, and Science. Although these courses do not satisfy any particular department's graduation requirements, they do count as full academic classes and may well be cross-listed, within a relevant department, on the following pages.

FALL SEMESTER COURSES

Impact of Technology: An Economic Perspective (f)

38412

Grade Level: 10th-12th

Prerequisite: None

Technology advances drive commercial growth in the global economy. This course begins with a brief historical review of how major technological advances have shaped our economy. Each student will explore the impact of one of these advances in depth (examples range from the microprocessor to modern steel production).

A substantial majority of the course looks forward in time. Many future technology advances are likely to have a disruptive impact on the present economic environment. Our objective is to engage students in thinking about the future – and explore how these technologies will influence growth. Students will select a technology of focus, research its potential impact, and present their findings to the class. Future technologies of interest include augmented reality, big data in a commercial setting, and various aspects of artificial intelligence. The class will engage in formal and vigorous debate on a number of relevant topics.

Introduction to Journalism (f)

36476

Grade Level: 10th-12th

Prerequisite: None

Journalism has transformed into an interdisciplinary endeavor. Writers produce content for digital and print media, news articles are translated into video, and social media has altered how audiences consume news. This elective will introduce students to the various career opportunities in this multifaceted industry. Over the semester, students will grow their creative and critical thinking skills, assess the news value of an event or situation, and develop their own story ideas. Projects will range from co-producing a podcast, designing a spread for the yearbook, writing articles for school newspapers,

and directing and producing a broadcast news segment. By the end of the course, students will gain the ability to put together a story in a variety of formats. This course will utilize skills gained in previous English, Art and Film classes and will be co-taught by two faculty members. Projects will be both independent and collaborative and students will be assessed on their writing and creativity. What stories do you want to tell?

Public Speaking and Effective Communication (f)

39050

Grade Level: 10th-12th

Prerequisite: None

Communication is one of the most sought-after skills by employers in the current job market. A person who can effectively communicate viewpoints, positions, and facts has the power to influence and win over others. In this class, students will master the basics of public speaking through practicing and studying well-known speeches from the past and present. Additionally, they will learn the foundations for spontaneous debate, presentation giving, and speech-writing, setting them up for success in all future formal and informal public speaking opportunities

FULL-YEAR COURSES

Poetry Seminar

14125

Grade Level: 10th-12th

Google “poetry,” and you won’t find a single definition that really makes sense. This course will be an experience of reading and writing this notoriously unwieldy genre, demystifying it while also delighting in its strangeness. Through a balance of both critical and creative work, we will begin with the foundations of poetic craft, exploring image, sound, line-making, metaphor, diction, and syntax. We will read curated selections of poems from a wide range of time periods, forms, and cultural traditions, including sonnets, blank verse, haiku, ghazals, pantoums, sestinas, and the avant-garde. Our writing practice will begin with play, lowering the barrier around the blank page with a series of generative prompts designed to detonate your expectations of what good poetry looks and sounds like. Then, in supportive, structured workshops, we will share and learn how to critique each other’s work in progress with specific, actionable feedback. Drawing from a mix of imitation and experimentation, you will leave the course with a printed chapbook of your original poems. Along the way, you’ll gain several practical methods to jumpstart and maintain your own writing practice while also developing your unique poetic voice.

This course may be taken in fulfillment of the 12th grade English requirement, or as an elective for students in 10th and 11th grades (concurrently with either English 10 or English 11).

GLOBAL ONLINE ACADEMY

2024-2025 Student Course Catalog

Semester 1: August 28 – December 13, 2024

Semester 2: January 8 – April 25, 2025

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 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 your location.
2. Communicate and empathize with people who have perspectives different from your own.
3. Curate and create content relevant to real-world issues.
4. Reflect on and take responsibility for your learning and that of others.
5. Organize your time and tasks to learn independently.
6. Leverage digital tools to support and show your 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 a choice in the work they do and the ideas they explore.

Students in grades 10-12 may enroll in a GOA course. These courses are semester electives that are offered as part of a student's regular schedule. Students should register for GOA courses through the described process at GA (see Ms. Blunden) or Brunswick (see Mr. Hastings) and consider the following guidelines:

- GOA courses are elective offerings and are not intended to fulfill or replace core requirements.
- Students may not register for a GOA course that is determined (by the Head of Upper School) to conflict or overlap with a course currently offered at GA or Brunswick.
- The GOA course cannot be a seventh course for GA students, and must be a sixth course for BR students.
- GOA course grades are listed and reported on student transcripts.
- Students must request GOA courses during GA/BR registration with Ms. Blunden at GA or Mr. Arthmire at Brunswick.
- GOA adheres to strict drop/add policies and requires that students drop or add classes within the first two weeks of the GOA semester.

To see the full list of GOA offerings, please visit:

<https://globalonlineacademy.org/student-program/student-courses>

DEPARTMENT DESIGNATIONS

Department(s)	Course Title	Term(s)
Art, Media & Design	Architecture	Fall, Spring
Art, Media & Design	Arts Entrepreneurship	Spring
Art, Media & Design	Creative Nonfiction Writing	Fall
Art, Media & Design	Digital Photography	Spring
Art, Media & Design	Fiction Writing	Spring
Art, Media & Design	Filmmaking	Fall
Art, Media & Design	Graphic Design	Fall, Spring
Business, Economics, Finance	Business Problem Solving	Fall, Spring
Business, Economics, Finance	Capitalism: Past Present & Future	Spring
Business, Economics, Finance	Entrepreneurship in a Global Context	Fall, Spring
Business, Economics, Finance	Introduction to Blockchain & Cryptocurrency	Spring
Business, Economics, Finance	Introduction to Branding & Marketing	Fall, Spring
Business, Economics, Finance	Investing I	Fall, Spring
Business, Economics, Finance	Macroeconomics	Fall, Spring
Business, Economics, Finance	Microeconomics	Fall, Spring
Business, Economics, Finance	Personal Finance	Fall, Spring
Computer Science & Engineering	Computer Science I: Computational Thinking	Fall, Spring
Computer Science & Engineering	Computer Science II: Game Design and Development	Spring
Computer Science & Engineering	Computer Science II: Java	Spring
Computer Science & Engineering	Computer Science II: Analyzing Data with Python	Spring
Computer Science & Engineering	Cybersecurity	Fall, Spring
Computer Science & Engineering	Introduction to Artificial Intelligence	Fall, Spring
Computer Science & Engineering	Problem Solving with Engineering & Design	Fall, Spring
Global Studies	Applying Philosophy to Global Issue	Fall
Global Studies	Climate Action & Sustainability	Fall
Global Studies	Discourse across Difference	Spring
Global Studies	Genocide & Human Rights	Fall
Global Studies	Global Health	Fall
Global Studies	International Relations	Fall, Spring
Health Sciences	Bioethics	Fall, Spring
Health Sciences	Global Health	Fall
Health Sciences	Health & Fitness	Fall
Health Sciences	Medical Problem Solving I	Fall, Spring
Health Sciences	Medical Problem Solving II	Fall, Spring
Justice, Ethics & Human Rights	Gender & Society	Spring
Justice, Ethics & Human Rights	Introduction to Legal Thinking	Fall, Spring
Justice, Ethics & Human Rights	Prisons & Criminal Justice Systems	Fall, Spring
Justice, Ethics & Human Rights	Race & Society	Fall
Justice, Ethics & Human Rights	Religion & Society	Spring
Mathematics & Quantative Reasoning	Data Visualization	Fall
Mathematics & Quantative Reasoning	Game Theory	Fall, Spring
Mathematics & Quantative Reasoning	Linear Algebra	Fall, Spring
Mathematics & Quantative Reasoning	Number Theory	Fall
Psychology & Neuroscience	Abnormal Psychology	Fall, Spring
Psychology & Neuroscience	Developmental Psychology	Fall, Spring
Psychology & Neuroscience	Introduction to Psychology	Fall, Spring
Psychology & Neuroscience	Neuropsychology	Fall, Spring
Psychology & Neuroscience	Positive Psychology	Fall
Psychology & Neuroscience	Social Psychology	Fall, Spring

ALPHABETICAL LIST OF COURSES

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

APPLYING PHILOSOPHY TO 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 Socrates, Confucius, and Immanuel Kant, this course also aims to be richly interdisciplinary, incorporating models and methods from diverse fields including history, journalism, literary criticism, and media studies. Students learn to develop their own philosophy and then apply it to the ideological debates that surround efforts to improve their local and global communities.

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

ARTS ENTREPRENEURSHIP: In this course, aspiring visual artists, designers, filmmakers, musicians, and other creatives learn how to find success in the dynamic fields of their choosing. Students learn about arts careers and organizations by attending virtual events and interviewing art practitioners, entrepreneurs, and administrators. Beyond exploring trajectories for improving their crafts, students build skills in networking and personal branding while examining case studies of a variety of artistic ventures — some highly successful and some with teachable flaws. Using real-world examples of professional and emerging creatives and arts organizations, students gain a better understanding of the passion and dedication it takes to have a successful creative career.

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 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.

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 tackle real-world problems facing businesses large and small in today's fast-changing global marketplace where radical reinvention is on the minds of many business leaders. Students work collaboratively and independently on case studies, exploring business issues through varied lenses including operations, marketing, human capital, finance and risk management as well as sustainability. As they are introduced to the concepts and practices of business, students identify, analyze, and propose solutions to business problems, engaging in research of traditional and emerging industries, from established multinationals to startups.

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

CLIMATE CHANGE & 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 interrogate the causes and effects of climate change, and the public policy debates surrounding it. In case studies, students 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? Students collaborate in workshops with classmates to deepen their collective understanding of the complex issues surrounding climate change. Throughout the semester, students meet with professionals working in the field of climate change as well as build and curate a library of resources and share findings in varied media, engaging as both consumers and activists to increase knowledge and advocate for sustainable norms. Finally, students have the opportunity to reach a global audience by participating in GOA's Catalyst Exhibition in the spring, as they present their individual projects to spark change in local communities through well-informed activism.

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 help them apply their knowledge of computational thinking in practical ways. They learn how to read code and pseudocode as well as begin to develop strategies for debugging programs. By developing computational thinking and programming skills, students 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 & 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 work in teams to brainstorm and develop new games in response to a theme or challenge. Students develop their skills in communication, project and time management, and creative problem-solving while focusing on different aspects of asset creation, design, and coding. Prerequisite: 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 is on creating intelligent systems through the fundamentals of Computer Science. Students write working programs through short lab assignments and more extended projects that incorporate graphics and animation. Prerequisite: Computer Science I: Computational Thinking or its equivalent.

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

CYBERSECURITY: 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 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 also explore the fundamentals of data forensics and incident response protocols. The course includes analysis of current threats and best-practice modeling for cyber defense, including password complexity, security, management, breach analysis, and hash cracking. Computational thinking and programming skills developed in this course will help students solve a variety of cybersecurity issues. There is no computer science prerequisite for this course, though students with some background will certainly find avenues to flex their knowledge.

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 wrangle data into spreadsheets, learning the basic ways professionals translate information into comprehensible formats. They explore charts, distinguishing between effective and misleading visualizations. Employing principles from information graphics, graphic design, visual art, and cognitive science, students create their own stunning and informative visualizations using Datawrapper, Tableau Public, and/or Python. From spreadsheets to graphics, students in this course practice the crucial skills of using data to decide, inform, and convince. There is no computer science, math, or statistics prerequisite for this course, though students with backgrounds in those areas will certainly find avenues to flex their knowledge in this course.

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.

DIGITAL PHOTOGRAPHY: In an era where everyone has become a photographer obsessed with documenting most aspects of life, we swim in a sea of images posted on Instagram, Facebook, Snapchat, Pinterest, and other digital media. To that end, why is learning how to use a digital camera important and what does taking a powerful and persuasive photo with a 35mm digital single lens reflex (DSLR) camera require? Digital Photography explores this question in a variety of ways, beginning with the technical aspects of using and taking advantage of a powerful camera and then moving to a host of creative questions and opportunities. Technical topics such as aperture, shutter, white balance, and resolution get ample coverage in the first half of the course, yet each is pursued with the goal of enabling students to leverage the possibilities that come with manual image capture. Once confident about technical basics, students apply their skills when pursuing creative questions such as how to understand and use light, how to consider composition, and how to take compelling portraits. Throughout the course, students tackle projects that enable sharing their local and diverse settings, ideally creating global perspectives through doing so. Additionally, students interact with each other often through critique sessions and collaborative exploration of the work of many noteworthy professional photographers whose images serve to inspire and suggest the diverse ways that photography tells visual stories. Prerequisite: Students must have daily access to a DSLR camera.

DISCOURSE ACROSS DIFFERENCE: Our increasingly interconnected, globally networked society presents us with complex social, political, and ethical dilemmas. This course equips students with strategies for engaging such issues through constructive dialogue focused on building understanding across differences. Through structured conversations, debate, rhetorical analysis, and guided reflection, students will gain skills for having difficult yet thoughtful dialogues. They will learn how to carefully evaluate multiple perspectives, make evidence- based claims, ask insightful questions, take others' viewpoints into account, and seek common ground. Specific topics examined may include technology's impact on privacy, environmental sustainability, social justice reform, and other current events that are sure to emerge! By practicing perspective-taking, identifying shared goals, and finding compromise, students will be able to have productive conversations even when they disagree. The course aims to foster civil discourse, strengthen critical thinking abilities, and build understanding across diverse perspectives. Students will emerge better prepared for responsible civic participation and prepared to thrive in a globally networked society.

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 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 and pivots, brand strategy and 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.

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, students 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 the course's online community, as well as dedicated time outside of class reading and providing feedback on one another's work as well as 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, the course increasingly focuses on helping students express their personal outlooks and develop unique styles as filmmakers. Students review and reference short films online and discuss how they 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, and editing software such as iMovie, Premiere Pro, etc.

GAME THEORY: In this course, students explore a branch of mathematics known as game theory, which uses mathematical models to inform decision making. There are many applications to everyday dilemmas and conflicts, many of which can be treated as mathematical games. Students consider significant global events from fields like diplomacy, political science, anthropology, philosophy, economics, and popular culture. They examine models of world conflicts and scheduling of professional athletic contests. Specific topics include two-person zero-sum games, two-person non-zero-sum games, sequential games, multiplayer games, linear optimization, and voting theory.

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 & 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 human rights report card website about a nation of their choice.

GLOBAL HEALTH: What makes people sick? What social and political factors lead to the health disparities we see both within our own communities and on a global scale? What are the biggest challenges in global health and how might they be met? Using an interdisciplinary approach to address these questions, this course improves students' health literacy through an examination of the most significant public health challenges facing today's global population. Topics addressed include the biology of infectious disease, the statistics and quantitative measures associated with health issues, the social determinants of health, and the role of organizations (public and private) in shaping the landscape of global health policy. Throughout the course, students use illness as a lens through which to critically examine such social issues as poverty, gender, and race. Student work includes analytical writing, research and curating sources around particular topics, readings and discussions exploring a variety of sources, and online presentations created both on their own and with peers.

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 passion-driven communication projects. 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 includes individual and collaborative group projects, graphic design, content curation, analytical and creative writing, peer review and critiques, and online presentations.

HEALTH & FITNESS: In this course, students take a comprehensive look at multiple factors that influence our bodies over a lifetime to maintain an active and healthy lifestyle. Students gain physical literacy by identifying, applying, analyzing, and evaluating components of fitness, exercise (FITT) principles, principles of training, phases of movement, and athletic performance. Students set personal improvement goals for both fitness and movement skills utilizing baseline testing and performance analysis. Each week students complete a variety of physical exercises to target specific areas of fitness and movement to assist in achieving their goals. Reflection and feedback will inform students regarding their improvement. The course culminates in a student-led project where students explore, synthesize, and implement an exercise- or sport-specific topic that directly impacts their lives. Topics of exploration include but are not limited to: nutrition in sport, exercise psychology or mental health in sport, sport exploration for

the lifetime, exercise science or sport-specific performance and biomechanics, careers in sport, and community-based improvement design and implementation.

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 the holy land? Will North Korea launch a nuclear weapon? Can India and Pakistan share the subcontinent in peace? These questions dominate global headlines and our daily news feeds. In this course, students go beyond soundbites and menacing headlines to explore the context, causes, and consequences of the most pressing global issues of our time. Through case studies, students 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, students also identify and model ways to prevent, mediate, and resolve some of the most pressing global conflicts.

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

INTRODUCTION TO BLOCKCHAIN & CRYPTOCURRENCY: Much attention has been brought to the cryptocurrency space by the meteoric rise in the valuation of Bitcoin and other cryptocurrencies. More recently, meme tokens have also grabbed the spotlight. When thinking about cryptocurrency, there is much more to consider than just market capitalization or coins named after canines. Introduction to Blockchain & Cryptocurrency is an entry-level course for anyone excited by the space. This course explores how we arrived at the place we are now, and what the current and possible applications of crypto are. Students explore how markets in crypto operate, where they've received practical application, and where the space may head in the future through the lenses of creators, consumers, and governments. In addition, students take a deeper look at blockchain, the underlying technology that powers cryptocurrencies, and its many, far-reaching implications for the future of government, business, the arts, and more. Each lens represents a different way to view the complex and interrelated causes and outcomes of the changing crypto landscape. Using a variety of technologies and activities, students work individually and with peers to evaluate each lens. Students then analyze and explore how these technologies may shape and disrupt the future not only of the crypto space but of many current and future industries.

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

INTRODUCTION TO LEGAL THINKING: Inspired by GOA's popular Medical Problem Solving series, this course uses a case-based approach to give students a practical look into the professional lives of lawyers and legal thinking. By studying and debating a series of real legal cases, students sharpen their ability to think like lawyers who research, write, and speak persuasively. The course focuses on problems that lawyers encounter in daily practice, and on the rules of professional conduct case law. In addition to practicing writing legal briefs, advising fictional clients, and preparing opening and closing statements for trial, students approach such questions as the law and equity, the concept of justice, jurisprudence, and legal ethics.

INTRODUCTION TO PSYCHOLOGY: What does it mean to think like a psychologist? In Introduction to Psychology, students explore three central psychological perspectives — the behavioral, the cognitive, and the sociocultural — in order to develop a multifaceted understanding of what thinking like a psychologist encompasses. The additional question of “How do psychologists put what they know into practice?” informs study of the research methods in psychology, the ethics surrounding them, and the application of those methods to practice. During the first five units of the course, students gather essential information that they apply during a group project on the unique characteristics of adolescent psychology. Students similarly envision a case study on depression, which enables application of understandings from the first five units. The course concludes with a unit on positive psychology, which features current positive psychology research on living mentally healthy lives. Throughout the course, students collaborate on a variety of activities and assessments, which often enable learning about each other’s unique perspectives, while building their research and critical-thinking skills in service of understanding the complex field of psychology.

INVESTING I: This course is a prerequisite to Investing II at GOA. In this course, students simulate the work of investors by working with the tools, theories, and decision-making practices that define smart investment. Students 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 weighing financial risks and benefits and leave this course not just with a simulated portfolio of investments, but the skills necessary to manage portfolios in the future.

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. Students do some paper-and-pencil calculations early in the course, but the computer software package Geogebra (free) is 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 learn how to model social networks using matrices as well as discover things about the network with linear algebra as their tool and will consider applications like Facebook and Google. Prerequisite: Geometry and Algebra 2 or the equivalents Mathematics & Quantitative Reasoning.

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 is the focus of this course. Students 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 then study theoretical methods of influencing national economic activity with monetary and fiscal policy and learn about some of the controversy surrounding these policy tools. The advantages and disadvantages of international trade and of methods of setting exchange rates is also introduced. The course includes an individual student investigation of a national economy other than their home country. Students identify their economic findings and present resolutions in their final report.

MEDICAL PROBLEM SOLVING I: This course is a prerequisite to Medical Problem Solving II at GOA. 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, interviewing a patient, and creating a new mystery case.

MEDICAL PROBLEM SOLVING II: Medical Problem Solving II is an extension of the problem-based approach in Medical Problem Solving I. While collaborative examination of medical case studies remain at the center of the course, MPS II approaches medical cases through the perspectives of global medicine, medical ethics, and social justice. The course examines cases not only from around the world but also in students' local communities. Additionally, the course addresses the challenges patients face because of a lack of access to health care, often a result of systemic discrimination and inequity along with more general variability of health care resources in different parts of the world. All students in MPS II participate in the Catalyst Exhibition, a GOA-wide conference near the end of the semester where students from many GOA courses create and publish presentations on course-specific topics. For their projects, students use all of the lenses from the earlier parts of the course to choose and research a local topic of high interest. Further, their topics enable identifying a local medical problem, using local sources, and generating ideas for promoting change. Prerequisite: Medical Problem Solving I Health Sciences

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 help them better understand their roles as consumers and workers, and someday, as voters and producers.

MULTIVARIABLE CALCULUS: In this course, students learn to differentiate and integrate functions of several variables. They extend the Fundamental Theorem of Calculus to multiple dimensions and the course culminates in Green's, Stokes', and Gauss' Theorems. The course opens with a unit on vectors, which introduces students to this critical component of advanced calculus. They then move on to study partial derivatives, double and triple integrals, and vector calculus in both two and three dimensions. Students are expected to develop fluency with vector and matrix operations. Understanding parametric curves as a trajectory described by a position vector is an essential concept, which allows us to break free from one-dimensional calculus and investigate paths, velocities, and other applications of science that exist in three-dimensional space. Students study derivatives in multiple dimensions and use the ideas of the gradient and partial derivatives to explore optimization problems with multiple variables as well as consider constrained optimization problems using Lagrangians. After studying differentials in multiple dimensions, the course moves to integral calculus. Students use line and surface integrals to calculate physical quantities especially relevant to mechanics, electricity, and magnetism, such as work and flux. They employ volume integrals for calculations of mass and moments of inertia and conclude with the major theorems (Green's, Stokes', Gauss') of the course, applying each to some physical applications that commonly appear in calculus-based physics. Prerequisite: The equivalent of a college year of single-variable calculus, including integration techniques, such as trigonometric substitution, integration by parts, and partial fractions. Completion of the AP Calculus BC curriculum with a score of 4 or 5 on the AP Exam would be considered adequate preparation.

NEUROPSYCHOLOGY: Neuropsychology is the exploration of the neurological basis of behavior. Within this course, students learn about basic brain anatomy and function as well as cognitive and behavioral disorders from a neurobiological perspective. They do an in-depth analysis of neural communication with an emphasis on how environmental factors such as smartphones affect nervous system function, their own behaviors, and the behaviors of those around them. Students also have the opportunity to choose topics in neuropsychology to explore independently including Alzheimer's disease, addiction, neuroplasticity, and CTE and share their understanding with their peers in a variety of formats. The course concludes with a study of both contemporary and historic neuropsychological case studies and their applications to everyday life.

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. Students progressively develop the tools needed to understand the RSA algorithm, the most common encryption scheme used worldwide. Along the way, they invent some encryption schemes of their own and discover how to play games using number theory. Students also get a taste of the history of the subject, which involves the most famous mathematicians from antiquity to the present day, and see parts of the story of Fermat's Last Theorem, a 350-year-old statement that was fully proven only 20 years ago. While most calculations are simple enough to do by hand, students 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

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

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, but 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, students 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. They also seek out and lean on knowledge from positive psychology research and experts, such as Martin Seligman's well-being theory, Mihaly Csikszentmihalyi's idea of flow, and Angela Lee Duckworth's concept of grit. In exploring such theories and concepts, students imagine and create real-world measurements using themselves and willing peers and family members as research subjects. As part of the learning studio format of the course, students also imagine, research, design, and create projects that they share with a larger community. Throughout the development of these projects, students collaborate with each other and seek ways to make their work experiential and hands-on. Students leave the class with not only some answers to the question of what makes life meaningful, happy, and fulfilling, but also the inspiration to continue responding to this question for many years to come.

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

PROBLEM SOLVING WITH ENGINEERING & DESIGN: This course investigates various topics in science, technology, engineering, and mathematics using a series of projects and problems that are both meaningful and relevant to the students' lives. Students develop engineering skills, including design principles, modeling, and presentations, using a variety of computer hardware and software applications to complete assignments and projects. This is a course that focuses on practical applications of science and mathematics to solve real-world issues. Project-based learning, working in collaborative teams, and designing prototypes are essential components of the course. Throughout the program, students step into the varied roles engineers play in our society, solve problems in their homes and communities, discover new career paths and possibilities, and develop engineering knowledge and skills. There are no particular math or science prerequisites for this course, just an interest in using STEM to solve problems and a desire to learn!

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

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

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 students take up these topics and questions, they build and engage in a community of inquiry, aimed primarily at learning how to analyze human behavior through the lens of a social psychologist. Social Psychology invites students to explore, plan, investigate, experiment, and apply concepts of prejudice, persuasion, conformity, altruism, relationships and groups, and the self that bring the "social" to psychology. The course culminates in a public exhibition of a student- designed investigation of a social psychological topic of their choice. This course uses a competency-based learning approach in which students build GOA core competencies that transcend the discipline and learn how to think like a social psychologist.

GLOBAL ONLINE ACADEMY

2024-2025 Student Course Catalog

Semester 1: August 28 – December 13, 2024

Semester 2: January 8 – April 25, 2025

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 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 your location.
2. Communicate and empathize with people who have perspectives different from your own.
3. Curate and create content relevant to real-world issues.
4. Reflect on and take responsibility for your learning and that of others.
5. Organize your time and tasks to learn independently.
6. Leverage digital tools to support and show your 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 a choice in the work they do and the ideas they explore.

Students in grades 10-12 may enroll in a GOA course. These courses are semester electives that are offered as part of a student's regular schedule. Students should register for GOA courses through the described process at GA (see Ms. Blunden) or Brunswick (see Mr. Hastings) and consider the following guidelines:

- GOA courses are elective offerings and are not intended to fulfill or replace core requirements.
- Students may not register for a GOA course that is determined (by the Head of Upper School) to conflict or overlap with a course currently offered at GA or Brunswick.
- The GOA course cannot be a seventh course for GA students, and must be a sixth course for BR students.
- GOA course grades are listed and reported on student transcripts.
- Students must request GOA courses during GA/BR registration with Ms. Blunden at GA or Mr. Arthmire at Brunswick.
- GOA adheres to strict drop/add policies and requires that students drop or add classes within the first two weeks of the GOA semester.

To see the full list of GOA offerings, please visit:

<https://globalonlineacademy.org/student-program/student-courses>

DEPARTMENT DESIGNATIONS

Department(s)	Course Title	Term(s)
Art, Media & Design	Architecture	Fall, Spring
Art, Media & Design	Arts Entrepreneurship	Spring
Art, Media & Design	Creative Nonfiction Writing	Fall
Art, Media & Design	Digital Photography	Spring
Art, Media & Design	Fiction Writing	Spring
Art, Media & Design	Filmmaking	Fall
Art, Media & Design	Graphic Design	Fall, Spring
Business, Economics, Finance	Business Problem Solving	Fall, Spring
Business, Economics, Finance	Capitalism: Past Present & Future	Spring
Business, Economics, Finance	Entrepreneurship in a Global Context	Fall, Spring
Business, Economics, Finance	Introduction to Blockchain & Cryptocurrency	Spring
Business, Economics, Finance	Introduction to Branding & Marketing	Fall, Spring
Business, Economics, Finance	Investing I	Fall, Spring
Business, Economics, Finance	Macroeconomics	Fall, Spring
Business, Economics, Finance	Microeconomics	Fall, Spring
Business, Economics, Finance	Personal Finance	Fall, Spring
Computer Science & Engineering	Computer Science I: Computational Thinking	Fall, Spring
Computer Science & Engineering	Computer Science II: Game Design and Development	Spring
Computer Science & Engineering	Computer Science II: Java	Spring
Computer Science & Engineering	Computer Science II: Analyzing Data with Python	Spring
Computer Science & Engineering	Cybersecurity	Fall, Spring
Computer Science & Engineering	Introduction to Artificial Intelligence	Fall, Spring
Computer Science & Engineering	Problem Solving with Engineering & Design	Fall, Spring
Global Studies	Applying Philosophy to Global Issue	Fall
Global Studies	Climate Action & Sustainability	Fall
Global Studies	Discourse across Difference	Spring
Global Studies	Genocide & Human Rights	Fall
Global Studies	Global Health	Fall
Global Studies	International Relations	Fall, Spring
Health Sciences	Bioethics	Fall, Spring
Health Sciences	Global Health	Fall
Health Sciences	Health & Fitness	Fall
Health Sciences	Medical Problem Solving I	Fall, Spring
Health Sciences	Medical Problem Solving II	Fall, Spring
Justice, Ethics & Human Rights	Gender & Society	Spring
Justice, Ethics & Human Rights	Introduction to Legal Thinking	Fall, Spring
Justice, Ethics & Human Rights	Prisons & Criminal Justice Systems	Fall, Spring
Justice, Ethics & Human Rights	Race & Society	Fall
Justice, Ethics & Human Rights	Religion & Society	Spring
Mathematics & Quantative Reasoning	Data Visualization	Fall
Mathematics & Quantative Reasoning	Game Theory	Fall, Spring
Mathematics & Quantative Reasoning	Linear Algebra	Fall, Spring
Mathematics & Quantative Reasoning	Number Theory	Fall
Psychology & Neuroscience	Abnormal Psychology	Fall, Spring
Psychology & Neuroscience	Developmental Psychology	Fall, Spring
Psychology & Neuroscience	Introduction to Psychology	Fall, Spring
Psychology & Neuroscience	Neuropsychology	Fall, Spring
Psychology & Neuroscience	Positive Psychology	Fall
Psychology & Neuroscience	Social Psychology	Fall, Spring

ALPHABETICAL LIST OF COURSES

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

APPLYING PHILOSOPHY TO 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 Socrates, Confucius, and Immanuel Kant, this course also aims to be richly interdisciplinary, incorporating models and methods from diverse fields including history, journalism, literary criticism, and media studies. Students learn to develop their own philosophy and then apply it to the ideological debates that surround efforts to improve their local and global communities.

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

ARTS ENTREPRENEURSHIP: In this course, aspiring visual artists, designers, filmmakers, musicians, and other creatives learn how to find success in the dynamic fields of their choosing. Students learn about arts careers and organizations by attending virtual events and interviewing art practitioners, entrepreneurs, and administrators. Beyond exploring trajectories for improving their crafts, students build skills in networking and personal branding while examining case studies of a variety of artistic ventures — some highly successful and some with teachable flaws. Using real-world examples of professional and emerging creatives and arts organizations, students gain a better understanding of the passion and dedication it takes to have a successful creative career.

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 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.

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 tackle real-world problems facing businesses large and small in today's fast-changing global marketplace where radical reinvention is on the minds of many business leaders. Students work collaboratively and independently on case studies, exploring business issues through varied lenses including operations, marketing, human capital, finance and risk management as well as sustainability. As they are introduced to the concepts and practices of business, students identify, analyze, and propose solutions to business problems, engaging in research of traditional and emerging industries, from established multinationals to startups.

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

CLIMATE CHANGE & 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 interrogate the causes and effects of climate change, and the public policy debates surrounding it. In case studies, students 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? Students collaborate in workshops with classmates to deepen their collective understanding of the complex issues surrounding climate change. Throughout the semester, students meet with professionals working in the field of climate change as well as build and curate a library of resources and share findings in varied media, engaging as both consumers and activists to increase knowledge and advocate for sustainable norms. Finally, students have the opportunity to reach a global audience by participating in GOA's Catalyst Exhibition in the spring, as they present their individual projects to spark change in local communities through well-informed activism.

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 help them apply their knowledge of computational thinking in practical ways. They learn how to read code and pseudocode as well as begin to develop strategies for debugging programs. By developing computational thinking and programming skills, students 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 & 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 work in teams to brainstorm and develop new games in response to a theme or challenge. Students develop their skills in communication, project and time management, and creative problem-solving while focusing on different aspects of asset creation, design, and coding. Prerequisite: 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 is on creating intelligent systems through the fundamentals of Computer Science. Students write working programs through short lab assignments and more extended projects that incorporate graphics and animation. Prerequisite: Computer Science I: Computational Thinking or its equivalent.

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

CYBERSECURITY: 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 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 also explore the fundamentals of data forensics and incident response protocols. The course includes analysis of current threats and best-practice modeling for cyber defense, including password complexity, security, management, breach analysis, and hash cracking. Computational thinking and programming skills developed in this course will help students solve a variety of cybersecurity issues. There is no computer science prerequisite for this course, though students with some background will certainly find avenues to flex their knowledge.

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 wrangle data into spreadsheets, learning the basic ways professionals translate information into comprehensible formats. They explore charts, distinguishing between effective and misleading visualizations. Employing principles from information graphics, graphic design, visual art, and cognitive science, students create their own stunning and informative visualizations using Datawrapper, Tableau Public, and/or Python. From spreadsheets to graphics, students in this course practice the crucial skills of using data to decide, inform, and convince. There is no computer science, math, or statistics prerequisite for this course, though students with backgrounds in those areas will certainly find avenues to flex their knowledge in this course.

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.

DIGITAL PHOTOGRAPHY: In an era where everyone has become a photographer obsessed with documenting most aspects of life, we swim in a sea of images posted on Instagram, Facebook, Snapchat, Pinterest, and other digital media. To that end, why is learning how to use a digital camera important and what does taking a powerful and persuasive photo with a 35mm digital single lens reflex (DSLR) camera require? Digital Photography explores this question in a variety of ways, beginning with the technical aspects of using and taking advantage of a powerful camera and then moving to a host of creative questions and opportunities. Technical topics such as aperture, shutter, white balance, and resolution get ample coverage in the first half of the course, yet each is pursued with the goal of enabling students to leverage the possibilities that come with manual image capture. Once confident about technical basics, students apply their skills when pursuing creative questions such as how to understand and use light, how to consider composition, and how to take compelling portraits. Throughout the course, students tackle projects that enable sharing their local and diverse settings, ideally creating global perspectives through doing so. Additionally, students interact with each other often through critique sessions and collaborative exploration of the work of many noteworthy professional photographers whose images serve to inspire and suggest the diverse ways that photography tells visual stories. Prerequisite: Students must have daily access to a DSLR camera.

DISCOURSE ACROSS DIFFERENCE: Our increasingly interconnected, globally networked society presents us with complex social, political, and ethical dilemmas. This course equips students with strategies for engaging such issues through constructive dialogue focused on building understanding across differences. Through structured conversations, debate, rhetorical analysis, and guided reflection, students will gain skills for having difficult yet thoughtful dialogues. They will learn how to carefully evaluate multiple perspectives, make evidence- based claims, ask insightful questions, take others' viewpoints into account, and seek common ground. Specific topics examined may include technology's impact on privacy, environmental sustainability, social justice reform, and other current events that are sure to emerge! By practicing perspective-taking, identifying shared goals, and finding compromise, students will be able to have productive conversations even when they disagree. The course aims to foster civil discourse, strengthen critical thinking abilities, and build understanding across diverse perspectives. Students will emerge better prepared for responsible civic participation and prepared to thrive in a globally networked society.

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 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 and pivots, brand strategy and 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.

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, students 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 the course's online community, as well as dedicated time outside of class reading and providing feedback on one another's work as well as 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, the course increasingly focuses on helping students express their personal outlooks and develop unique styles as filmmakers. Students review and reference short films online and discuss how they 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, and editing software such as iMovie, Premiere Pro, etc.

GAME THEORY: In this course, students explore a branch of mathematics known as game theory, which uses mathematical models to inform decision making. There are many applications to everyday dilemmas and conflicts, many of which can be treated as mathematical games. Students consider significant global events from fields like diplomacy, political science, anthropology, philosophy, economics, and popular culture. They examine models of world conflicts and scheduling of professional athletic contests. Specific topics include two-person zero-sum games, two-person non-zero-sum games, sequential games, multiplayer games, linear optimization, and voting theory.

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 & 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 human rights report card website about a nation of their choice.

GLOBAL HEALTH: What makes people sick? What social and political factors lead to the health disparities we see both within our own communities and on a global scale? What are the biggest challenges in global health and how might they be met? Using an interdisciplinary approach to address these questions, this course improves students' health literacy through an examination of the most significant public health challenges facing today's global population. Topics addressed include the biology of infectious disease, the statistics and quantitative measures associated with health issues, the social determinants of health, and the role of organizations (public and private) in shaping the landscape of global health policy. Throughout the course, students use illness as a lens through which to critically examine such social issues as poverty, gender, and race. Student work includes analytical writing, research and curating sources around particular topics, readings and discussions exploring a variety of sources, and online presentations created both on their own and with peers.

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 passion-driven communication projects. 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 includes individual and collaborative group projects, graphic design, content curation, analytical and creative writing, peer review and critiques, and online presentations.

HEALTH & FITNESS: In this course, students take a comprehensive look at multiple factors that influence our bodies over a lifetime to maintain an active and healthy lifestyle. Students gain physical literacy by identifying, applying, analyzing, and evaluating components of fitness, exercise (FITT) principles, principles of training, phases of movement, and athletic performance. Students set personal improvement goals for both fitness and movement skills utilizing baseline testing and performance analysis. Each week students complete a variety of physical exercises to target specific areas of fitness and movement to assist in achieving their goals. Reflection and feedback will inform students regarding their improvement. The course culminates in a student-led project where students explore, synthesize, and implement an exercise- or sport-specific topic that directly impacts their lives. Topics of exploration include but are not limited to: nutrition in sport, exercise psychology or mental health in sport, sport exploration for

the lifetime, exercise science or sport-specific performance and biomechanics, careers in sport, and community-based improvement design and implementation.

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 the holy land? Will North Korea launch a nuclear weapon? Can India and Pakistan share the subcontinent in peace? These questions dominate global headlines and our daily news feeds. In this course, students go beyond soundbites and menacing headlines to explore the context, causes, and consequences of the most pressing global issues of our time. Through case studies, students 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, students also identify and model ways to prevent, mediate, and resolve some of the most pressing global conflicts.

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

INTRODUCTION TO BLOCKCHAIN & CRYPTOCURRENCY: Much attention has been brought to the cryptocurrency space by the meteoric rise in the valuation of Bitcoin and other cryptocurrencies. More recently, meme tokens have also grabbed the spotlight. When thinking about cryptocurrency, there is much more to consider than just market capitalization or coins named after canines. Introduction to Blockchain & Cryptocurrency is an entry-level course for anyone excited by the space. This course explores how we arrived at the place we are now, and what the current and possible applications of crypto are. Students explore how markets in crypto operate, where they've received practical application, and where the space may head in the future through the lenses of creators, consumers, and governments. In addition, students take a deeper look at blockchain, the underlying technology that powers cryptocurrencies, and its many, far-reaching implications for the future of government, business, the arts, and more. Each lens represents a different way to view the complex and interrelated causes and outcomes of the changing crypto landscape. Using a variety of technologies and activities, students work individually and with peers to evaluate each lens. Students then analyze and explore how these technologies may shape and disrupt the future not only of the crypto space but of many current and future industries.

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

INTRODUCTION TO LEGAL THINKING: Inspired by GOA's popular Medical Problem Solving series, this course uses a case-based approach to give students a practical look into the professional lives of lawyers and legal thinking. By studying and debating a series of real legal cases, students sharpen their ability to think like lawyers who research, write, and speak persuasively. The course focuses on problems that lawyers encounter in daily practice, and on the rules of professional conduct case law. In addition to practicing writing legal briefs, advising fictional clients, and preparing opening and closing statements for trial, students approach such questions as the law and equity, the concept of justice, jurisprudence, and legal ethics.

INTRODUCTION TO PSYCHOLOGY: What does it mean to think like a psychologist? In Introduction to Psychology, students explore three central psychological perspectives — the behavioral, the cognitive, and the sociocultural — in order to develop a multifaceted understanding of what thinking like a psychologist encompasses. The additional question of “How do psychologists put what they know into practice?” informs study of the research methods in psychology, the ethics surrounding them, and the application of those methods to practice. During the first five units of the course, students gather essential information that they apply during a group project on the unique characteristics of adolescent psychology. Students similarly envision a case study on depression, which enables application of understandings from the first five units. The course concludes with a unit on positive psychology, which features current positive psychology research on living mentally healthy lives. Throughout the course, students collaborate on a variety of activities and assessments, which often enable learning about each other’s unique perspectives, while building their research and critical-thinking skills in service of understanding the complex field of psychology.

INVESTING I: This course is a prerequisite to Investing II at GOA. In this course, students simulate the work of investors by working with the tools, theories, and decision-making practices that define smart investment. Students 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 weighing financial risks and benefits and leave this course not just with a simulated portfolio of investments, but the skills necessary to manage portfolios in the future.

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. Students do some paper-and-pencil calculations early in the course, but the computer software package Geogebra (free) is 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 learn how to model social networks using matrices as well as discover things about the network with linear algebra as their tool and will consider applications like Facebook and Google. Prerequisite: Geometry and Algebra 2 or the equivalents Mathematics & Quantitative Reasoning.

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 is the focus of this course. Students 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 then study theoretical methods of influencing national economic activity with monetary and fiscal policy and learn about some of the controversy surrounding these policy tools. The advantages and disadvantages of international trade and of methods of setting exchange rates is also introduced. The course includes an individual student investigation of a national economy other than their home country. Students identify their economic findings and present resolutions in their final report.

MEDICAL PROBLEM SOLVING I: This course is a prerequisite to Medical Problem Solving II at GOA. 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, interviewing a patient, and creating a new mystery case.

MEDICAL PROBLEM SOLVING II: Medical Problem Solving II is an extension of the problem-based approach in Medical Problem Solving I. While collaborative examination of medical case studies remain at the center of the course, MPS II approaches medical cases through the perspectives of global medicine, medical ethics, and social justice. The course examines cases not only from around the world but also in students' local communities. Additionally, the course addresses the challenges patients face because of a lack of access to health care, often a result of systemic discrimination and inequity along with more general variability of health care resources in different parts of the world. All students in MPS II participate in the Catalyst Exhibition, a GOA-wide conference near the end of the semester where students from many GOA courses create and publish presentations on course-specific topics. For their projects, students use all of the lenses from the earlier parts of the course to choose and research a local topic of high interest. Further, their topics enable identifying a local medical problem, using local sources, and generating ideas for promoting change. Prerequisite: Medical Problem Solving I Health Sciences

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 help them better understand their roles as consumers and workers, and someday, as voters and producers.

MULTIVARIABLE CALCULUS: In this course, students learn to differentiate and integrate functions of several variables. They extend the Fundamental Theorem of Calculus to multiple dimensions and the course culminates in Green's, Stokes', and Gauss' Theorems. The course opens with a unit on vectors, which introduces students to this critical component of advanced calculus. They then move on to study partial derivatives, double and triple integrals, and vector calculus in both two and three dimensions. Students are expected to develop fluency with vector and matrix operations. Understanding parametric curves as a trajectory described by a position vector is an essential concept, which allows us to break free from one-dimensional calculus and investigate paths, velocities, and other applications of science that exist in three-dimensional space. Students study derivatives in multiple dimensions and use the ideas of the gradient and partial derivatives to explore optimization problems with multiple variables as well as consider constrained optimization problems using Lagrangians. After studying differentials in multiple dimensions, the course moves to integral calculus. Students use line and surface integrals to calculate physical quantities especially relevant to mechanics, electricity, and magnetism, such as work and flux. They employ volume integrals for calculations of mass and moments of inertia and conclude with the major theorems (Green's, Stokes', Gauss') of the course, applying each to some physical applications that commonly appear in calculus-based physics. Prerequisite: The equivalent of a college year of single-variable calculus, including integration techniques, such as trigonometric substitution, integration by parts, and partial fractions. Completion of the AP Calculus BC curriculum with a score of 4 or 5 on the AP Exam would be considered adequate preparation.

NEUROPSYCHOLOGY: Neuropsychology is the exploration of the neurological basis of behavior. Within this course, students learn about basic brain anatomy and function as well as cognitive and behavioral disorders from a neurobiological perspective. They do an in-depth analysis of neural communication with an emphasis on how environmental factors such as smartphones affect nervous system function, their own behaviors, and the behaviors of those around them. Students also have the opportunity to choose topics in neuropsychology to explore independently including Alzheimer's disease, addiction, neuroplasticity, and CTE and share their understanding with their peers in a variety of formats. The course concludes with a study of both contemporary and historic neuropsychological case studies and their applications to everyday life.

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. Students progressively develop the tools needed to understand the RSA algorithm, the most common encryption scheme used worldwide. Along the way, they invent some encryption schemes of their own and discover how to play games using number theory. Students also get a taste of the history of the subject, which involves the most famous mathematicians from antiquity to the present day, and see parts of the story of Fermat's Last Theorem, a 350-year-old statement that was fully proven only 20 years ago. While most calculations are simple enough to do by hand, students 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

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

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, but 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, students 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. They also seek out and lean on knowledge from positive psychology research and experts, such as Martin Seligman's well-being theory, Mihaly Csikszentmihalyi's idea of flow, and Angela Lee Duckworth's concept of grit. In exploring such theories and concepts, students imagine and create real-world measurements using themselves and willing peers and family members as research subjects. As part of the learning studio format of the course, students also imagine, research, design, and create projects that they share with a larger community. Throughout the development of these projects, students collaborate with each other and seek ways to make their work experiential and hands-on. Students leave the class with not only some answers to the question of what makes life meaningful, happy, and fulfilling, but also the inspiration to continue responding to this question for many years to come.

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

PROBLEM SOLVING WITH ENGINEERING & DESIGN: This course investigates various topics in science, technology, engineering, and mathematics using a series of projects and problems that are both meaningful and relevant to the students' lives. Students develop engineering skills, including design principles, modeling, and presentations, using a variety of computer hardware and software applications to complete assignments and projects. This is a course that focuses on practical applications of science and mathematics to solve real-world issues. Project-based learning, working in collaborative teams, and designing prototypes are essential components of the course. Throughout the program, students step into the varied roles engineers play in our society, solve problems in their homes and communities, discover new career paths and possibilities, and develop engineering knowledge and skills. There are no particular math or science prerequisites for this course, just an interest in using STEM to solve problems and a desire to learn!

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

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

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 students take up these topics and questions, they build and engage in a community of inquiry, aimed primarily at learning how to analyze human behavior through the lens of a social psychologist. Social Psychology invites students to explore, plan, investigate, experiment, and apply concepts of prejudice, persuasion, conformity, altruism, relationships and groups, and the self that bring the "social" to psychology. The course culminates in a public exhibition of a student- designed investigation of a social psychological topic of their choice. This course uses a competency-based learning approach in which students build GOA core competencies that transcend the discipline and learn how to think like a social psychologist.