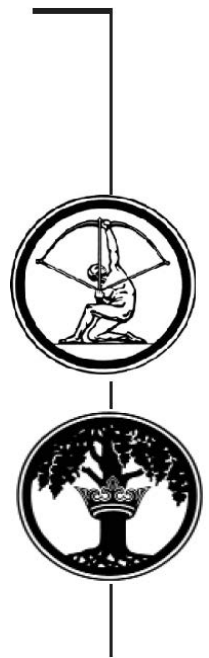


CRANBROOK SCHOOLS

CRANBROOK KINGSWOOD UPPER SCHOOL



2025-26 Curriculum

MISSION

Cranbrook Schools prepares students to thrive in and shape a complex world. A community that values diversity and inclusion, we cultivate wonder and, through our comprehensive programs and world-class campus, create opportunity for intellectual, creative, and athletic excellence, personal well-being, and social accountability. We nurture and challenge, inspire and empower students to be caring, passionate, and purposeful.

VISION

As one of the largest independent boarding and day schools in the country, for students in early childhood through 12th grade, we envision:

- All members of our community will have a transformational journey as each develops a unique and abiding sense of self, forges empathetic and enduring relationships, and harnesses the power of creative and critical thinking;
- All will find life-long joy in inquiry and discovery and will relish collaboration and enrich the lives of others.

CRANBROOK KINGSWOOD UPPER SCHOOL

COURSE OFFERINGS 2025-2026

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ENGLISH

9-13

Full Year Courses

1110	English 9
1210	World Literature
1310	American Literature

Semester 1 Courses

1521	Humor in Literature
1551	Shakespeare
1553	Heroes in British Literature
1555	Immigration, Race, and Identity
1559	Americans in Paris
1563	The Stranger in World Literature
1565	Creative Nonfiction: Investigations

Semester 2 Courses

1606	Creative Writing Workshop
1648	Sports Literature
1654	The Artist's Journey: Capturing the Creative Process
1656	The Female <i>Bildungsroman</i> in Literature
1662	Imagined Spaces: Architecture in Fiction
1668	Searching for Meaning in Modern Literature
1672	Creative Nonfiction: Memoir

MATHEMATICS

14-18

Full Year Courses

2110	Algebra I
2230	Geometry Essentials
2210	Geometry
2330	Algebra II Essentials
2310	Algebra II
2330	Pre-Analysis H
2530	Pre-Calculus Essentials
2540	Pre-Calculus
2550	Pre-Calculus H
2600	Calculus
2610	Advanced Topics: Analysis
2660	AP Calculus AB
2670	AP Calculus BC
2700	Statistics
2780	AP Statistics
2810	Advanced Topics: Calculus II/III

Semester 1 Course

2863	Advanced Topics: Multivariable Calculus (2026-27)
2881	Advanced Topics: Differential Equations (2025-26)
2866-1	Number Theory Through Programming

Semester 2 Course

2864	Advanced Topics: Linear Algebra (2026-27)
2882	Advanced Topics: Group Theory (2025-26)
2886-2	Number Theory Through Programming

WORLD LANGUAGES

19-24

Full Year Courses

3000	Latin I
3020	Latin II
3030	Latin III: Language and Literature
3050	Latin IV: Literature
3070	Latin IVH: Literature
3060	AP Latin: Caesar & Vergil
3100	French I
3120	French II
3140	French III
3160	French IV
3170	French VH
3180	AP French Language
3300	Spanish I
3320	Spanish II
3340	Spanish III
3360	Spanish IV
3370	Spanish VH
3380	AP Spanish Language
3400	Chinese I
3420	Chinese II
3440	Chinese III
3460	Chinese IV
3470	Chinese IVH
3480	AP Chinese Language

SCIENCE

25-29

Full Year Courses

4110	Biology I
4120	Biology IH
4150	Marine Biology
4180	AP Biology
4200	Conceptual Chemistry
4210	Chemistry I
4220	Chemistry IH
4280	AP Chemistry
4310	Physics I
4320	Physics IH
4380	AP Physics: C - Mechanics
4390	AP Physics C - Electricity and Magnetism
4410	Advanced Topics: Scientific Research

Semester 1 Courses

4515	Environmental Science: Systems
4505	Planetary Astronomy
4517	Anatomy
4519	The Chemistry of Food
9801	Health

Semester 2 Courses

4616	Environmental Science: The Human Element
4606	Stellar Astronomy
4618	Physiology
4622	The Chemistry of Food
9802	Health

CRANBROOK KINGSWOOD UPPER SCHOOL

COURSE OFFERINGS 2025-26

HISTORY/SOCIAL SCIENCE

30-34

Full Year Courses

5110	Worldviews and Civilizations
5210	World History: Intersections Past and Present
5310	American History and Government (AS)
5380	AP United States History (AS)
5470	AP World History: Modern
5480	AP European History
5490	AP African American Studies

Semester 1 Courses

5503	Principles of Psychology
5533	The Rise of Nazi Germany and the Holocaust
5535	History of Feminist Thought in the Modern World
5543	Microeconomics
5545	The Human Footprint
5547	AP Microeconomics
5549	History of American Architecture: Early

Semester 2 Courses

5604	Principles of Psychology
5634	The Rise of Nazi Germany and the Holocaust
5636	History of Feminist Thought in the Modern World
5644	Macroeconomics
5648	The Human Footprint
5652	AP Macroeconomics
5654	History of American Architecture: Modern

RELIGION AND PHILOSOPHY

35-37

Full Year Courses

5110	Worldviews and Civilizations
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Semester 1 Course

6503	Ethics: Philosophical Perspectives
6505	The Theodicy Problem
CD001-REL	Ethics of AI: Safeguarding Humanity

Semester 2 Courses

6616	Aesthetics: Philosophy of Art
6618	Ethics: Philosophy as a Way of Life
6622	The Theodicy Problem

PERFORMING ARTS

38-42

Full Year Course

7100	Concert Choir
7120	Madrigals
7140	The MasterSingers
7200	Concert Band
7220	Symphony Band
7300	Chamber Orchestra
7320	Orchestra
7440	Intermediate Dance
7460	Advanced Dance

Semester 1 and 2 Courses

7401,7402	Movement and Conditioning
7501,7602	Speech
7503,7604	Acting
7608	Advanced Theatre and Performance
7509	Introduction to Theatre: Stagecraft
7511,7612	Video Production
7616	Advanced Video Production
7618	Scriptwriting

FINE ARTS

43-47

Semester 1 and 2 Courses

8501,8602	Foundations in Design
8503,8604	Design Studio H
8505,8606	Drawing
8507,8608	Drawing Studio H
8551,8666	Painting
8567,8668	Painting Studio H
8555,8656	Digital Photography
8557,8658	Digital Photography Studio H
8511,8612	Ceramics
8517,8618	Ceramics Studio H
8521,8622	Sculpture
8527,8628	Sculpture Studio H
8531,8632	Weaving and Fiber Arts
8537,8638	Weaving and Fiber Arts Studio H
8541,8642	Metalsmithing/Creative Jewelry
8547,8648	Metalsmithing/Creative Jewelry Studio H
8583,8684	Fashion Design
8589,8692	Fashion Design Studio H

COMPUTER SCIENCE AND ENGINEERING

48-50

Full Year Courses

9780	AP Computer Science A
9770	Advanced Topics: CS Data Architecture

Semester 1 and 2 Courses

9509,9612	Introduction to Computer Science I
9513,9616	Introduction to Computer Science II
9618	Mechatronics
9517	Cyber Security I
9616	Cyber Security II
CD001-CSE	Ethics of AI: Safeguarding Humanity

INTERNATIONAL STUDENT PROGRAMS

51

ENGLISH FOR SPEAKERS OF OTHER LANGUAGES (ESOL)

51

Full Year Courses

1010	English for Speakers of Other Languages (ESOL)
1020	Writing and Vocabulary Development for Non-Native Speakers of English

DEPARTMENT X

52-53

Full Year Courses

9400	Advanced Topics: Humanities Research
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Semester 1 and 2 Courses

9411,9412	The Human Question: Defining Humanity in a Digital Age
9413,9416	Classics, Civics and Social Justice
9418	Fabrication and Design
9415,9422	Art Activism in Latin America
9424	Voice and Vision: Pen to Performance and Art
9426	Self and Place: How do I Inhabit the World?
9417,9428	Introduction to International Relations

ATHLETICS

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LIBRARY

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OFF-CAMPUS PROGRAMS

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FACULTY

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GOA Course Guide

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CRANBROOK KINGSWOOD UPPER SCHOOL

CURRICULUM GUIDELINES

Introduction

In order to be responsive to the needs and goals of each student, the curriculum of Cranbrook Kingswood Upper School offers academic flexibility and choice.

The Distributional Requirements are based on a liberal arts format and emphasize fundamental skills within departments. The program that is developed for each student is the result of a comprehensive process involving:

- *The personal interests and goals of the student*
- *The careful assessment of skill development in the disciplines*
- *The recommendations of departments based on placement tests and the evaluation of previous academic experiences*
- *The advice of the Academic Deans*
- *The college aspirations of the student*
- *The suggestions of the student's adviser*
- *The concerns of the student's parents*

This process is vital because it provides thorough and thoughtful support to the student, and it assures that the student benefits from the richly varied curriculum of Cranbrook Kingswood Upper School.

Upper School Distributional Requirements

In choosing courses, students should follow the academic policies listed below:

1. Students are expected to carry five academic courses each semester selected from at least four different departments. Any change in this program requires permission from parent, adviser, appropriate Academic Dean and (in the case of seniors) College Counselor.
2. A student may select an additional non-academic course from fine or performing arts.
3. Any student who wishes to take six academic courses must write a petition and obtain approval from the Academic Dean.
4. Credit is earned at the completion of a course; no partial credit is awarded for partial completion of a course unless approved by the department and Academic Dean and supported by the Educational Policies Committee (EPC). A student who withdraws from a course will not receive any credit for that course.
5. All students must pass four academic credits to move to the next level or to graduate.

It is highly recommended that all 9th and 10th grade students be in six courses (five academic courses and a fine or performing art or computer science class) each semester. During the 9th and 10th grade years, students must earn the minimum number of credits by department as indicated.

Departmental Requirements	Credits
English	2 credits
Mathematics	2 credits
World Languages*	2 credits
Science**	2 credits
History/Social Science	1.5 credits
Religion and Philosophy	0.5 credit
Arts (Fine or Performing)	0.5 credit
Health	0.25 credit

* These credits must include two successive years of sequential levels of the same language. (ESOL students are exempt from this requirement.)

** To include Biology and Chemistry.

During the 11th and 12th grade years, a student must earn the minimum number of credits by department as indicated.

Departmental Requirements	Credits
English***	2 credits
Mathematics****	2 credits
Science*****	1 credit
History/Social Science*****	1 credit
Religion and Philosophy	0.5 credit
Arts (Fine or Performing)	0.5 credit

*** These credits must include American Literature.

**** The mathematics sequence includes first-year algebra, geometry, and second-year algebra, or equivalent.

***** The credits must include one year of Physics

***** This credit must include a course designated “American Studies” (AS) unless the student has already passed a course in United States history in high school above the ninth grade and has department head approval.

Upper School Activities Requirement

Please see pages 54-55 for complete activities requirements.

Global Online Academy

Cranbrook Kingswood Schools is a founding member of the Global Online Academy (GOA). This consortium of leading independent day schools offers semester-long online courses. Students from member schools may enroll in courses; courses are taught by faculty from member schools. Founding schools include: Cranbrook Kingswood Schools (Bloomfield Hills, MI), The Dalton School (NY), Germantown Friends School (PA), Head-Royce School (CA), King’s Academy (in Jordan), Lakeside School (WA), Punahou School (HI), and Sidwell Friends School (Washington, DC).

The mission of the Global Online Academy is to translate into online classrooms the intellectually rigorous programs and excellent teaching that are hallmarks of its member schools; to foster new and effective ways, through best practices in education, for all students to learn; and to promote students’ global awareness and understanding by creating truly diverse, worldwide, online schoolroom communities.

Courses elected through the GOA during the school year will be noted on the student’s official Cranbrook Schools transcript. The student will earn credit for courses and course grades will factor into the overall GPA. Online courses are as rigorous as classroom courses. Students enrolled in the GOA should expect to spend an equally appropriate amount of time studying as they would a Cranbrook course. If the course is dropped late, families may incur a drop fee of 50% or 100% of the course fee. The full GOA catalogue can be found at the end of this guide.

Advanced Placement/Advanced Topics

Students are recommended by departments to take AP or Advanced Topics courses based on previous course work and standardized test scores. **Students enrolled in an Advanced Placement course are expected to take the associated Advanced Placement examination for that course in May.** The standard Advanced Placement examination fee will be applicable. The maximum number of AP/Advanced Topics courses is two for 10th graders; three for 11th graders; and four for 12th graders.

Summer Academic Work

Students sometimes enroll in summer programs for the purpose of academic enrichment. Upon receipt of an official transcript documenting the successful completion of a recognized summer program, the transcript will be attached to the student’s Cranbrook transcript.

Students who wish to do summer academic work in order to skip an intermediate level in an established sequence (for example, Spanish I to Spanish III) must submit a “Summer Work Proposal” form to the Registrar’s Office by the end of April. The department head will describe the expectations for such summer work and make an assessment of this work upon the student’s return to school. Only the department head and Academic Dean may authorize the student to skip an intermediate level in a course sequence for only one subject for summer. **Under no circumstances should a student plan to satisfy a graduation requirement by doing summer work. Only coursework offered by the upper school can be considered for satisfying a graduation requirement.**

Student Scheduling

Placement tests, prerequisites, previous grades, department head/instructor approval, and the approval of an Academic Dean determine enrollment in a course. All course offerings are subject to certain constraints. These constraints include but are not limited to: the staffing of all sections of core departmental courses, minimum enrollment, and the availability of appropriate physical space. **A few of the courses listed may not be offered because of these constraints.**

Students must list three choices (except Senior English electives require 6 choices) they would be willing to take. No guarantee can be given for enrollment in “elective” courses.

Each year, the master schedule is designed upon student course recommendations and requests. These recommendations and requests are collected during the registration process. The school makes every attempt to schedule students into the courses chosen. **As course requests are made for next year, please keep in mind that the courses offered, the number of sections of a course, and the schedule for classes for next year will be determined by the course recommendations and requests. For these reasons, it may not be possible to honor late course requests or course request changes made after the end of April. PLEASE MAKE COURSE SELECTIONS PROMPTLY, CAREFULLY, AND THOUGHTFULLY.**

Requesting Course Changes

Students may request a change in courses during the registration process (for all courses) or during the Drop/Add period (for semester electives). After the Drop/Add period, adding a course is not permitted. Any decision to withdraw from a course or change levels should be reviewed with the advisor, college counselor, department head, academic dean, and parents. Please be aware of the dates below for Drop/Add, the last date to drop a course, level changes in year-long courses, and the final dates to withdraw from courses.

Drop/add 1 st semester electives	9/4-9/8	
Drop/add 2 nd semester electives	1/21-1/25	Grades 9 -11
Last date to drop a year-long course or change course levels	10/10	Course not indicated on report card or transcript
Level changes in year-long courses	10/10 - 4/3	Withdraw will be indicated on report card and transcript; grade in previous course carried over to new course.
Last date to drop a 1 st semester elective course	10/10	Course not indicated on report card or transcript
Last date to drop a 2 nd semester elective course	2/20	Course not indicated on report card or transcript
Last date to withdraw from a 1 st semester course	12/5	Withdraw will be indicated on report card and transcript
Last date to withdraw from a 2 nd semester course	4/24	Withdraw will be indicated on report card and transcript
Last date to withdraw from a year-long course	4/3	Withdraw will be indicated on report card and transcript

College Counseling

Cranbrook Schools strives to prepare our students to move into higher education with competence and confidence. We embrace a student-centered approach that encourages the development of a student's self-awareness and connects that awareness to the development of post-secondary choices. In an environment of support and advocacy, students acquire the ability to:

- Identify personal strengths, interests, and goals
- Explore post-secondary educational options
- Manage the multi-faceted process of applying to college

Our process is one of collaboration that involves the counselor, the student, and the student's family; our common purpose focuses on the development of: a balanced college list, the skills and understanding necessary to complete college applications in a competitive college environment, and a growth in the accountability and ownership by the student for their college process.

As a school preparing students for success at the college level, planning for that future begins with our ninth-grade advisory program, Navigating Ninth Grade. Here the emphasis is to help students make a commitment to their academics and learn to fully engage their coursework by becoming active learners and recognizing the importance of their own learning style. Students explore the importance of maintaining a balance between their academic and co-curricular commitments. Through conversations and presentations conducted in the program, students become aware of leadership opportunities and the resources available to support them. College counselor assignments are made during the summer between the ninth and tenth grades.

The need for continued balance, better preparation, and added depth of self-knowledge continues into sophomore year. Through an individual meeting with their college counselor and an asynchronous, self-paced course designed specifically for sophomore students, the college counseling team focuses their energies in the tenth-grade year on helping students learn:

- How to use standardized test results to become better prepared academically
- The importance of balancing strong classroom performance with strong academic rigor
- How interests, strengths, and temperament relate to certain career fields
- How to prepare for specialized areas of interest (e.g., art, athletics, STEM)
- More about the tools available to research colleges, summer programs, and research opportunities

During the eleventh and twelfth grade years, an emphasis is placed on developing an individualized approach to the college process. During the fall, a heavy focus is placed on working with seniors and their families as they complete the application process. This emphasis transitions to individual meetings with juniors during the second semester. Additionally, students are encouraged to meet with college representatives as they visit the Cranbrook campus each fall. Information about local college fairs, specific college presentations, and summer opportunities are conveyed to students and families via email, on CranNet, through SCOIR, and via Instagram.

Through ongoing meetings with their college counselor, students utilize a variety of source materials to research and develop a college list that is appropriately aspirational and balanced. Every effort is made to assess and match a student's proficiency, goals, and interests with appropriate colleges where they can fully thrive as a student.

College Admission Testing

For many students, one of the first encounters with college admissions comes when taking a series of standardized tests. While many colleges are now "test optional" some colleges require students to take the SAT or the ACT. All SAT and ACT test results, regardless of when the test was administered, can be forwarded on to colleges and universities by the student during the application process in the senior year.

EXPLANATION OF COURSE DESCRIPTIONS

1) Chemistry I					7) Staff
2) 4210	3) Full Year	5) 5/wk	6) 1	8) 11, 12	
	4) Biology I and Dept. Rec.				

- 1) Course Title (If there is an *, then two alternate choices are required)
- 2) Course number (Course numbers ending in “0” are full year; course numbers ending in “odd” numbers are Semester 1; course numbers ending in “even” numbers are Semester 2)
- 3) Semester offered
- 4) Prerequisite and/or Approvals required
Instr. = Instructor Approval required
Dept. Head = Department Head Approval required
Dept. Rec. = Department Recommendation required
- 5) #/wk = number of meetings per week, if other than 4
- 6) Credit
- 7) Teacher name
- 8) Grade(s) for which course is open

Course Description

Course objectives: what the course deals with, teaching modes used, requirements or typical assignments, how student performance is evaluated, what materials are used.

English

English 9



World Literature
10, 11



American Literature
11, 12



Semester 1

Electives

Americans in Paris
Creative Nonfiction: Investigations
Heroes in British Literature
Humor in Literature
Immigration, Race, and Identity
The Stranger in World Literature
Shakespeare

Semester 2

Electives

Creative Nonfiction: Memoir
Creative Writing Workshop
Imagined Spaces: Architecture in Fiction
Searching for Meaning in Modern Literature
Sports Literature
The Artist's Journey
The Female *Bildungsroman*

ENGLISH

Michael German, Department Head

The Upper School English Department believes that the study of literature is the foundation for the development of students' skills in reading, writing, speaking, listening, and critical thinking. Properly trained to be better critical readers, students become independent thinkers equipped to take reasoned positions on complex questions and to develop an appreciation of other cultures. The department strives to teach clear and compelling writing, to develop critical inquiry and discussion skills, and to allow students to share their ideas in papers, presentations, and projects. All classes are taught in seminar format to provide these opportunities; instructors and students use appropriate technology to enrich the educational process. Faculty and students alike value their relatively small classes because they facilitate discussion and make it possible to devote time to individual students. While maintaining rigorous standards, we seek to meet students' individual needs.

English 9: The Journey, *World Literature* (10th grade), and *American Literature* (11th grade) are organized around core texts, and instructors may complement these with additional readings. *World Literature* and *American Literature* are intentionally aligned with the Upper School history curriculum to promote cross-curricular and global understanding. Vocabulary building proceeds continuously through the junior year, while formal grammar instruction gives way to an emphasis on style after the 10th grade. The primary method of assessment is the critical essay; however, students also write creatively and in other modes. Courses are year-long until the 12th grade, when students choose from a rich array of semester-long electives designed by individual instructors and based upon their own expertise.

Gender equity, cultural diversity, and historical context inform the selection of great literature in all genres in Upper School courses. Because the Department is committed to developing a diverse range of abilities and voices in the classroom, classes are not tracked. At all levels, when possible, differentiated instruction meets students' needs without modifying curriculum. The ESOL program supports international students in English classes and by offering two levels of instruction to meet the varied needs of English language learners.

The Department encourages qualified juniors and seniors to take one or both AP examinations and introduces them to the exams' formats. *English 9* and *World Literature* prepare students for American Literature and the senior elective system: this calibrated program positions students strongly for AP exams, college English classes, and a unique high school experience. The range of electives honors student choice while going beyond AP classes in both breadth and depth. By allowing any senior to take any elective, the Department ensures that all students will enjoy a capstone seminar experience, building on and refining the unfettered discussions they have pursued during the previous three years, directing their own and one another's learning in significant ways.

The Department fosters a culture of writing by honoring excellent writing through the annual award publication Prize Papers, Strickland Writing Awards, the Visiting Writer program, and the Upper School Libraries Alumni Collections. Cranbrook Kingswood alumni have given the school a national reputation for producing excellent writers, speakers, and critical thinkers. Several former students have become professional writers, and all leave better prepared to communicate in an age of globalization.

English 9: The Journey

Staff

1110 Full Year 1 9

Because all students who take English 9 are new to the Upper School, the course is focused on themes of transition, on "the journey" from one state to another. The class combines a careful analysis of literature with instruction in basic composition. Students also study vocabulary and topics in grammar. Core texts include Homer's *The Odyssey*, Adichie's *We Should All Be Feminists*, Salinger's *The Catcher in the Rye*, and Shakespeare's *A Midsummer Night's Dream*. Department-generated anthologies are used to teach poetry and short stories. Students are expected to participate in class discussions and are assessed through quizzes, timed writing, major essays, class presentations, other projects, and examinations.

World Literature

Staff

1210 Full Year 1 10, 11

The texts in World Literature have been chosen to help students understand and respect different parts of the world while finding commonalities across cultures. The core texts include *Reading the World* (an anthology), Achebe's *Things Fall Apart*, Dai Sijie's *Balzac and the Little Chinese Seamstress*, Esquivel's *Like Water for Chocolate*, and Shakespeare's *Macbeth*. Students also study vocabulary and topics in grammar; instructors devote significant time to teaching the writing process. Students are expected to participate in class discussions; assessments include quizzes, timed writing, major essays, class presentations, other projects, and examinations.

American Literature

Staff

1310 Full Year 1 11, 12

This course examines significant themes in American culture and introduces students to major American authors. Core texts include *The Norton Anthology of American Literature*, Fitzgerald's *The Great Gatsby*, Miller's *Death of a Salesman*, and Morrison's *Song of Solomon*. Vocabulary enrichment continues. Students are expected to participate in class discussions and are assessed through quizzes, timed writing, major essays, class presentations, other projects, and examinations.

Semester 1

Thompson

1521	Sem 1	1/2	12
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Creative Nonfiction: Investigations*

German

1565	Sem 1	1/2	12
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Shakespeare*

Crowl

1551	Sem 1	1/2	12
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Heroes in British Literature*

Rainwater

1553	Sem 1	1/2	12
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The Stranger in World Literature*

Pistner

1563	Sem 1	1/2	12
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Americans in Paris*

Green

1559	Sem 1	1/2	12
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11

ENGLISH

Immigration, Race, and Identity*

Kang

1555	Sem 1	1/2	12
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In the eighteenth century, Hector St. John De'Crevecoeur wrote exuberantly about the ways in which America would act as a nurturing parent for the immigrant, who "becomes an American by being received in the broad lap of our great *Alma Mater* [dear mother]." This course explores the elusive nature of that *Alma Mater*, as it is depicted in contemporary American fiction. Through the voices of diverse authors, we examine the tension of simultaneously existing within and apart from multiple cultures, as well as the challenges of negotiating a sense of belonging in America while maintaining a connection to the countries that characters once considered "home." Major texts may include *The Namesake* by Jhumpa Lahiri, *Who's Irish?* by Gish Jen, *The Brief Wondrous Life of Oscar Wao* by Junot Diaz, and *Woman Hollering Creek and Other Stories* by Sandra Cisneros. Assessments include critical essays, class discussions, seminar-leading assignments, and a final paper.

Semester 2

Creative Writing Workshop*

Thompson

1606	Sem 2	1/2	12
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This course is for students with a serious interest in writing and revising fiction, poetry, or essays (the narrative or reflective essay — not the critical essay). Most days the class consists of reviewing students' own work in the "workshop" model of group critique. We also study the work of current published writers. Students must produce at least one piece in each of three genres mentioned above; after meeting this requirement, they may choose to concentrate on one genre. Weekly submissions of substantive, well-edited, original writing that follows specific guidelines are required. Students must help produce an atmosphere that is candid and critical but also compassionate and constructive. Assessment is based almost exclusively on creative writing assignments and revisions of same.

Sports Literature*

Pistner

1648	Sem 2	1/2	12
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Some of the best American prose writing of the twentieth and twenty-first centuries is about sports. Writers not normally thought of as sports writers—Ernest Hemingway, David Foster Wallace, John Updike, and Bernard Malamud—have contributed to the literature of sport. This course traces sports writing as an art form that developed at a great pace in the twentieth century through the work of canonical sports writers such as Red Smith, Gay Talese, and David Halberstam. The main focus of the course is on literary figures like Wallace and Malamud who use sports as a platform to pursue meaningful topics about life, nature, character, and society. Jon Krakauer’s dramatic story of a group of climbers, including himself, on Mount Everest is a representative text in the course. Finally, the class looks at current articles on a variety of sports, often online. Assessments include class discussion, short response papers, short presentations, and an end-of-semester paper or exam.

Creative Nonfiction: Memoir*

German

1672	Sem 2	1/2	12
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Memoir is a subgenre of creative nonfiction; it is typically the story of one event or period of time in a writer's life. In a memoir, the writer attempts to make sense of the past by sharing scenes and reflecting upon them. Just as fiction writers do, memoirists employ literary techniques such as figurative language, imagery, and characterization. Memoir often wrestles with growing up, changing, apologizing, or grieving. While the focus tends to be inward, memoir can also comment on social issues and reflect universal ideas. Texts include *Wild* by Cheryl Strayed, *Stay True* by Hua Hsu, and *The Glass Castle* by Jeannette Walls. Students also write short memoirs and participate in a writing workshop. Other assessments include quizzes and critical essays.

The Artist's Journey: Capturing the Creative Process*

Rainwater

1654	Sem 2	1/2	12
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Writers, chefs, musicians, and other artists often link their artistic visions to their journeys. This course examines profiles of artists across media and identifies common themes in stories about how and where creatives come from, and how they express their creative visions. Representative texts may include James Joyce's *Portrait of the Artist as a Young Man* and Gabrielle Hamilton's *Blood, Bones, and Butter*. Assessments include student-led discussion, critical essays, personal narratives, short written responses, and a collaborative, interdisciplinary final project.

ENGLISH

Imagined Spaces: Architecture in Fiction*

Green

1662 Sem 2 1/2 12

From the moment students arrive at Cranbrook, they are invited to appreciate the architectural and aesthetic beauty that surrounds them; they are asked to recognize the impact of physical spaces on the educational process. Students begin the semester by considering the ways that Cranbrook architecturally enables and disables specific types of social interaction (possible encounters with archival materials). Students then move to encounter literary representations of architecture, examining the consequences of these architectures, and ultimately, recognizing that the built environment can both reinforce and challenge existing social structures. Loosely organized around types of architectures—the single-family home, the apartment building, the skyscraper, and the city streets—this course begins with the home’s role in reinforcing patriarchal family structures and domestic roles for women. Later, we consider the ways in which apartment buildings, institutional spaces and cityscapes begin to challenge the neat separation of spaces—male/female, upper/lower class, interior/exterior. Students can expect to complete at least one critical essay but may also be asked to use architectural modeling to envision and interrogate the significance of literary spaces.

Searching for Meaning in Modern Literature*

Crowl

1664 Sem 2 1/2 12

The course proposes a fundamental tension between worldly and spiritual existence that figures into one’s search for self-understanding and meaning in life. Readings and discussion illuminate this tension and examine the ways characters cope with suffering and doubt, loneliness and alienation, love and envy, triumph and defeat. The class will look at texts in which characters work to interpret the world in which they live and come to some self-understanding in the process. Texts include Samuel Beckett’s *Waiting for Godot*, Tomas Rivera’s *And the Earth Did Not Devour Him*, James Baldwin’s *The Fire Next Time*, and John Steinbeck’s *Of Mice and Men*, along with short stories and non-fiction pieces. Assessments include class discussion, response papers, quizzes, short presentations, and a final paper.

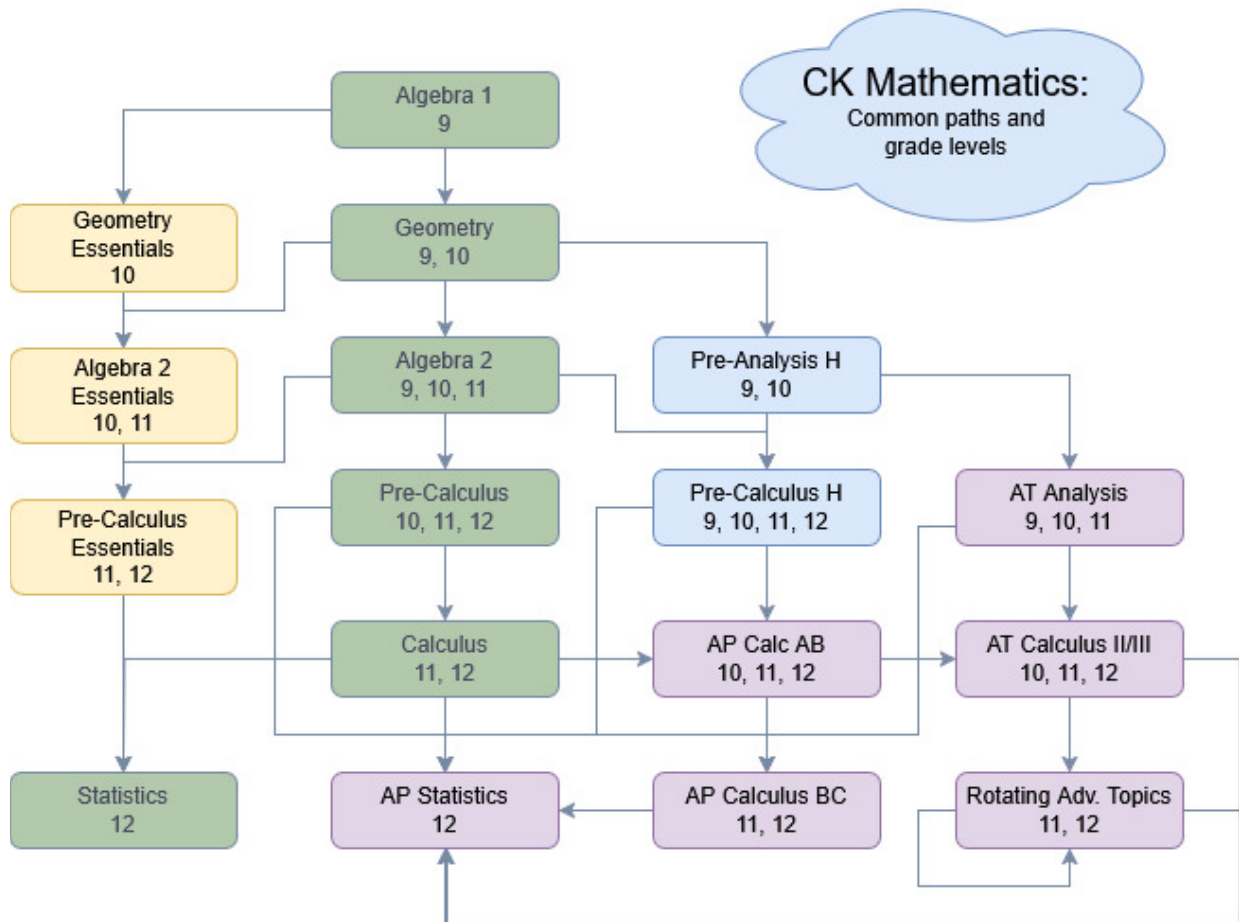
The Female *Bildungsroman* in Literature*

Kang

1656 Sem 2 1/2 12

A *bildungsroman* (German for “formation novel”) is a coming of age novel, traditionally a genre which follows a young man’s journey from childhood to adulthood. This course explores the more modern tradition of the female *bildungsroman*, examining the ways in which these female stories adhere to or subvert the genre, reflecting the pressures that gender and power exert on the more traditional story form. While female protagonists confront the questions of who they want to be, they also confront, directly or indirectly, how to freely seek these answers within or outside of the restrictions of gender roles. Primary texts may include *Jane Eyre* by Charlotte Bronte, *Their Eyes Were Watching God* by Zora Neale Hurston, and the graphic novel *Persepolis* by Marjane Satrapi. Assessments include critical essays, class discussions, seminar-leading assignments, and a final paper.

Mathematics



MATHEMATICS

Colin Hinde, Department Head

The Mathematics Department offers courses designed for students of varying degrees of ability and levels of prior mastery, thus making it possible to tailor a course of study to the needs of each student. The graduation requirement in mathematics is one credit per year and successful completion through the Algebra I/Geometry/Algebra II sequence or equivalent. The Department assumes responsibility for placing students according to their ability, level of preparation, and interest. In general, levels are reassessed during each year's course recommendation process. Students enrolled in an Advanced Placement course are expected to take the Advanced Placement exam in May. Each of the Department's courses aims for student mastery of the concepts and techniques particular to the course. In addition, all courses stress development of "studentship" (so that students might discover how best to engage their subject), and all aim at engendering interest in mathematics and related fields of intellectual endeavor. With support from the Upper School Math Club, all students are afforded the opportunity and encouraged to participate in extracurricular activities and contests such as the American Math Contests (AMC10/12), University of Waterloo Canadian Math Contests, Arete Online Math Madness, University of Michigan Math Field Day, and membership in the Mu Alpha Theta National Honor Society.

The TI-84 or TI-83 graphing calculator is required in all courses.

Algebra I

Staff

2110 Full Year 1 9, 10

This first-year course in algebra covers single-variable linear equations and inequalities, including those using absolute values; the basic language and notation of functions; a detailed study of two-variable linear equations, including solving systems of equations; manipulating expressions with exponents and radicals, including operations on polynomials; and a detailed study of quadratics, including graphing parabolas, factoring, and the quadratic formula. Throughout the year students build their number sense and ability to work with numerical expressions as well as their ability to relate language to math through word problems.

Geometry Essentials

Staff

2230 Full Year 1 9-11
Algebra I

This course covers all of the fundamental topics studied in Geometry but at a more accessible pace and appropriate depth of concepts for the students who need to have basic skills reinforced. The essentials of Euclidean geometry are studied at length, with less emphasis being placed upon the development of proofs. The subsequent course path would be Algebra II Essentials followed by Pre-Calculus Essentials.

Geometry

Staff

2210 Full Year 1 9-11
Algebra I

This is a basic course in Euclidean plane geometry with an emphasis on deductive reasoning and proof. The topics covered include parallel and perpendicular lines, congruence, similarity, right triangles and trigonometry, polygons, circles, area and volume formulas. Concepts and techniques from algebra are reviewed throughout the year to prepare the student for subsequent algebra-based mathematics courses.

Algebra II Essentials

Staff

2330 Full Year 1 10, 11
Geometry or Geometry Essentials

This course covers all of the fundamental topics studied in Algebra II but at a more accessible pace and appropriate depth of concepts for the students who may need to have basic skills reinforced. Emphasis is on developing self-confidence in students and improving their ability to understand the structure in problem-solving with algebra. The subsequent course is Pre-Calculus Essentials.

MATHEMATICS

Algebra II

2310 Full Year 1 10, 11
Geometry

Staff

Students in Algebra II re-examine in detail the major topics from Algebra I and are subsequently introduced to more advanced topics and techniques. Ideas covered in depth from both the graphical and the algebraic perspectives include linear functions, equations, and inequalities; absolute value functions, equations, and inequalities; systems of linear equations and inequalities; rational exponents; radical expressions and equations; and quadratic equations and functions. The refinement of problem-solving techniques and the algebraic process are emphasized in order to facilitate their work with complex numbers; higher order polynomial functions, equations, and inequalities; and rational functions, equations, and inequalities. Familiarity with these algebraic concepts leads to the introduction of exponential and logarithmic functions and equations.

Pre-Analysis H

2330 Full Year 1 9-11
Dept. Rec.

Staff

This course covers all of the topics studied in Algebra II in greater depth and at a faster pace, leaving time for a thorough study of Pre-Calculus level trigonometry. The topics studied include right, circular, and inverse trigonometric functions and their graphs, as well as analytic trigonometry. Additional topics may include combinatorics, conic sections, and matrix arithmetic. Students who demonstrate exceptional work in this class may be recommended for Advanced Topics: Analysis.

Pre-Calculus Essentials

2530 Full Year 1 11, 12
Algebra II or Algebra II Essentials

Staff

This course is designed to help students acquire a solid foundation in algebra and trigonometry, preparing them for the continued study of mathematics in college. A fundamental goal is to enable students to develop problem-solving skills, while fostering critical thinking, within an engaging setting. During the first semester critical algebra skills are further developed from an algebraic and graphing calculator perspective. Topics include a wide variety of equations, inequalities, functions and their graphs. Second semester introduces the basic concepts of trigonometry including right triangle and circular trigonometry, basic graphs and identities.

Pre-Calculus

2540 Full Year 1 11, 12
Algebra II

Staff

This course is designed for students who have completed the core sequence in the Mathematics Department (Algebra I, Geometry, Algebra II). Pre-Calculus provides students with an opportunity to strengthen and expand their ability to analyze functions and use their mathematical abilities to solve real-life applications. Topics studied include exponential, linear, logarithmic, polynomial, rational, and radical functions. An investigation of sequences and series is also included. Trigonometry is the focus of the second semester. A possible additional topic is conic sections. The graphing calculator is employed to assist students in the study of these topics.

Pre-CalculusH

2550 Full Year 1 11, 12
Algebra II

Staff

Pre-CalculusH is intended for motivated students whose work in Algebra II demonstrated a high level of mastery. Course topics include an in-depth study of functions (polynomial, rational, exponential, logarithmic and trigonometric), series and sequences, vectors, graphing techniques, polar equations, parametric equations, and limits. We emphasize developing functions and models that first-year AP Calculus students typically encounter.

Advanced Topics: Analysis

2610 Full Year 1 10, 11
Pre-Analysis H or equivalent with Dept. Rec.

Staff

Advanced Topics: Analysis is intended for those students who have completed the core math courses by the end of their freshman year and are anticipating taking Advanced Calculus courses. Students are expected to enter the course with a full command of the topics covered in an advanced Algebra II course. The first semester will cover topics from Pre-Calculus such as trigonometry, series and sequences, vectors, polar functions, and parametric functions. The second semester will be dedicated to the study of topics from AP Calculus AB including limits, differentiation, and integration. Students are encouraged to take the AP Calculus AB exam. Successful completing of this course will allow students to move directly to Advanced Topics: Calculus II/III the following year.

MATHEMATICS

Calculus

Staff

2600 Full Year 1 11, 12
Pre-Calculus

This course introduces students to the calculus concepts of the limit, derivative, and integral. Formulas and techniques are developed for each of these concepts, which the students use to evaluate mathematical and real-life problem scenarios.

AP Calculus AB

Staff

2660 Full Year 1 10, 11, 12
Pre-CalculusH

This course covers the topics of the differential and integral calculus as described in the AB syllabus of the Advanced Placement Program and prepares students for the Calculus AB examination, given in May. Additional topics are presented after the examination. Students enrolled in this class are expected to take the AP Examination in May.

AP Calculus BC

Staff

2670 Full Year 1 11, 12
Pre-CalculusH, Calculus, AP Calculus AB, or AT: Analysis with Dept. Rec.

This course covers the topics of differential and integral calculus as described in the BC syllabus of the Advanced Placement Program and prepares students for the Calculus BC examination, given in May. Additional topics are presented after the examination. Students enrolled in this class are expected to take the AP Calculus BC examination in May. This is a terminal course in Calculus and is not intended for students wishing to take Advanced Topics mathematics courses.

Statistics

Staff

2700 Full Year 1 12
Algebra II or Dept. Rec.

Statistics acquaints students with the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students will occasionally be working with projects that involved hands-on gathering and analysis of real-world data. Ideas and computations presented in this course have immediate links and connections with actual events. The class often utilizes computer and calculator-based statistical programs, simulations, and manipulatives in a blended learning environment to enhance student understanding of the concepts involved in statistics.

AP Statistics

Staff

2780 Full Year 1 11, 12
Pre-CalculusH or Dept. Rec.

Advanced Placement Statistics is offered to students who wish to complete studies equivalent to a one-semester, introductory, non-calculus-based college course in statistics. The purpose of the AP course in statistics is to introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students are exposed to four broad conceptual themes:

1. Exploring Data: Describing patterns and departures from patterns
2. Sampling and Experimentation: Planning and conducting a study
3. Anticipating Patterns: Exploring random phenomena using probability
4. Statistical Inference: Estimating population parameters & testing hypothesis

Students in this class are expected to take the AP Examination in May.

Advanced Topics: Calculus II/III

Staff

2810 Full year 1 10, 11, 12
AP Calculus AB, or AT: Analysis with a 4 or better on the AP AB exam with Dept. Rec.

In addition to reviewing topics from Calculus AB, with a heavier emphasis on theory, this course covers the topics delineated in the BC syllabus of the Advanced Placement Program and prepares students for the Calculus BC examination, given in May. Additional topics not included on the AP BC exam are discussed throughout the year, with an emphasis on differential equations after the exam. Students enrolled in this class are expected to take the AP Calculus BC Examination in May.

MATHEMATICS

Advanced Topics: Multivariable Calculus

Staff

2863 Sem 1 1 11, 12

Dept. Rec

This course is designed for exceptional students who have completed Advance Topics: Calculus II/III. Topics covered include vectors and the geometry of space; application of calculus to vector-valued functions, including motion in space, arc length and curvature; functions of several variables, including partial derivatives, gradients and tangent planes, optimization problems, and Lagrange Multipliers; double and triple integration, including with change of variables; and calculus of vectors fields culminating with the classic Theorems of Green, Stokes and the divergence Theorem. While this course covers topics more advanced than any Advanced Placement test, the goal is to prepare students, upon college matriculation, for either an honors version of this course, a college administered placement test into a more advanced course, or an excellent preparation for a course covering similar material.

Advanced Topics: Linear Algebra

Staff

2864 Sem 2 1 11, 12

Dept. Rec

This course is designed for exceptional students who have completed Advanced Topics: Calculus II/III. Topics covered include solving systems of linear equations using Gaussian row reduction of matrices, including how to express the solution set in parametric form; detailed study of vector spaces beginning from axioms and including discussion of linear independence, subspaces, basis, dimension, and the rank theorem; considering the matrix as a linear transformation of vector spaces which leads to a rigorous discussion of matrix operations like multiplication, inverse, and determinants. Finally, we discuss ways to analyze and categorize matrices using eigenvectors and similarity. As time permits, we discuss applications such as systems of linear differential equations. Throughout, a goal is to focus on writing about math with precision, and many exercises are proof-based. While this course covers topics more advanced than any Advanced Placement test, the goal is to prepare students, upon college matriculation, for either an honors version of this course, a college administered placement test into a more advanced course, or an excellent preparation for a course covering similar material.

Advanced Topics: Differential Equations

Staff

2881 Sem1 1 11,12

Dept. Rec.

This course is designed for exceptional students who have completed Advanced Topics: Calculus II/III. We begin with a detailed study of Ordinary Differential Equations (ODE) including a categorization of 1st order equations with different solution techniques, existence and uniqueness theorems, and techniques for higher order linear equations including Laplace Transforms. An introduction to Partial Differential Equations contains a discussion of Fourier Series and an analysis of the famous heat, wave, and Laplace equations. As time permits, we will conclude the course with a discussion of the Calculus of Variations. While this course covers topics more advanced than any Advanced Placement test, the goal is to prepare students, upon college matriculation, for either an honors version of this course, a college administered placement test into a more advanced course, or an excellent preparation for a course covering similar material.

Advanced Topics: Group Theory

Staff

2882 Sem 2 1 11, 12

Dept. Rec.

This course is designed for exceptional students who have completed Advanced Topics: Calculus II/III. We begin with an inquiry-based study of the structure of finite groups including groups inspired by modular arithmetic, and geometric symmetries. We develop the language and tools of group theory including isomorphisms and homomorphisms, subgroups and quotient groups, normal subgroups, and the concept of a solvable group. We then shift to consider functions of a complex variable. Group theory is used to understand the Riemann surface of a function and the ultimate goal is to prove some famous theorems of Algebra: the Fundamental Theorem, and Abel's Theorem of the impossibility of the quintic formula in radicals. Throughout, a goal is to focus on writing about math with precision, and many exercises are proof-based. While this course covers topics more advanced than any Advanced Placement test, the goal is to prepare students, upon college matriculation, for either an honors version of this course, a college administered placement test into a more advanced course, or an excellent preparation for a course covering similar material.

Number Theory Through Programming*

Staff

2866-1 Sem 1 1/2

2866-2 Sem 2 1/2

Pre-CalculusH or Dept. Rec.

This is a departmental crossover course intended to deepen student skills in both computer programming and mathematics. It will be a project-based course where students are challenged to answer a sequence of mathematical questions. A few may be possible to answer by hand, but we want to focus on problems that use efficient algorithm and data structure techniques that may also require learning some new math to figure out. Students will be expected to develop and approach their own research projects, generalizing the course material.

World Languages

Latin

Latin I
9-11

Latin II
9-12

Latin III: Language
and Literature
9-12

Latin IV:
Literature
10-12

Latin IVH:
Literature
10-12

AP Latin:
Caesar & Virgil
11-12

French

French I
9-11

French II
9-12

French III
9-12

French IV
10-12

French VH
10-12

French VH
10-12

AP French
Language
11-12

Spanish

Spanish I
9-11

Spanish II
9-12

Spanish III
9-12

Spanish IV
10-12

Spanish VH
10-12

Spanish VH
10-12

AP Spanish
Language
11-12

Chinese

Chinese I
9-11

Chinese II
9-12

Chinese III
9-12

Chinese IV
10-12

Chinese IVH
10-12

AP Chinese
Language
11-12

WORLD LANGUAGES

Eglee Rodríguez-Bravo, Department Head

“The limits of my language are the limits of my world.”

-Ludwig Wittgenstein

Competence in more than one language and culture opens doors to social, academic, and business opportunities. At Cranbrook Kingswood, the World Language Department equips students to engage in a globally interconnected world through strong programming, excellent instruction, and travel opportunities. Students can choose Mandarin Chinese, French, Latin, or Spanish. Except for Latin, classes are taught almost exclusively in the target language, and are geared toward the level of the language students in any particular class. Lessons integrate listening, speaking, reading, and writing skills with culture as a backdrop. For example, a lesson might start with an audio, video, or reading excerpt on the French elections, followed by guided small group discussions, and finally a writing assignment. Vocabulary and grammar play a role in this holistic process; however, communication is the main goal. Students are assessed based on their reading and writing aptitude, as well as their oral and aural competence.

Two consecutive years of single-language study are required for graduation, although the World Language Department encourages a minimum of three years of study. Most students pursue a language through the fourth and fifth level; the latter take the College Board's Advanced Placement Examination. New students take a placement test to determine their proficiency level, while returning students are promoted by the World Language Department based on the strength of their prior achievement.

The World Language faculty is a cohesive and collaborative group of educators dedicated to building strong relationships with students. Teachers research, share, and maintain best practices in language and culture instruction. We possess native or superior proficiency and engage in languages and cultures we teach through constant interaction with each other, and frequent travel and workshop opportunities. For our students, we organize and promote school-sponsored trips abroad for authentic language and cultural experiences.

Language and culture learning offers social, academic, and workplace benefits that serve students throughout their lives. Cranbrook Kingswood World Language teachers understand this and take it to heart. We are proud of the progress our students make toward language and culture competency during their time with us, and we are confident that when they graduate, they are ready to embrace their global citizenship by understanding and being understood in a language and culture other than their own.

Latin I

Staff

3000 Full Year 1 9-11

This course uses stories set in ancient Pompei and Egypt to teach basic concepts of Latin grammar and to introduce students to the history, culture, and mythology of the Roman Empire. In addition to learning to analyze the word and sentence structure of Latin prose, the course also teaches students to recognize the Latin origins and meanings of English words. Daily assignments, quizzes, tests, semester and final examinations.

Latin II

Staff

3020 Full Year 1 9-12
Dept. Rec.

This course continues to develop reading skills and knowledge of grammar and vocabulary through the study of stories covering the Roman conquest of Britain as well as the political intrigue surrounding the emperor in ancient Rome itself. Students gain a deeper understanding of Roman history, culture, and mythology, and continue to build their knowledge of English vocabulary derived from Latin. Daily assignments, quizzes, tests, semester and final examinations.

Latin III: Language and Literature

Staff

3030 Full Year 1 9-12
Dept. Rec.

The first half of this course completes the study of Latin grammar and forms while continuing to improve students' ability to read and translate Latin in preparation for the AP level of Latin. The second half of the course introduces students to ancient literature through Cicero's speeches and letters and the poetry of Ovid. Daily assignments, quizzes, tests, semester and final examinations.

WORLD LANGUAGES

Latin IV: Literature

3050	Full year Dept. Rec.	1	10-12
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Staff

Students in this fourth-level course use their grammar and vocabulary skills from Latin I through Cicero and Ovid (Level III) to read and analyze new topics in Latin literature. Readings for the course include prose and poetry by Catullus, Horace, and other authors. The course helps students strengthen their reading and writing skills in preparation for AP Latin: Caesar and Vergil. Student performance is assessed through compositions, quizzes, tests, a midterm, and a final examination.

Latin IVH: Literature

3070	Full Year	1	10-12
	Dept. Rec.		

Staff

Students enrolled in this class will gain a deeper understanding of different topics in Latin Literature using the grammar and vocabulary learned in previous levels. Honor students must complete 2 essays/projects per semester to expand on their knowledge of the authors, texts, or historical/cultural contexts or significance of the texts beyond what is being studied by regular Latin IV curriculum, and complete 2 Latin prose compositions projects per semester.

AP Latin: Caesar & Vergil

3060	Full Year	1	11-12
	Dept. Rec.		

Staff

This course prepares students for the Advanced Placement Examination, which includes Caesar's *De Bello Gallico* and Vergil's *Aeneid*. As designated by the AP curriculum, thorough study of passages in Latin from both complete texts is required along with a familiarity of their historical contexts. Students must be able to read dactylic hexameter and to understand the rhetorical and poetic devices that characterize Latin literature and epic poetry. Assessments include recitations, discussions, quizzes, and exams. Students are expected to take the AP examination in May.

French I

3100	Full Year	1	9-11
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Staff

In this beginning course, which is taught mostly in French, students practice the fundamentals of the language through listening, repetition, speaking, reading, and writing activities. They are introduced to simple vocabulary, elementary grammatical structures, and the present and past tenses of common verbs. An understanding of Francophone culture is initiated. Projects, oral and written tests, semester and final examinations.

French II

3120	Full Year Dept. Rec.	1	9-12
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Staff

This course is taught in French and involves a review and extension of the principles and material presented in French I. Students develop and strengthen their ability to think and express ideas and opinions in French. They refine their reading and listening comprehension skills and further develop their speaking and written expression. In addition, key aspects of Francophone culture are discussed. Projects, oral and written tests, semester and final examinations.

French III

3140	Full Year Dept. Rec.	1	9-12
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Staff

This course further develops the speaking, listening, reading, writing, and culture proficiencies acquired in French I and II. Major emphasis is placed on increasing comprehension and comprehensibility by refining writing skills, reviewing grammatical concepts, and introducing more complex structures and a wider variety of vocabulary. Students' knowledge of Francophone cultures and civilizations is further expanded. Classes are taught in French, and students participate actively in role-playing activities, oral presentations, and frequent written and pronunciation exercises. Projects, oral and written tests, semester and final examination.

WORLD LANGUAGES

French IV

Staff

3160 Full Year 1 10-12
Dept. Rec.

French IV is a continuation of the first three years of French language and cultural study. It provides a thorough review of material from French I – III while exposing students to more detailed vocabulary and more complex sentence structures. In addition, it engages students in more sophisticated discussions of Francophone culture. The students improve their oral and written proficiency skills through frequent in-class interactions, presentations, and cultural projects. In order to enhance their communicative skills, students become familiar with a wide range of authentic French materials including Internet sites, news reports and broadcasts, music, and film. Speaking, reading, and listening-comprehension assessments, grammar review exams, projects, oral and written tests, semester and final examination.

French VH

Staff

3170 Full Year 1 10-12
Dept. Rec.

This class is conducted exclusively in the target language to provide students with maximum exposure to French. The course is designed for students intending to take the Advanced Placement French Language and Culture class. Culturally authentic materials, texts, video clips, songs, articles on current issues, and internet sources are presented and lead to an in-depth study of Francophone culture. Class discussions followed by student-to-student interaction and conversation increase oral proficiency as well as cultural awareness. Basic grammatical structures are reviewed while new and complex concepts are introduced to broaden students' oral and written expression. Performance in the language is regularly assessed using a variety of tools: compositions, projects, online oral and written responses to prompts, presentations, quizzes, tests and semester exams. Enrollment in this class is by departmental recommendation only.

AP French Language and Culture

Staff

3180 Full year 1 11-12
Dept. Rec.

This course is conducted entirely in French and is designed to prepare students for the College Board Advanced Placement French Language and Culture examination. By this level, students have acquired a good command of French grammar and a considerable competence in listening, speaking, reading and writing as well as a broad cultural awareness of Francophone culture. Students will increase their ability to understand how French is spoken in different parts of the world in both formal and informal conversational situations. They will develop a knowledge of idioms, sophisticated vocabulary, and discourse techniques. Multimedia resources will be analyzed and discussed. Students will comfortably express opinions and ideas about current events, internet articles, videos, documentaries, film excerpts, and commercials. Emphasis is placed on becoming fluent speakers, readers, and writers of French while absorbing relevant thematic information from the Francophone world. Enrollment in this course is by departmental recommendation. All students take the AP exam in May.

Spanish I

Staff

3300 Full Year 1 9-11

The objective of this course is to establish a foundation in elementary Spanish in the four language skills (listening, speaking, reading and writing). Students learn to use the language meaningfully and begin to develop the facility to communicate in the context of the Spanish-speaking world. Grammar and vocabulary are taught in terms of function and application to real-life situations. Very little English is used in class and students are encouraged to use Spanish as much as possible. Students listen to audio recordings by native speakers, participate in daily speaking and listening activities, and write simple, guided compositions. All four skills are tested regularly during the year.

Spanish II

Staff

3320 Full year 1 9-12
Dept. Rec.

This course involves a review and extension of the principles and material taught in Spanish I. Emphasis is placed on the refinement of reading and listening skills, greater development of writing skills, and a continued study of key aspects of Hispanic life and cultures. Students are introduced to new grammatical concepts and verb tenses, with a focus on the preterit and imperfect past tenses. Classes are taught almost exclusively in Spanish and an on-going effort is made to develop students' ability to express ideas in Spanish and to think in the target language. As in Spanish I, all four skills are tested regularly during the year.

WORLD LANGUAGES

Spanish III

3340	Full Year Dept. Rec.	1	9-12
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Staff

This course further develops the listening, speaking, reading, and writing skills acquired in Spanish I and II. Major emphasis is placed upon developing comprehension and comprehensibility by refining writing skills, reviewing previously acquired grammatical concepts, and introducing more complex structures. Particular focus is given to the subjunctive and the imperative moods. Readings include excerpts from Spanish literature as well as current online journalism. Classes are taught in Spanish and students participate in daily speaking and listening activities. As in the previous Spanish courses, all four skills are tested regularly during the year.

Spanish IV

3360	Full Year Dept. Rec.	1	10-12
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Staff

This course, conducted in Spanish, provides a comprehensive review of the material presented in the first three years while introducing students to more advanced verbal and grammatical structures. Students read and respond to texts in a variety of genres, including fiction, drama, poetry, journalism, as well as readings on Hispanic culture and history, popular and folk music, and Spanish-language films. They develop active vocabulary and proficiency in listening, speaking, and writing through class conversations, oral presentations, impromptu writing, and speaking exercises. Students use Spanish Internet sites, radio broadcasts, and online journalism. All four skills are tested regularly throughout the year.

Spanish VH

3370	Full Year Dept. Rec.	1	10-12
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Staff

This advanced course is conducted entirely in Spanish and is designed for students intending to take the Advanced Placement Spanish Language and Culture course. It provides a thorough study of the more complex aspects of Spanish grammar and is based on reading in a variety of genres, including fiction, poetry, journalism, readings on Hispanic culture and history, popular and folk music. Students develop active vocabulary and proficiency in listening, speaking, and writing through class discussions, oral presentations, impromptu writing, and speaking exercises. Students become familiar with the AP exam format and work with a range of authentic materials, including Spanish Internet sites, radio broadcasts, online journalism, and contemporary Spanish-language cinema. All four skills are tested regularly throughout the year. Enrollment in this class is by departmental recommendation.

AP Spanish Language and Culture

3380	Full Year	1	11-12
	Dept. Rec.		

Staff

This advanced course is conducted exclusively in Spanish and is designed to prepare students for the College Board Advanced Placement Spanish Language and Culture Examination. Students develop language proficiency across the three modes of communications –interpretive, interpersonal, and presentational- and learn about culture through the use of authentic materials that are relevant to the Spanish-speaking world. The main focus is to refine and integrate all four skills through informal conversations and impromptu dialogues, as well as through formal written and oral presentations. Reading and listening include a variety of resources, including journalistic and literary works, podcasts, interviews, charts, music, and film. Enrollment in this class is by departmental recommendation. All students take the AP exam in May.

Chinese I

3400	Full Year	1	9-11
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Staff

This introductory course in standard Chinese (Mandarin) is proficiency-based and develops a foundation in four basic language skills: aural comprehension, speaking, reading, and writing. The course objectives are to enable students 1) to converse using common expressions, 2) to read and write simple sentences, and 3) to gain a general overview of Chinese culture. Classes use lectures and simulated activities from daily life to teach major sentence structures, pinyin and characters (simplified and traditional), and to develop pronunciation, tones, and conversational skills. Classes are enhanced with presentations, games, movies, and festival celebrations. The course evaluates the four language skills throughout the year and uses *Communicating in Chinese* as the primary text. Students are highly encouraged to join the Sino Club and maintain their participation throughout their years of Chinese study.

WORLD LANGUAGES

Chinese II

Staff

3420 Full Year 1 9-12
Dept. Rec.

This course builds upon the foundation of Chinese I and asks students to go beyond the basic level in each of the four language skills. Students participate in conversations in a variety of everyday contexts and increase their listening skills through class discussions and a variety of audio-visual materials and exercises. Students read and write sentences, both in pinyin and Chinese characters, using broader vocabulary and more complex sentence structure. Students also learn more about popular beliefs and customs in traditional and contemporary Chinese culture. As in Chinese I, all four skills are tested throughout the year.

Chinese III

Staff

3440 Full Year 1 9-12
Dept. Rec.

This course is conducted mostly in Chinese and further develops the skills acquired in Chinese II. This course is designed to increase the students' proficiency in all four skill areas through class discussions, role-play activities, oral presentations, and frequent written exercises. Students are introduced to a broader and more complex range of textual material in order to expand their reading and writing skills. Students make use of both pinyin and Chinese characters in order to write about their daily activities, as well as those common

to contemporary Chinese culture. Students improve their listening skills through the use of audio-visual material, Internet sites, and contemporary Chinese cinema. All four skills are tested throughout the year.

Chinese IV

Staff

3460 Full Year 1 10-12
Dept. Rec.

This course expands upon Chinese III and challenges the students to continue to strengthen their spoken skills while developing their reading and writing proficiency. This course will enable students 1) to increase the fluency, complexity, and range of their conversational Chinese; 2) to increase reading and writing proficiency using Chinese characters; and 3) to acquire a better understanding of Chinese social issues and an appreciation of Chinese culture and philosophy. The course is taught almost entirely in Chinese and makes use of such authentic Chinese materials as short stories, proverbs, plays, and songs, as well as contemporary Chinese cinema. All four skills – reading, writing, speaking, and listening – are tested throughout the year.

Chinese IVH

Staff

3470 Full Year 1 10-12
Dept. Rec.

This class provides students in Chinese with the tools to achieve intermediate-high proficiency in reading, writing, speaking, and listening. Unlike students in regular Chinese IV, honor students are required to memorize the characters and use them in different assessments. Students in Honors will also write in characters one of the essays and one of the story narrations. Students are expected to use the characters they have learned in the past 4 years and know about 1200 from memory by the end of the school year. The cumulative exams include listening, reading, and writing parts from Chinese I through Chinese IV, focusing on the topics of level 4. Students should be able to memorize all the idioms they have learned and compose a story with idiomatic expressions in character writing. Enrollment in this class is by departmental recommendation.

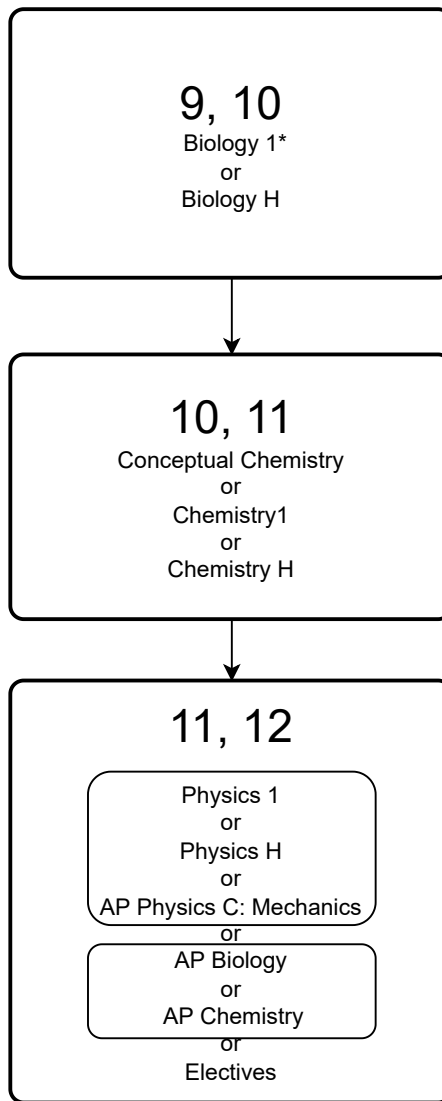
AP Chinese Language

Staff

3480 Full Year 1 11-12
Dept. Rec.

This course is conducted entirely in Chinese and is designed for students intending to take the College Board Advanced Placement Chinese Language Exam. The goal of this course is to further develop their proficiency skills and to develop their awareness and appreciation of the culture of Chinese-speaking societies. This course is comparable to third or fourth semester university courses in Mandarin Chinese. The students are expected to perform intermediate to advanced-level tasks in listening, reading, speaking, and writing. The course strives to increase students' ability in comprehending spoken Chinese both in formal and conversational situations, to develop vocabulary for reading newspapers and magazine articles, and to sharpen their presentational skills in oral and written form. Formative assessment of students' proficiencies in listening, speaking, reading, and writing are given on a regular basis. Instructional materials and activities are strategically adapted from authentic resources to support the linguistic and cultural goals of this course. Enrollment in the course is by departmental recommendation. All students take the AP exam.

Science



Science Requirement

At minimum, student completes three years of science; one year of:

- Biology
- Chemistry
- Physics

*Students who complete Biology1, or Honors Biology, with a high degree of success will be considered for Honors Chemistry the following school year.

Science Electives

Anatomy
AP Physics C: Electricity and Magnetism
Chemistry of Food
Environmental Science: Systems
Environmental Science: The Human Element
Planetary Astronomy
Physiology
Stellar Astronomy

SCIENCE

Daniel Lorts, Department Head

The Cranbrook Kingswood Upper School Science Department seeks to provide a challenging and comprehensive education in the core sciences of physics, chemistry, and biology (required). Students are motivated to engage in scientific thought, develop evaluative skills and exercise a scientific approach in the classroom, laboratory and to the larger world. As such, the department encourages students to pursue a breadth of study which once satisfied may be followed by in-depth study through Advanced Placement (AP) or elective courses. NOTE: students taking AP® courses are required to take the relevant AP Exam in May.

The Department believes that the sciences are better understood through an integrated class-lab approach, while learning to use the tools appropriate for the problem at hand. Students should expect classes to be process-oriented and lab activities to take a significant portion of scheduled time.

Biology I

Staff

4110 Full Year 1 9

Biology I is an introductory course designed to explore the nature of the physical world as it relates to the living. This course will focus on the diversity of organisms from their chemical constituents through their ecological roles. Emphasis is placed on laboratory exercises that promote problem-solving, refine laboratory procedures, and strengthen reading, writing, and math skills. Students will participate in outdoor field studies and be encouraged towards the exploration of personal avenues of interest in science. Topics include anatomy, cellular biology, energetics, genetics, ecology, and evolution.

Biology IH

Staff

4120 Full Year 1 9
Dept. Rec.

Biology IH is an accelerated first-year biology course with a focus on evolution and molecular biology. Students cultivate their understanding of biology through inquiry-based investigations as they explore the following topics: natural selection, cell structure and function, energetics, genetics, biochemistry, molecular biology of the gene, and ecology. Laboratory investigations require students to ask questions, make observations and prediction, design experiments, analyze data, and construct arguments in a collaborative setting.

Marine Biology

Staff

4150 Full Year 1 11,12
Bio I, Chem I or Dept. Rec.

This lab-oriented course delves into the diverse habitats found in aquatic environments, including the Great Lakes, coral reefs, and the deep sea. Students will examine the chemical and physical properties that shape marine ecosystems and explore the impact of human activity on ocean life. The curriculum provides a foundation in marine ecology, oceanography, and conservation, combining lectures, hands-on experiments, dissections, and field studies to create an engaging and comprehensive learning experience. Students will be assessed with assignments, dissections, exams, and projects.

AP Biology

Staff

4180 Full Year 1 11, 12
Chemistry IH and Dept. Rec.

AP Biology is a college-level biology course for majors. Students cultivate their understanding of biology through inquiry-based investigations as they explore the following topics: evolution, cellular processes, energy and communication, genetics, information transfer, ecology, and interactions. This course is aligned to the College Board AP Biology Curriculum Framework and is based on four Big Ideas, which encompass core scientific principles, theories, and processes that cut across traditional boundaries and provide a broad way of thinking about biological systems. Twenty-five percent of instructional time is devoted to hands-on laboratory work with an emphasis on inquiry-based investigations. Investigations require students to ask questions, make observations and prediction, design experiments, analyze data, and construct arguments in a collaborative setting.

Conceptual Chemistry

Staff

4200 Full Year 1 10, 11
Algebra II Essentials and Dept. Rec.

Ozone depletion, energy demands, climate change, water supply, plastics, and genetic engineering are real world issues that will be viewed through the lens of chemistry and examined in a framework intended to engage student critical thinking. Classroom lecture and activities as well as lab experiences will illustrate how conflicting answers to these big questions might arise from similar experimental results.

SCIENCE

Chemistry I

Staff

4210 Full Year 1 10, 11
Biology I and Dept. Rec.

This course concerns itself with the chemical and physical properties of matter, both qualitatively and quantitatively. In the classroom, problem solving, and visualization of abstract chemical concepts are emphasized. In the laboratory, careful measurement and observation is practiced through methods of work and lab report writing.

Chemistry IH

Staff

4220 Full Year 1 10, 11
Biology, Algebra II concurrently and Dept. Rec.

Placement is based on previous grades in science and mathematics, standardized test scores, and teacher recommendations. The course will cover all the topics of Chemistry I, but in greater depth and at a faster pace. It will also include an introduction to Organic Chemistry.

AP Chemistry

Staff

4280 Full Year 1 11, 12
Pre-Calculus H or above and Dept. Rec

This course is designed to be the equivalent of the general chemistry course usually taken during the first college year. Fundamental topics are covered in greater depth, with more emphasis on chemical calculations and the mathematical formulation of principles. Laboratory work is more independent with frequent use of instrumentation and equipment, and organic laboratory techniques are introduced. Students enrolled in this course are expected to take the Advanced Placement Examination in May.

Physics I

Staff

4310 Full Year 1 11, 12
Biology, Chemistry, Pre-Calculus Essentials, and Dept. Rec.

Physics I is a course in classical physics, intended to develop the student's inductive, deductive, and abstract reasoning. The course considers primarily Newtonian Mechanics. In the classroom this is accomplished thorough qualitative understanding of the concepts followed by rigorous, quantitative problem solving. In the laboratory this is accomplished through many college level laboratory experiments, which serve to test the relationships postulated in class. The entering student should be at ease with algebra and basic trigonometry. **Physics I and Physics IH and are parallel courses; therefore, enrollment in one precludes enrollment in the other.**

Physics IH

Staff

4320 Full Year 11, 12
Biology, Chemistry, Pre-Calculus and Dept. Rec.

Physics I Honors is an algebra-based rigorous introduction to the concepts and methods of physics. In addition to mechanics and electromagnetism, this course incorporates topics from astrophysics, optics, particle physics or solid-state physics. Frequent laboratory experiences will enhance the curriculum including projects that encourage exploration of topics in greater depth. The workload in this course is substantial and the ability to work both independently and in teams is assumed. **Physics I and Physics IH and are parallel courses; therefore, enrollment in one precludes enrollment in the other.**

AP Physics: C: Mechanics

Staff

4380 Full Year 1 11, 12
Biology, Chemistry, Calculus or above concurrently and Dept. Rec.

This course is intended for the highly motivated student with a strong mathematical background and interest in science. Primary activities are problem solving and lab investigations. The homework load is substantial and the ability to work independently is assumed. Basic calculus will be introduced and used as students become familiar with both the science and the math. Students enrolled in this course are expected to take the AP C Mechanics Examination in May.

AP Physics: C: Electricity and Magnetism

Staff

4390 Full Year 1 11, 12
Biology, Chemistry, AP Calculus AB or above concurrently and Dept. Rec.

Nature's four fundamental forces, electricity and magnetism (E&M) and the two nuclear forces, act in concert and at a distance. If one is to understand the most fundamental ideas of forces between objects, then understanding the relationship between E&M and their place in our current views of the universe is necessary. This course will be taught through lectures, experiments, and VPython programming (for process animation) and tests. Students enrolled in this course are expected to take the AP C: E&M Examination in May.

SCIENCE

Advanced Topics: Scientific Research

Kokoszka

4410 Full Year 1 11,12
Dept. Rec.

In the first semester, the class will cover how to choose research questions, complete effective literature reviews, and design experiments. Our discussions will include ethics in scientific research, tools for data collection, effective data analysis, and best practices for communication of findings. After being introduced to methods and advanced research skills, students will choose a topic of interest to develop an independent research project during the second semester. This interdisciplinary course will encourage students to demonstrate critical thinking in experimental design, observation, data collection, data analysis, and communication skills as we will end the year by presenting projects to an audience.

Environmental Science: Systems*

Staff

4515 Sem 1 1/2 11, 12
Biology I, Chem concurrent

The Earth's biosphere, atmosphere, hydrosphere, and geosphere operate as complex, linked systems. When left to their own devices, these systems would establish unchanging equilibria persisting throughout time. The reality is that various system components are exchanged and change over greatly varying time scales. This course introduces students to environmental, earth, living, and energy systems and their relationship to the biosphere. Environmental Science: Systems includes a significant laboratory and field investigation component. Assessments also include lab reports, presentations, group work, homework, tests, and a semester exam.

Planetary Astronomy*

Staff

4505 Sem 1 1/2 11, 12
Biology I

This course is dedicated to the study of objects within the solar system, including the Sun, planets, moons, minor planets, and comets. Students will be introduced to the observational basis for our understanding of the movements of solar system objects. Regular observations of the night sky will be required. Current data from space probes will be used to understand the surface and interior conditions of solar system objects. Weekly lab exercises will reinforce lecture material. A final project has the students creating and presenting a plausible planetary system.

Anatomy*

Staff

4517 Sem 1 1/2 11, 12
Biology I

The scope of this course extends beyond the human anatomy and physiology studied in Biology I. Classroom lectures and discussions concentrate on the systems of the human body. In the twice-weekly laboratory exercises, students primarily study comparative anatomy. By means of dissection, students examine the evolutionary paths taken by different animals and acquire an appreciation for the diversity of life forms.

Physiology*

Staff

4618 Sem 2 1/2 11, 12
Biology I

This course extends both the breadth and depth of physiology studied in first year Biology. Classroom lectures and discussions concentrate on the nervous, respiratory, digestive, and reproductive systems with a focus on the physical and chemical processes of each system. Laboratory work will be primary experimental focus in the course with three major dissections.

Environmental Science: The Human Element*

Staff

4616 Sem 2 1/2 11, 12
Biology I, Chem concurrent

The earth is a biosphere of abundance that at one time was seen as a resource for all human needs. A soaring human population, however, has reduced the earth's size, making it smaller than anyone ever anticipated. How do humans interact with and affect the atmosphere, biosphere, hydrosphere, and lithosphere? To be good stewards of this planet, the next generation of scientists and policy makers must have an understanding of population, land and water use, pollution, and global change. Environmental Science: The Human Element includes significant laboratory and field investigation components. Assessments also include lab reports, presentations, group work, homework, tests, and a semester exam.

SCIENCE

Stellar Astronomy*

Staff

4606	Sem 2	1/2	11, 12	
	Biology I			

This course offers an understanding of Astronomy from the standpoint of stars, systems of stars, and the environment between stars. Stellar evolution is studied in detail, as is the Milky Way galaxy, other galaxies, and the universe as a whole. Weekly lab exercises reinforce lecture material. This course is not necessarily intended to be a continuation of Planetary Astronomy and may be taken independently.

The Chemistry of Food*

Moss

4519	Sem 1	1/2	11,12	
4622	Sem 2	1/2		

Imagine taking a bite of a delicious Honey Crisp Apple. Did you know that the chemistry behind changing the red, moist, fragrant, and sweet fruit from food to fuel begins in your mouth while chewing? Imagine placing a slice of whole wheat bread into a toaster – did you consider that the breads' color change while becoming toast is a chemical reaction? These ideas and more will be considered through cooking, tasting, and learning the role that carbohydrates, lipids, proteins, and more play in the creation of food dishes and as well as their role and effect on our bodies. The course applies basic scientific principles to food systems and practical applications. Reactions, conditions, and processes that affect color, flavor, texture, nutrition, and safety of food are emphasized. Classroom work and significant lab work will comprise the method learning the chemistry of food.

Health

Staff

9801	Sem 1	1/4	9	
9802	Sem 2	1/4	9	

This required course for freshmen provides the opportunity to acquire the insights and information that can help form sound choices and the development of personal values on matters of mind and body. Relevant topics including physical health assessment, the importance of exercise, sleep and nutrition, maintaining emotional balance, strengthening interpersonal relationships and understanding behaviors such as smoking, drinking, drugs and sexual activity will be explored as they pertain to the teenager emerging into young adulthood. Offered in single-gender settings, the instructional format will allow for interactive discussions, presentations by knowledgeable speakers and the support of appropriate audio-visual and printed materials. Occasional short readings and surveys of opinion will occur. Students are evaluated on three major projects: participating in a lifetime fitness activity done outside of class, presenting a group project, and arranging a guest speaker for the class. Students are also expected to prepare and participate in physical activity days and in class discussions. Quizzes are also occasionally administered on the material learned in class.

History/Social Science

Worldviews and Civilizations
9



World History: Intersections
Past and Present
or
AP World History: Modern
10



American History and
Government
11-12

AP United States History
11-12



AP African American Studies
AP European History
AP World History: Modern
11-12

Electives

History of American Architecture: Early
History of American Architecture: Modern
History of Feminist Thought in the Modern World
Macroeconomics
Microeconomics
Principles of Psychology
The Human Footprint
The Rise of Nazi Germany and the Holocaust

AP Microeconomics
AP Macroeconomics
11-12

HISTORY/SOCIAL SCIENCE

Frank Wiswall, Department Head

Courses are designed for students to nurture habits of critical thought, to take pleasure in history's narrative, to explore the sources of creativity, to understand the causes of conflict that arise from human intention, to learn facts systematically but also to appreciate that the study of history is interpretive, and to apply ideas from history to similar current issues.

Classes are arranged to engage students' values and interests. Students are encouraged to respond to and make their own judgment about the people, ideas, and events from the past. The success of the class depends, therefore, on students presenting their own ideas and listening to others, recognizing that many interpretations, properly supported, may be valid. Activities, whether accomplished individually or in partnership, assure that learning comes with earnest involvement.

Activities are designed to strengthen the skills of selective reading and retention of important information, interpretation, synthesis, and clear expression in discussion and writing. Students are expected to organize materials for tests and research papers through the study of interpretive, as well as primary source materials. Geography, multimedia, and group projects are also used in most courses.

The 9th grade course provides students with a basis for observing the pattern of human social development, which in turn is expanded upon in the 10th grade world history course. The additional requirement, a course familiarizing students with America's traditions and present society, is completed in the junior year, or senior year under extenuating circumstances. The elective program includes varied offerings in the social sciences and area studies and may be sampled in the 11th and 12th grades. The Advanced Placement courses in American history, European history, and world history provide selected students with a thorough, rigorous preparation for the College Board Advanced Placement Examinations in May.

Worldviews and Civilizations

Staff

5110 Full Year 1 9

This course, drawing on the strengths and interests of the departments of History/Social Science and Religion & Philosophy, provides a concrete and conceptual foundation for the study of human societies. Through an interdisciplinary study of several of the most significant world-shaping civilizations across time, students learn to ask, and to begin to answer, fundamental questions of humanity. From the Ancient Near East and the Indus Valley to China, Greece, Rome, and the legacies of Hinduism, Buddhism, Judaism, Christianity, and Islam, students study and discuss the systems of government, culture, and faith which continue to provide humanity with its view of its place in the world. Assessment is made through quizzes, tests, essays, research projects, and semester examinations.

World History: Intersections Past and Present

Staff

5210 Full year 1 10

Knowledge of the past allows students to understand the present, examine their own beliefs and to develop an understanding of those different from themselves. The themes of connections and progress guide this course as students examine important developments in world history from 1200 CE to the present. While training students in critical reading, speaking, and writing, this curriculum provides a historical perspective on the problems of the contemporary world. Students develop research and writing skills throughout the course, culminating in an independent research paper. They also develop test taking skills, engage in collaborative and digital projects, and learn media literacy skills.

AP World History: Modern

Staff

5470 Full Year 1 10-12
Dept. Rec.

In AP World History: Modern, students investigate significant events, individuals, developments, and processes from 1200 C.E. to the present. Students develop and use the same skills, practices, and methods employed by historians: analyzing primary and secondary sources; developing historical arguments; making historical connections; and utilizing reasoning about comparison, causation, and continuity and change over time. The course provides six themes that students explore throughout the course in order to make connections among historical developments in different times and places: humans and the environment, cultural developments and interactions, governance, economic systems, social interactions and organization, and technology and innovation. Students take the College Board Advanced Placement Examination in May for advanced college standing.

HISTORY/SOCIAL SCIENCE

American History and Government (AS)

Staff

5310 Full Year 1 11, 12

American History and Government focuses on the American experience from first contacts to the present in order to provide students with an understanding of the development of society, government, and America's place in the world. Various units highlight the multicultural colonial experience, evolution of republican forms of government, foundations of racial relations, industrialization, immigration and urbanization, the 20th Century, the Cold War, and beyond. Students learn to read, analyze, and critique historical material. They are introduced to different methodologies and learn to weigh historical evidence. Various assessments are utilized including quizzes, oral presentations and classroom projects, multiple choice and essay tests, and research projects.

AP United States History (AS)

Staff

5380 Full Year 1 11, 12
Dept. Rec.

Equivalent to an introductory college course, this course analyzes a variety of political, economic, social, cultural, and international themes. It provides students with a thorough background in factual material, but proceeds to an examination of context, cause, result, and significance. Students learn to read historical material analytically and critically and are able to weigh historical evidence soundly. A college text is used, as well as a wide variety of materials. Students take the College Board Advanced Placement Examination in May for advanced college standing.

AP European History

Staff

5480 Full Year 1 11, 12
Dept. Rec.

This course surveys the development of Europe from the early Renaissance to the early twenty-first century, c. 1450 to the present. In accordance with the College Board's Course Description in European History, the course instruction emphasizes seven core themes of this period: the interaction of Europe and the world; poverty and prosperity; objective knowledge and subjective visions; states and other institutions of power; the individual and society; technological and scientific innovation; and national and European identity. Varying interpretations of historical events are examined at every stage. In addition to a college-level core text, students analyze a wide array of written and audio-visual resources such as primary source readings, music, works of art, maps, charts, and graphs. Daily guided discussion focuses on major themes and questions, emphasizing consistent preparation and direct student participation. Written work consists of papers and essays, both free-response and document-based, closely fashioned and scored on the model of the AP Exam. These assessments prepare students for the Advanced Placement Examination in May, which students in the course are expected to take for advanced college credit.

AP African American Studies

Staff

5490 Full Year 1 11,12
Dept. Rec.

AP African American Studies offers an in-depth, interdisciplinary introduction to the experiences that have shaped African American people from the beginnings of the African diaspora to the present. Students are introduced to a range of primary and secondary sources that will give them multiple angles from which to explore the central themes of the course. In keeping with the course's interdisciplinary nature, traditional historical sources will be explored alongside poetic, literary, musical, and cinematic documents. Students are expected to take the College Board AP exam in African American Studies, part of which will include a four-week research project in the spring semester on a topic selected in consultation with the instructor.

Principles of Psychology*

Staff

5503 Sem 1 1/2 11, 12
5604 Sem 2 1/2

This course introduces the fundamental concepts and theories of psychology. Topics covered may include learning theory, intelligence, development, memory, personality, and psychological adjustment. These theories and concepts are reinforced with a series of laboratory experiments. Discussions, lectures, exams, papers, research projects, and supplemental readings will be used.

HISTORY/SOCIAL SCIENCE

Macroeconomics*

5644 Sem 2

1/2

11, 12

Staff

Economics may best be understood as a study of how individuals and societies make decisions. Macroeconomics in particular focuses on how national (as well as international and global) economies and their participants: households, firms, and governments interact in aggregate. Students will study the theoretical principles of economics, the role of government in regulating domestic and international markets, common metrics of economic activity, the Western model of financial and monetary systems, and the principle analytical models for understanding the health and trajectory of “open” economies. In the process, students will engage with a diverse array of primary-source theory and applied work from economists across American society and around the world. This emphasis on attaching applied and theoretical economics to authorship is intended to help students better understand the contributions of various peoples across time and space, and how their circumstances and experiences have helped to shape a shared understanding of the material world vis a vis Economics. The curation of course content has been informed by the Voluntary National Content Standards in Economics and a survey of “first-year” economics curricula at several well-known university economics programs. The course will culminate in an independent research unit, in which students will extend their knowledge of macroeconomics in an area of their choice (i.e. modern portfolio theory, foreign exchange markets, fiscal policy, trad/regulatory policy, monetary policy, or other).

AP Macroeconomics*

5653 Sem 2

1/2

10-12

Staff

Dept. rec (see Chris Schotten)

AP Macroeconomics instructs students in relevant introductory-level economic theory, and the creation, interpretation, and application of proper macroeconomic models and graphs. Successful completion of all course components should result in students being prepared to complete the Advanced Placement Exam in macroeconomics in the spring. In particular, students will study how national (as well as international and global) economies and their participants: households, firms, and governments interact in aggregate. Students will study the theoretical principles of economics, the role of government in regulating domestic and international markets, common metrics of economic activity, the Western model of financial and monetary systems, and the principle analytical models for understanding the health and trajectory of “open” economies. In the process, students will engage with a diverse array of primary-source theory and applied work from economists across American society and around the world. The course will culminate in an independent research unit, in which students will extend their knowledge of macroeconomics in an area of their choice (i.e. modern portfolio theory, foreign exchange markets, fiscal policy, trad/regulatory policy, monetary policy, or other). Students take the College Board Advanced Placement Examination in May for advanced college standing.

Microeconomics*

5543 Sem 1

1/2

11, 12

Staff

Economics may best be understood as a study of how individuals and societies make decisions. Microeconomics in particular focuses on how individuals, firms, and government interact. Students will study the theoretical principles of economics, the role of government in regulating domestic markets, economic theories on non-private goods, industrial organization (structures from competitive to monopolistic), and labor economics. In the process, students will engage with a diverse array of primary-source theory and applied work from economists across American society and around the world. This emphasis on attaching applied and theoretical economics to authorship is intended to help students better understand the contributions of various peoples across time and space, and how their circumstances and experiences have helped to shape a shared understanding of the material world vis a vis Economics. The curation of course content has been informed by the Voluntary National Content Standards in Economics and a survey of “first-year” economics curricula at several well-known university economics programs. The course will culminate in an independent research unit, in which students will extend their knowledge of microeconomics in an area of their choice (i.e. applications of game theory, market structure analysis, policy analysis, etc.).

AP Microeconomics*

5547 Sem 1

1/2

10-12

Staff

Dept. rec (see Chris Schotten)

AP Microeconomics instructs students in relevant introductory-level economic theory, and the creation, interpretation, and application of proper microeconomic models and graphs. Successful completion of all course components should result in students being prepared to complete the Advanced Placement Exam in microeconomics in the spring. In particular, students will study how individuals, firms, and government interact. Students will study the theoretical principles of economics, the role of government in regulating domestic markets, economic theories on non-private goods, industrial organization (structures from competitive to monopolistic), and labor economics. The course will culminate in an independent research unit, in which students will extend their knowledge of microeconomics in an area of their choice (i.e. applications of game theory, market structure analysis, policy analysis, etc.). Students take the College Board Advanced Placement Examination in May for advanced college standing.

HISTORY/SOCIAL SCIENCE

The Rise of Nazi Germany and the Holocaust*

Karinen

5533	Sem 1	1/2	11, 12
5634	Sem 2	1/2	

How could Hitler and the Nazi Party achieve power in such a highly advanced country at the heart of Western civilization? How could the Nazis, in such a short span of time, establish a racially based totalitarian regime, and plunge the world into a war that consumed millions of lives while leaving the devastating legacy of the Holocaust in its wake? Students will understand the historical foundations of German unification, and the outcomes of World Wars I and II. Students will also learn of the long-term implications on the modern state of Germany. We will use primary and secondary sources to provide deeper insights into the mindset that created and perpetuated the Holocaust. Textbooks, supplemental readings, film documentaries, novels, a visit to the local Holocaust Memorial Museum, and outreach to local survivors help answer these questions. Tests, papers, and quizzes will assess student understanding of the material.

Will not run during the 2025-26 school year.

History of Feminist Thought in the Modern World*

Ryan

5535	Sem 1	1/2	11, 12
5636	Sem 2	1/2	

History of Feminist Thought in the Modern World traces the development of the global women's liberation movement and expansion of feminist thinking since the Enlightenment. The course focuses on four major stages: Roots of Feminist Thought (pre-19th century), First Wave Feminism (1830s-1920s), Second Wave Feminism (1950s-1980s), and Third Wave Feminism (1990s-present). While much of the ideology and literature framing international women's liberation developed in the West, the course also weaves non-Western histories into the narrative. Examples from Communist China, Catholic Latin America, post-Colonial Africa, and the Middle East will help highlight the ways in which feminists have struggled for gender equality under a variety of political, social, and religious structures.

History of American Architecture: Early*

German

5549	Sem 1	1/2	11, 12
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History of American Architecture: Early will provide students with an understanding of the origins of architecture in America and the beginning of American cities through the built environment. Selected topics will include regional Native American cultures, colonial, early American, Victorian and Arts and Crafts styles and periods. This leads to the growth of development of American cities through early urban planning and the first skyscrapers. To put the local area in context students will also learn about Metropolitan Detroit and examine the origins of the founding of the Cranbrook Educational Community with a special focus on the Schools. Field trips both on and off campus will allow students to explore the various styles, and buildings we examine together in class. Assessments will include reading homework, visual identification quizzes, and unit tests. The semester will end with a research project designed by the student to explore a related topic of their choosing in depth.

History of American Architecture: Modern*

German

5654	Sem 2	1/2	11,12
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History of American Architecture: Modern will provide students with a greater understanding of the continued evolution of architecture in America and the rapid growth of American cities in this period. Selected topics include Art Deco, Industrial, Mid-Century Modern, Brutalism, Post-Modern and Contemporary styles. Continued changes to American cities including Urban Renewal, Public Housing and Preservation will also provide context to the history of the century. The final unit will cover the modern issues architecture and architects face in the 21st century including Green Architecture, Supertall Skyscrapers, and Climate and Housing concerns. To put the local area in context students will also examine the continued expansion and evolution of the Cranbrook Educational Community. Field trips both on and off campus will allow students to explore the various styles, issues, and buildings we examine together in class. Assessments will include reading homework, visual identification quizzes, and unit tests. The semester will end with a research project designed by the student to explore a related topic of their choosing in depth.

The Human Footprint*

Roebeck

5545	Sem 1	1/2	11,12
5648	Sem 2	1/2	

How did we get here, where are we going, and what is the best way to get there? These have been the essential questions of the collective human experience for millennia. This course will take an in-depth look at the trajectory of human history, what major events have caused/alerted that trajectory, and the potential that we currently have to shape what comes next. While its core emphasis is on the study of the human experience, it weaves together humanities with the study and application of science, creating an authentically interdisciplinary experience. Moreover, with its emphasis on project-based learning, the course is designed to create a hands-on experience, empowering students to create real-life solutions in an effort to forge our collective next steps forward and to...save the world.

Religion and Philosophy

Worldviews and Civilizations
9

Transfer Students

Electives

Aesthetics: Philosophy of Art

Ethics: Philosophical Perspectives

Ethics: Philosophy as a Way of Life

Ethics of AI: Safeguarding Humanity

The Theodicy Problem: Why Do Bad Things Happen to Good People

11-12

NOTE: All elective courses are one semester.

RELIGION AND PHILOSOPHY

Eric R. Lorey, Department Head

We believe that a key element of success in today's world is a true and deep understanding of the beliefs and philosophies which inspire both nations and individuals. The growth of a well-informed and culturally sensitive global citizen is often dependent upon how these subjects are taught in school.

The faculty of the Department of Religion and Philosophy affirm that there are valuable lessons to learn in all of the world's religious traditions. By helping our students grow in the understanding of the great traditions of thought and belief, our students become better able to understand the people who live their lives by their precepts as well as to continue their own development as human beings.

Ninth-grade students engage in a study of the basic tenets of many world religions. Seniors are required to complete one of the Department's elective courses which explore the religious and philosophical traditions of the world in greater depth.

Worldviews and Civilizations

Staff

5110 Full Year 1 9

This course, drawing on the strengths and interests of the departments of History/Social Science and Religion & Philosophy, provides a concrete and conceptual foundation for the study of human societies. Through an interdisciplinary study of several of the most significant world-shaping civilizations across time, students learn to ask, and to begin to answer, fundamental questions of humanity. From the Ancient Near East and the Indus Valley to China, Greece, Rome, and the legacies of Hinduism, Buddhism, Judaism, Christianity, and Islam, students study and discuss the systems of government, culture, and faith which continue to provide humanity with its view of its place in the world. Assessment is made through quizzes, tests, essays, research projects, and semester examinations.

Ethics: Philosophical Perspectives*

Lorey

6503 Sem 1 1/2 11, 12

What is important? What is real? What is good? In today's pluralistic world is any consensus possible? This course tackles these questions as well as addressing how we make choices. We will apply ethical theories to perennial moral questions and to our daily personal decisions, conduct, and identity. Our core study will include major figures in philosophy such as Kierkegaard, Heidegger, Camus, de Beauvoir, Baudrillard, and King. Unit tests and in-class writings are factored into the semester grade.

Aesthetics: Philosophy of Art*

Lorey

6616 Sem 2 1/2 11, 12

George Booth believed that "a life without beauty is only half lived." The philosophical study of art poses many questions including art's definition, function, meaning, importance, and relation to beauty. This course examines these questions through the eyes of Plato, Aristotle, Hegel, Foucault, Mudimbe and Suzuki. The Cranbrook Art Museum collection and Cranbrook's Cultural Properties serve as primary resources. In addition to studying theory, students analyze works of art using the aesthetic theories learned in class. Assessments include tests, in-class writings, critical essays, and a presentation.

Ethics: Philosophy as a Way of Life*

Furry

6618 Sem 2 1/2 11, 12

Many people think of philosophy as a set of abstract beliefs. For much of human history, however, philosophy was a way of life that included questions, practices, and living in the world in concrete ways. Philosophers also sought to change the world through philosophical reflection and practice. This course explores how philosophy can be a way of living in our world. Logic and argument evaluation are taught using contemporary news and marketing. Historical examples of how philosophy informed the way people lived are studied, including philosophers such as Socrates, Marcus Aurelius, and James Baldwin. Specific issues in economics, language, politics, and morality are also addressed. Assessments include a weekly journal for philosophical reflection, tests, quizzes, papers, and a semester examination. Pierre Hadot's *Philosophy as a Way of Life* is the textbook.

RELIGION AND PHILOSOPHY

The Theodicy Problem: Why Do Bad Things Happen To Good People*

Cooke

6505 Sem 1 1/2 11, 12

6622 Sem 2 1/2 11, 12

This course explores the question of theodicy and suffering. Primarily, the course examines these concepts through the lenses of various world religions, including Hinduism, Buddhism, Christianity, Judaism, and Islam. Secondly, students consider their own thoughts on the cosmic reasons for suffering, addressing real world topics of suffering today. Texts include primary, sacred texts: the Vedas, the Bhagavad Gita, teachings of the Buddha, the Bible, the Tanakh, and the Qur'an. Various articles supplement these texts. Assessments involve short papers from the perspective of each religion and leading one class period throughout the semester. The final paper allows students to draw from what they have learned throughout the semester as they attempt to answer the guiding question of the course.

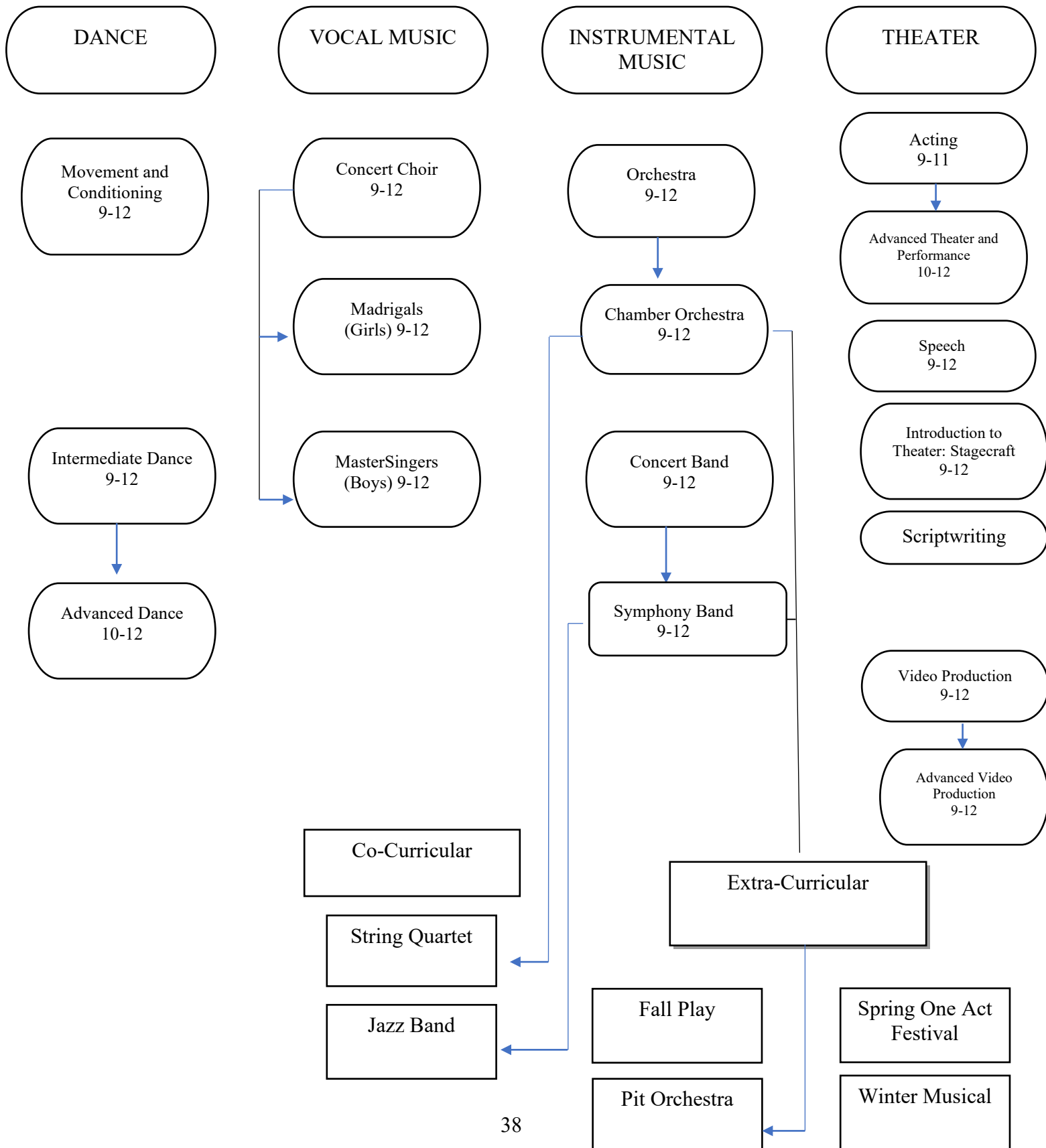
Ethics of AI: Safeguarding Humanity*

Furry/Staff

CD001-REL Sem 1 1/2 11, 12

From military drones to shopping recommendations, AI is powering a wide array of smart products and services across nearly every industry—and with it, creating new ethical dilemmas for which there are no easy answers. Moreover, those involved with AI often lack the tools and knowledge to expertly navigate ethical challenges. This course examines today's most pressing ethical issues related to AI and explores implications for AI design, warfare and politics, policy making, and responsibility—both individual and corporate. Students will be pushed to think about AI in terms of what is truly good, not just advantageous. While the course will be largely project based, assessment will also be in the forms of presentations, essays, exams and machine learning projects.

Performing Arts



PERFORMING ARTS

Mark Hourigan, Department Head

The Performing Arts program offers students opportunities to perform and develop skills in dance, music, and theatre. Students are grouped by ability level, and auditions with instructors may be necessary for entrance at some levels. Classroom work focuses on skills that enable students to develop their artistic potential, culminating in full length public presentations on and off-campus.

In DANCE, the students present selections at the Winter Concert and in a fully produced Evening of Dance concert in the spring. Throughout the entire school year, dance ensembles perform in concerts and recitals. Students are given the opportunity to choreograph pieces for adjudication at the Annual Strickland Choreography Competition. Classes focus on technique in the modern/contemporary style, with units in ballet, jazz, and creative exploration.

In MUSIC, instrumental and vocal ensembles present winter and spring concerts. Students are encouraged to participate in festivals both as soloists and in small ensembles. The String Quartets and Jazz Band are co-curricular opportunities available to students in the Chamber Orchestra and the Symphony Band classes by audition or by instructor's assignment.

In THEATRE, three productions are presented each year, including the fall play, the musical, and the One-Act Festival. Musicals are a combined production of the Department. Auditions are open to all students. Two levels of Acting classes are offered, as well as Stagecraft and Speech.

All students enrolled in Performing Arts classes are expected to participate actively in classroom rehearsals and perform the dance, music, and theatrical selections chosen by the faculty. Plays, vocal and instrumental music and musical accompaniments for dances are selected primarily for the quality of the literature. Our interest in the appreciation of diversity encourages us to read stories of all races, religions, nationalities, and sing their songs, play their music, and dance their dances.

Concert Choir

Gabriel

7100 Full Year 1 9-12

No audition necessary

The purpose of this course is to give all interested students the experience of singing in a large mixed-voice ensemble. Students will explore and sing a variety of choral literature from classical to contemporary.

Madrigals

Gabriel

7120 Full Year 1 Girls 9-12

Audition

This ensemble is for the experienced female singer who wishes to study, sing and perform a wide range of difficult female-chorus literature. The Madrigals perform throughout the community as well as for the Department's scheduled concerts. In addition, this ensemble presents its own concerts twice a year and participates in the Michigan Schools Vocal Music Association solo and ensemble festival.

MasterSingers

Gabriel

7140 Full Year 1 Boys 9-12

Audition

This ensemble is for the experienced male singer who wishes to study, sing and perform a wide range of difficult male-chorus literature. The MasterSingers perform throughout the community as well as for the Department's scheduled concerts. In addition, this ensemble presents its own concerts twice a year and participates in the Michigan Schools Vocal Music Association solo and ensemble festival.

Concert Band

Hourigan/Hurd

7200 Full Year 1 9-12

2-4 years playing experience. Audition required for new students

This class is the intermediate band in the Upper School and is designed to provide exposure to a variety of musical styles. Tone quality, intonation, rhythm, technique, and interpretation of concert band repertoire are all emphasized. Students have the opportunity to perform in the district and state solo and ensemble festivals, winter, and spring concerts as well as other events.

PERFORMING ARTS

Symphony Band

Hourigan/Hurd

7220 Full Year 1 9-12

Instr. Audition required for new students

This ensemble is designed for the advanced wind or percussion instrumentalist. Advanced tone quality, intonation, rhythm, technique, and interpretation of symphonic band repertoire are all emphasized. Selected members may perform in the Jazz Band, Orchestra, and Pit Orchestra for the musical. Students have the opportunity to perform in the district and state solo and ensemble festivals, winter, and spring concerts as well as other events. Private lessons are strongly encouraged for this ensemble.

Orchestra

Artushin

7320 Full Year 1 9-12

Audition required for new students

The Orchestra consists of string players in grades 9 through 12 who have at least four years of experience. Educational emphasis is placed on advancement of string techniques, independent musicianship and an understanding of ensemble playing. Students are expected to know musical terminology and theory that is frequently used in orchestral repertoire. The most common scales are expected to be played in at least two octaves. Participation opportunities are offered for both the District and State Solo and Ensemble Festivals. The Orchestra performs two major concerts each year.

Chamber Orchestra

Lorts

7300 Full Year 1 9-12

The Chamber Orchestra is designed for the top string players in grades 9 through 12. An audition is required for entry. Expectations include mature interpretation of string orchestra literature and proficiency with advanced string techniques. Select members are assigned to one of four string quartets and may also be given the opportunity to perform with the Pit Orchestra for the musical. Four major concerts are presented each year and students also have the option to participate in the District and State Solo and Ensemble Festivals. Chamber Orchestra students also augment the Orchestra during concerts in December and April. Private lessons are strongly encouraged.

Intermediate Dance

Rediers

7440 Full Year 1 9-12

Audition

This course focuses on the development of technical, performance, and creative dance skills. Expectations require the student's willingness to strive for achievement in the areas of technique, improvisation, and performance. Technique studies will include modern/contemporary style dance with jazz, ballet, and musical theater dance units. Students will perform in the Winter Festival Concert and the Evening of Dance Concert. Students also can choreograph and present dances at the Annual Strickland Choreography Competition. Students will have experiences with guest artists in choreographic residencies and masterclasses. Basic dance experience or instructor approval required.

Advanced Dance

Rediers

7460 Full Year 1 10-12

Audition

This is a comprehensive course for the highly motivated student who has achieved proficiency in technical skills through the intermediate level, and who exhibits creativity and expressiveness in composition and performance. Technique studies will include modern/contemporary style dance with jazz, ballet, and musical theater dance units. Students will perform in the Winter Festival Concert and the Evening of Dance Concert. Students also choreograph and present dances at the Annual Strickland Choreography Competition. Other performance opportunities are possible. Students will have experiences with guest artists in choreographic residencies and masterclasses.

Movement and Conditioning*

Rediers

7401 Sem 1 1/4 9-12

7402 Sem 2 1/4

Students will experience various movement practices such as yoga, pilates, dance, and other somatic techniques learning to integrate these practices and concepts into sports, fitness, and everyday wellness. Students will concentrate on body awareness, alignment, and safe and efficient ways of moving, enhancing coordination, flexibility, and core strength. Basic anatomy and body/mind centering concepts will be emphasized as well. No rehearsal or performances are required.

PERFORMING ARTS

Speech*

Dobrovich

7501	Sem 1	1/2	9-12
7602	Sem 2	1/2	

This course is designed to provide the fundamentals of speech preparation and delivery based on the five canons of rhetorical composition. A minimum of eight graded speeches (2-10 min. in length) is required. The main emphasis is on informative speaking. Assignments include demonstration, visual aid, reporting and special occasion speeches. Impromptu delivery techniques, reading from a manuscript, and memorizing are included. Extensive bibliography for research, listening projects, final speech for exam. **This course can only be taken once.**

Acting*

Dobrovich

7503	Sem 1	1/2	9-12
7604	Sem 2	1/2	9-11

This course introduces students to the art of theatrical performance with an emphasis on the interpretive art of acting. Course content includes the study of theatre history, contemporary theories of acting, and in-class performances. The course develops vocal, physical, and intellectual skills through improvisation, textual analysis, observation, discussion, memorization, stage directions, theatre games, monologues, and scene work. Focus of the course is directed toward areas of performance that enhance and support the student's imagination, creativity, and self-confidence. 12th grade students can take this course with instructor approval.

Advanced Theatre and Performance*

Dobrovich

7608	Sem 2	1/2	10-12
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Instructor Recommendation Only

This course is designed to extend and deepen the student's growing knowledge of performance. It will develop and expand upon the techniques introduced in the beginning acting classes, continuing the exploration of character development through textual analysis, physical characterization, and emotional exploration. This will be accomplished by providing a wide variety of advanced acting exercises, monologues, and scene study to broaden the student's imagination and creative subconscious, deepening their understanding of text, motivation, and characterization. Student performers are encouraged to audition for the main stage productions and will be required to participate in a monologue or scene study showcase at the end of the semester.

Introduction to Theatre: Stagecraft*

Dobrovich

7509	Sem 1	1/2	9-12
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This course is for students interested in the various elements of theatre production "behind the scenes." Students explore the creation of a theatre production from design to installation to the final performance. Topics include the examination of the technical elements of sets, lighting and sound from a historical point-of-view as well as experiencing hands-on construction of these elements for the fall and winter productions. A final design project is required of each student.

Video Production*

Staff

7511	Sem 1	1/2	9-12
7612	Sem 2	1/2	

This project-oriented class introduces students to the entire production process from scripting and storyboarding, to filming and editing to create a finished product. For each production, students learn and apply a range of acting, filming, and editing techniques and tools. As the film projects become more complex throughout the semester, students will have opportunities to focus on the areas of film making that most interest them both in front of and behind the camera.

PERFORMING ARTS

Advanced Video Production*

Staff

7616 Sem 2

 $1/2$

9-12

Video Production or Instr.

This course explores filming and editing techniques that are beyond the scope of the introductory Video Production course and is designed for students with previous video production experience. This project-based class will allow students to explore the science, art, skills, and tools used to create engaging visual stories. Specific techniques and equipment covered in this repeatable class will vary depending on student interest and the requirements of each project.

Scriptwriting*

Dobrovich

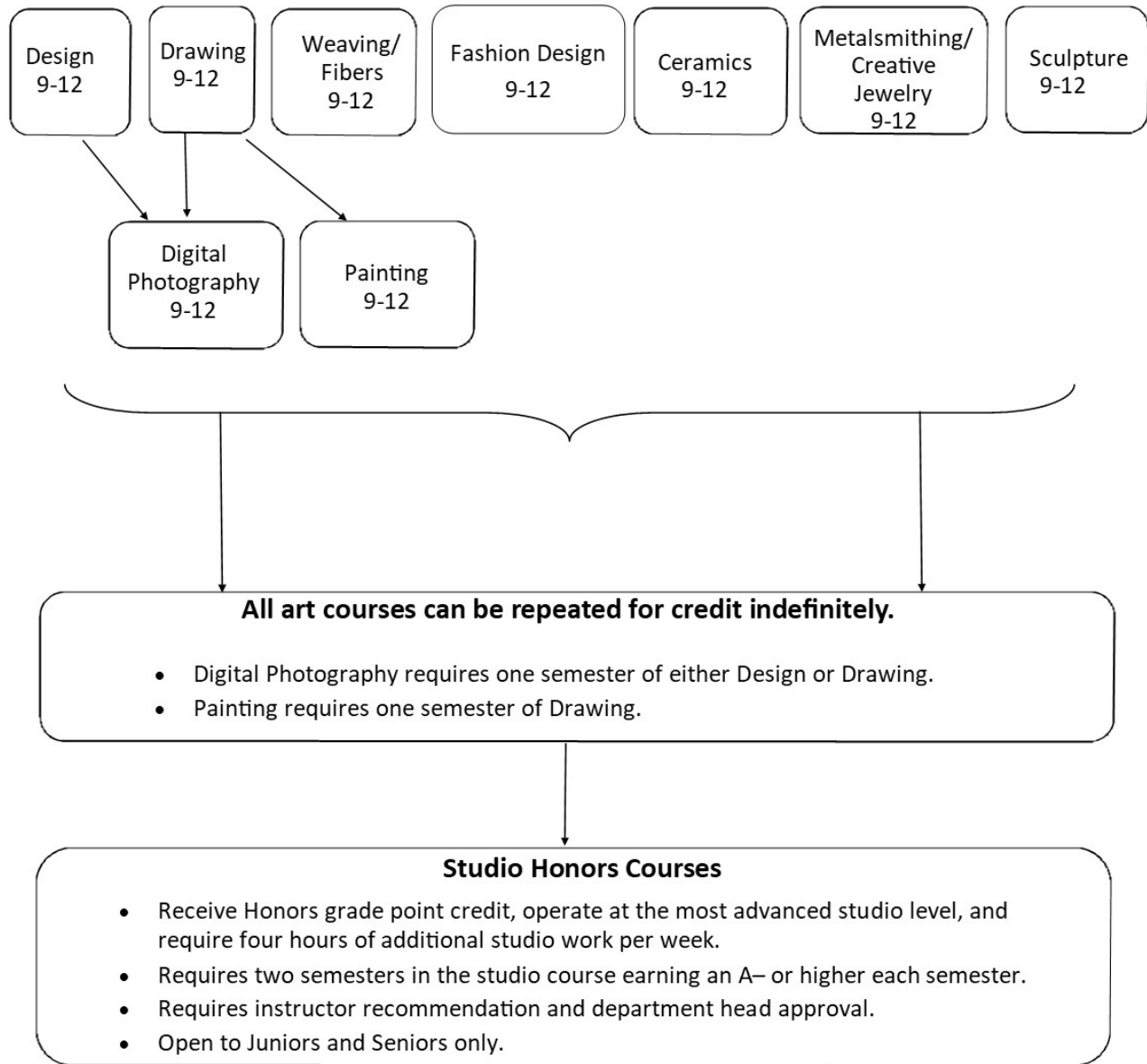
7618 Sem 2

 $1/2$

10-12

Write like an award-winning professional! This course will teach the basics of three different styles of scriptwriting; screenwriting, playwriting, and comedy writing. Students will hold conversations with professional writers from the area who are responsible for some of the most popular shows and movies including The Golden Girls (television), Saturday Night Live (comedy writing), Reel Steel (movie), and Detroit '67 (stage). Students will study the elements of scriptwriting and how they apply to all styles. The final project will be a fully fleshed out and formatted script to be submitted to national scriptwriting competitions. **Will not run during the 2024-25 school year.**

Fine Arts



FINE ARTS

Senghor Reid, Department Head

The Fine Arts Department encourages creative engagement, both intellectual and practical, with traditional media of the fine arts. The School enjoys a rich and unique artistic heritage. Making students aware of, responsive to and skilled in employing the various forms of artistic expression is the Department's primary objective. All courses examine art history, aesthetics, and criticism as they relate to each unique studio situation. Students entering in the 9th grade are strongly advised to take Foundations in Design. All art classes may be repeated for credit. Classes that are repeated may be assigned a higher designation, from intermediate to advanced, by the instructor.

Students may repeat any level if they are not placed in the next level. With each new level of any class, the studio work is expected to be more advanced. Students may, with instructor's approval, go on to work in Studio Honors. This course is a studio concentration, under the guidance of the instructor; setting pertinent assignments and helping the student set qualitative and quantitative goals. Students are expected to have attained expertise with skills and must have a complete understanding of principles and elements of design. Honors level students are encouraged to think creatively and critically, developing a portfolio that reflects increased artistic and personal vision.

Foundations in Design*

Mosley

8501	Sem 1	3/wk	1/4	9-12
8602	Sem 2	3/wk	1/4	

This beginning level course cultivates creative thinking through challenging assignments that explore visual elements and design principles that underpin art, design, and architecture. In the studio, students practice skills of inquiry to enjoy experiential learning and are encouraged to make connections while asking the questions, how and what if. Two-dimensional and three-dimensional spatial ideas are investigated in making processes that use varied media, materials, and technologies.

Design Studio H

Mosley

8503	Sem 1	3/wk	1/2	11, 12
8604	Sem 2	3/wk	1/2	

Foundations in Design or Drawing and Instr.

This course provides the advanced student time to research an area of design and with the guidance of the instructor, develop creatively, both conceptual and material aspects of a selected project. Students are expected to accomplish at a high level, working with greater independence, taking risks and documenting progress. Students engage in critical analysis of their work and other artists, designers and cultural styles to develop a unique point of view.

Drawing*

Staff

8505	Sem 1	3/wk	1/4	9-12
8606	Sem 2	3/wk	1/4	

This course is concerned with developing visual, aesthetic, and technical skills. Through a variety of drawing media students learn to solve the traditional and contemporary problems of pictorial composition. Students will focus on the Principles and Elements of Art, as well as the application of those components to their artwork. Students are expected to take creative risks and cultivate a strong critical awareness.

Drawing Studio H

Staff

8507	Sem 1	3/wk	1/2	11, 12
8608	Sem 2	3/wk	1/2	

Drawing and Instr.

This class is for students who are skilled at drawing and who want to expand their ideas about the meaning of art. We explore a wide range of materials and techniques, as well as art history and criticism. Students are strongly encouraged to create their own unique imagery within a thematic concentration, and active participation in weekly critiques is expected. By semester's end each student will have produced a substantial and varied portfolio of drawings. Students will work outside of class regularly, taking risks and documenting progress.

FINE ARTS

Painting*

Reid

8551	Sem 1	3/wk	1/4	9-12
8666	Sem 2	3/wk		

Drawing

After an introduction to the materials and subject possibilities of painting, the emphasis of this course is on construction, composition, paint handling and color. Students study a number of contemporary painters in order to understand their problems and the solutions they developed. Students then attempt to confront the same problems and find their own unique solutions. Students will use watercolor, tempera, gouache, and acrylic paint. Oil paint may be used by advanced students and students who have prior experience with the medium.

Painting Studio H

Reid

8567	Sem 1	3/wk	½	11, 12
8668	Sem 2	3/wk	1/2	

Painting and Instr.

This course provides students with an intensive experience in the aesthetics, conceptual development and media of painting. Students extend their range of painting techniques and their study of art history and criticism. Students are expected to work inside and outside of the classroom on conceptual assignments, develop their portfolio, assist in the studio, and take active part in weekly critiques. Each student works with the instructor to develop a plan for the semester. Evaluation is based on criteria established to encourage students to meet exceptional standards, to grow in freedom and originality of expression, and to demonstrate conceptual and technical ability. Students are expected to work an additional 4-6 hours outside of the classroom each week. This course requires instructor approval.

Digital Photography*

Earls

8555	Sem 1	3/wk	1/4	9-12
8656	Sem 2	3/wk	1/4	

Foundations in Design or Drawing

This course introduces students to the techniques for capturing photographic images using a digital camera and manipulating those images using photo-editing software, such as Photoshop Elements, accessible on computers in the labs and libraries. Students explore digital photography as a vehicle for self-expression, creativity, and critical thinking through the development of camera technique combined with artistic elements and principle and design. Students engage in critiques with time reserved for discussion of historical and contemporary photography. In addition to classroom work, students are expected to take photographs outside of class. The portfolios created by students may be thematic in content or represent a carefully considered sequence of experimental work. Students will need to provide a personal point-and-shoot or DSLR camera.

Digital Photography Studio H

Earls

8557	Sem 1	3/wk	1/2	11, 12
8658	Sem 2	3/wk	1/2	

Digital Photography and Instr.

This course provides students an intensive experience in the aesthetics, conceptual development and media of digital photography. Students explore a wide range of techniques, as well as art history and criticism. Students are expected to work out of the classroom on conceptual assignments, develop their portfolio, assist in the studio and actively take part in weekly critiques. The individual student will work with the instructor to develop a plan for the semester. Evaluation is based on criteria established to meet exceptional standards, with growth in freedom and originality of expression, and on demonstration of conceptual and technical ability. The student is expected to work an additional 4 hours outside of the classroom each week. This course requires instructor approval.

Ceramics*

Smith

8511	Sem 1	3/wk	1/4	9-12
8612	Sem 2	3/wk	1/4	

In this course, ceramic students begin a study of three-dimensional form and process by exploring the material qualities of clay. Students use traditional hand-building methods of slab construction, coiling and pinching and then progress to basic wheel throwing technology. Learning how to wedge, center, shape, finish, glaze, and fire, complete the semester's production. This beginning level emphasizes a set of skills for working in the studio and builds a foundation for critical thinking necessary to evaluate ceramic works, explore artistic intent and better understand the design of functional objects.

FINE ARTS

Ceramics Studio H

Smith

8517	Sem 1	3/wk	1/2	11, 12
8618	Sem 2	3/wk	1/2	

Ceramics and Instr.

This course provides the student who excels in ceramics the opportunity for advanced research and deeper understanding of historical reference, leading to a more critical and personal expression of form. Students are expected to extend their knowledge of ceramic processes and work towards expertise in one area. Students work toward a high level of accomplishment in skill development and learning to take creative risks. Students work with the instructor in setting goals. All students participate in loading and firing the kiln and learning proper care of studio equipment.

Sculpture*

Earls

8521	Sem 1	3/wk	1/4	9-12
8622	Sem 2	3/wk	1/4	

The purpose of this course is to introduce the student to three-dimensional form through the concepts, materials, tools and techniques of sculpture. Students are required to conceive and produce at least two sculptures. Principles of design and art history are presented. Advanced students may explore software and film as a method for understanding space. Evaluation is based on personal growth in idea, commitment, and quality of work produced. Media used include plaster, wood, steel, bronze, and found objects.

Sculpture Studio H

Earls

8527	Sem 1	3/wk	1/2	11, 12
8628	Sem 2	3/wk	1/2	

Sculpture and Instr.

This course provides students an intensive experience in the aesthetics, conceptual development and media of sculpture. Students explore a wide range of materials and techniques, as well as art history and criticism. Students are expected to work out of the classroom on conceptual assignments, develop their project in the studio and take part in weekly critiques. Students work with the instructor to develop a plan. Evaluation is based on meeting exceptional standards, with growth in freedom and originality of expression, and demonstration of conceptual and technical ability.

Weaving and Fiber Arts*

Smith

8531	Sem 1	3/wk	1/4	9-12
8632	Sem 2	3/wk	1/4	

Students in Weaving and Fiber Arts concentrate on floor loom weaving as it relates to the contemporary field of Fiber Arts. They explore various materials and techniques including collage, tapestry, sewing, digital photography, embroidery, computerized weaving, fashion, and product design. All activities of the weaving studio use thread as the basic material for creative and individual expression. Beginning weavers gain a familiarity with the entire process of weaving. Intermediate and advanced weavers take on more creative challenges to further their understanding of the loom's capabilities. They manipulate the cloth once it is off the loom in unexpected ways. Inspiration for all projects comes from students' personal experiences and ideas, the cultural and historical use of textiles from around the world, from fashion, the decorative and fine arts, and the materials and techniques themselves.

Weaving and Fiber Arts Studio H

Smith

8537	Sem 1	3/wk	1/2	11, 12
8638	Sem 2	3/wk	1/2	

Weaving and Instr.

Weaving and Fiber Arts Studio Honors involves the advanced student in sophisticated projects that are designed by the student with the instructor. Students bring to the table their own project ideas, research, and motivation. The Studio Honors Fiber student engages more deeply in the medium and creates finely finished projects.

FINE ARTS

Metalsmithing/Creative Jewelry*

Macey

8541	Sem 1	3/wk	1/4	9-12
8642	Sem 2	3/wk	1/4	

Metalsmithing develops the student's creative ability through projects that utilize the plastic qualities of non-ferrous metals: copper, brass and bronze. Instruction includes forging, raising, soldering, or construction of functional or non-functional three-dimensional forms. Creative ideas are encouraged through critiques and slide lecture discussions of historic and contemporary metalsmithing. Creative Jewelry utilizes the plastic qualities of metal. Forging, sawing, filing, soldering and polishing techniques are examined in the initial semester. Subsequent semesters include casting, fabrication and stone-setting skills. Non-commercial attitudes of inventive design are stressed through critiques and slide presentations of historic and contemporary jewelry production and adornment.

Metalsmithing/Creative Jewelry Studio H

Macey

8547	Sem 1	3/wk	1/2	11, 12
8648	Sem 2	3/wk	1/2	

Metal/Jewelry and Instr.

This intensive course is based on the acquired skills and aesthetics of the Metalsmithing /Creative Jewelry course. The students develop their own direction for what they plan to accomplish during this course and consult with the teacher throughout the semester. The students are asked to develop unique concepts that are highly crafted that use advanced techniques and include alternative materials for their projects. Techniques such as complex forging, masonite die forming, extensive angle raising hollowware, hollow construction, Keum Boo, repousse and chasing, advanced glass bead making, PMC (Precious Metal Clay) or advanced casting may be explored.

Fashion Design*

Smith

8583	Sem 1	3/wk	1/4	9-12
8684	Sem 2	3/wk	1/4	

Fashion Design is a studio art class where students design and construct wearable works of art. Fundamental skills surrounding fashion design will be taught and expanded upon. Students will learn the many skills of fashion design including fashion drawing, mood boards, pattern making, sewing construction, and finishing. We will look at a wide variety of designers from a variety of contexts including those from history, other cultures, and those who are cutting edge. Projects may range from the more traditional to the experimental and sculptural.

Fashion Design Studio H

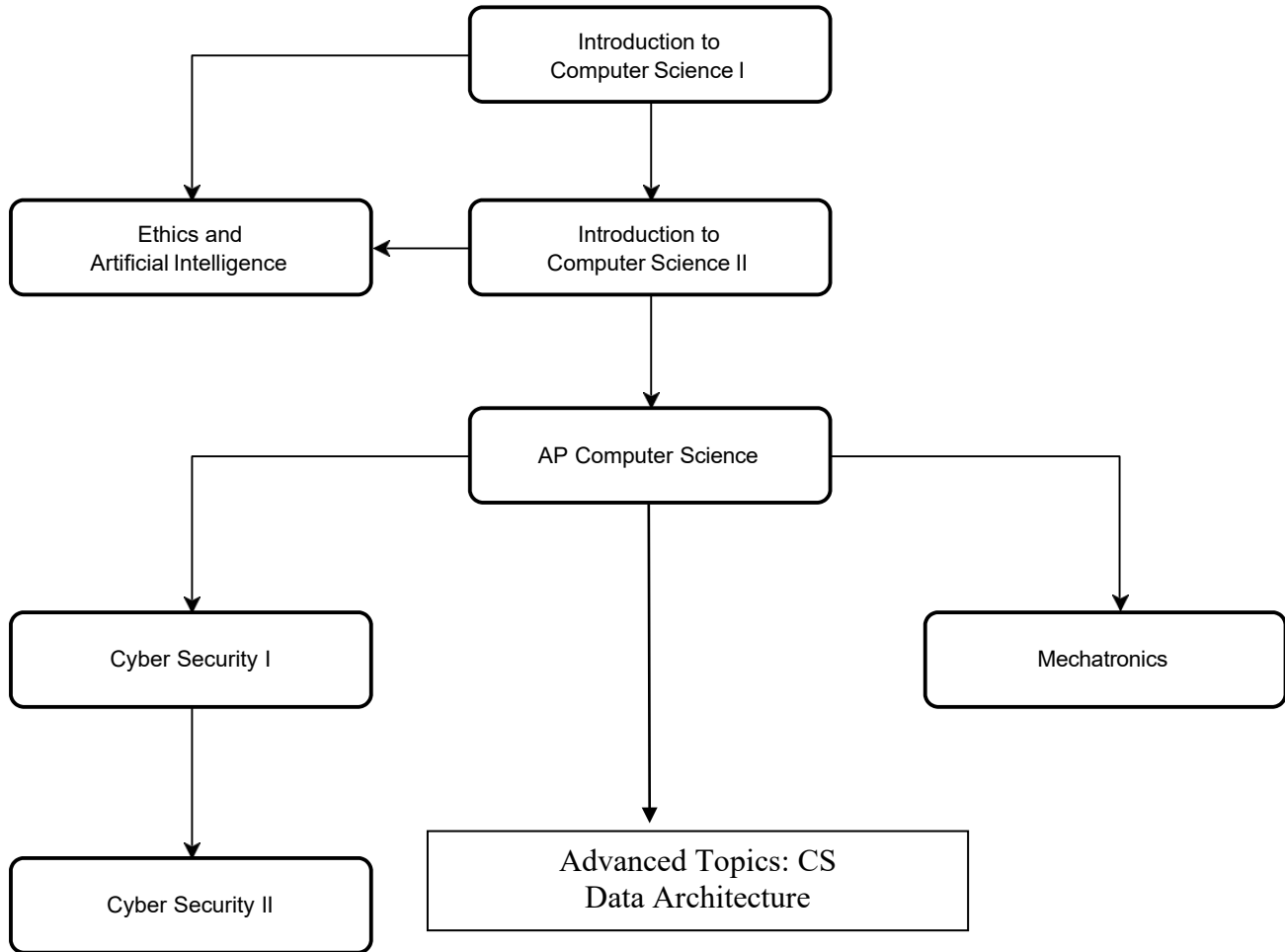
Smith

8589	Sem 1	3/wk	1/2	11-12
8692	Sem 2	3/wk	1/2	

Fashion Design and Instr.

Studio Honors Fashion Design is for students who demonstrate a high level of achievement in both craft and concept in the Fashion Design courses. Students work independently under the guidance of the instructor. They will conduct research as it applies to their particular projects including fashion designers, cultural and historical movements of fashion, particular technologies and skills as it relates to fashion, etc. Honors students also will write and refine an artist statement describing their work and thought processes. All work will be presented in a formal critique at the end of the semester. Studio Honors students are expected to be self-motivated, hard-working, deep thinkers, and show passion for Fashion Design.

Computer Science and Engineering



COMPUTER SCIENCE AND ENGINEERING

Kieren Reynolds, Department Head

The Computer Science and Engineering department offers a dynamic and comprehensive curriculum to prepare students for the world they will soon enter. Beginning with Introduction to Computer Science, students are guided to college-level courses such as AP Computer Science A and Advanced Topics in Computer Science: Data Architecture.

In addition, electives are available to the interested student. Cybersecurity introduces students to essential concepts in digital security, ethical hacking, and network protection, equipping them with critical skills in an increasingly digital world. Mechatronics fosters hands-on problem-solving and design thinking, allowing students to explore engineering principles through practical applications.

All courses emphasize real-world problem-solving, collaboration, and innovation. Such experiences provide students with the technical knowledge and critical thinking skills necessary for success in both college and industry. Whether students are exploring computer science for the first time or diving into advanced computational theory, every learner is challenged, engaged, and prepared for the future.

Introduction to Computer Science I*

Staff

9509	Sem 1	1/2	9-12
9612	Sem 2	1/2	

This entry-level programming course assumes no computing background. Students are introduced to computer science fundamentals using the coding language Python. The course covers essential programming concepts, including variables, loops, conditionals, and functions; the data types, strings, and lists are also extensively studied. This course serves as a strong foundation for further study in computer science and prepares students for AP Computer Science A and other non-core courses. Small to medium-sized coding projects are the basis of student evaluation. A significant project replaces the final examination, encouraging creativity and practical application of programming skills.

Introduction to Computer Science II*

Staff

9513	Sem 1	1/2	9-12
9616	Sem 2	1/2	

ICS I

This course is a continuation of the project-based Introduction to Computer Science 1 and it is assumed that the incoming student is familiar with Python programming basics such as decisions, loops, lists, and functions. In iCS2, students will learn additional data structures including dictionaries, and begin coding using object-oriented strategies. From this course, a student would be prepared to enter Advanced Placement Computer Science or Directed Studies.

AP Computer Science A

Staff

9780	Full Year	1	10-12
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Dept. Rec.

This college-level course is less about facts and formulas and more about learning and understanding how to work through problems. The course uses Java to focus on programming theory, algorithmic thinking, and data structures. No prior experience in Java is required, but students should have a foundation in logical reasoning and computational thinking. Key topics include object-oriented programming, searching and sorting algorithms, data structures (arrays, ArrayLists, and recursion), and simulations. Students engage with interactive online platforms and hands-on coding exercises to develop a deep understanding of these concepts. This course prepares students for the AP Computer Science A Exam in May.

COMPUTER SCIENCE AND ENGINEERING

Advanced Topics: CS Data Architecture

Staff

9770 Full Year 1 11-12
Dept. Rec.

Intended for the student considering a college major in computer science, this course will examine the design, implementation, and analysis of fundamental data structures, including arrays, linked lists, stacks, queues, trees, heaps, and graphs. The curriculum also covers algorithmic techniques such as recursion, sorting, searching, dynamic programming, and graph traversal. The primary focus is to help students develop a deep understanding of these concepts and techniques. Students will demonstrate their learning through tests and practical programming assignments.

Mechatronics*

Staff

9618 Sem 2 1/2 11-12
Dept Rec and ICS I

Mechatronics is an interdisciplinary field that integrates mechanical, electrical, and computer technologies to design and develop complex systems. Traditionally, these components are treated as separate product design elements, but mechatronics optimizes their integration to create more efficient, intelligent, and innovative solutions. Students are evaluated through their approach and solutions to two significant design challenges. Student teams complete the challenges using design-thinking strategies. The first challenge focuses on product design; the second explores internal systems that drive functionality. Throughout the course, students engage with electronic and software-based systems. While emphasizing collaborative teamwork, the course also includes independent tasks to reinforce technical skills and understanding. Departmental approval is required for enrollment.

Cyber Security I*

Staff

9517 Sem 1 1/2 11-12
ICS I

Cybersecurity is defined as the steps and processes taken to protect networks, devices, programs, and data from unauthorized access that can result in theft or damage. Small and large companies alike put cybersecurity measures into place to protect their network, as well as to restrict employees from visiting websites that may compromise sensitive data. It's just as important as any measures a company takes to secure their trade secrets or physical assets from being compromised. This covers the first half of the COMPTIA SEC+ Qualification

Cyber Security II*

Staff

9616 Sem 2 1/2 11-12
Cyber Security I

The course explains security fundamentals including core principles, critical security controls, and cybersecurity best practices. Students will also evaluate specific security techniques used to administer a system that meets industry standards and core controls, assess high-level risks, vulnerabilities, and attack vectors of a sample system, and explain ways to establish and maintain the security of different types of computer systems. Students will gain exposure to a diverse group of technologies that will provide or enhance the skills needed to enter the cybersecurity field. You will follow the COMPTIA SEC+ Curriculum which is the industry standard for IT professionals.

Ethics of AI: Safeguarding Humanity*

Furry/Staff

CD001-CSE Sem 1 1/2 11, 12

From military drones to shopping recommendations, AI is powering a wide array of smart products and services across nearly every industry—and with it, creating new ethical dilemmas for which there are no easy answers. Moreover, those involved with AI often lack the tools and knowledge to expertly navigate ethical challenges. This course examines today's most pressing ethical issues related to AI and explores implications for AI design, warfare and politics, policy making, and responsibility—both individual and corporate. Students will be pushed to think about AI in terms of what is truly good, not just advantageous. While the course will be largely project based, assessment will also be in the forms of presentations, essays, exams and machine learning projects.

INTERNATIONAL STUDENT PROGRAMS

International Student Programs

Anna Bryant, International Student Life Coordinator

The purpose of the International Student Program is to provide academic and personal support to students who come from different cultures and whose native language is not English. The program also recognizes the special contributions of international students.

At the beginning of the academic year, the new international students attend an orientation program designed to help them adapt to the academic and social expectations of Cranbrook Kingswood School. Arriving a few days before the other students allows new international students an opportunity to recover from extensive travel and begin to adjust to American culture.

The School provides some assistance with visas, special registrations, and travel planning. Departing early or returning late from vacations is highly discouraged.

English for Speakers of Other Languages (ESOL)

Anna Bryant, Academic Coordinator

As part of the International Student Program, classes are available for students who need English language support. These classes promote English skills as well as multicultural thinking and an understanding of American culture. They are required for students whose Test of English as a Foreign Language (TOEFL) scores, previous academic record, previous experience in English and personal interview with the coordinator indicate a need to further develop academic English proficiency.

Placement into classes is determined by grade level, test scores, English Department recommendation and the coordinator's assessment.

English for Speakers of Other Languages (ESOL)

Bryant

1010 Full Year 1 9-11

This is a course for entering international students who place at a high-intermediate English proficiency level. The class emphasizes reading, writing and vocabulary development. It also practices using spoken English in academic and social settings. Activities include journal writings, extensive use of new vocabulary, formal and informal speech presentations, sentence and paragraph generation and the organization and revision of essays. Writing activities build upon life experience, content courses, interviews and class presentations. Students practice active reading strategies and employ a variety of skills to improve reading comprehension. Selected readings reflect American culture as well as life in a multicultural world.

Writing and Vocabulary Development for Non-Native Speakers of English

Bryant

1020 Full Year 1 10-12

This class is for entering and returning 10th, 11th, and 12th grade international students. Class activities emphasize advanced development of vocabulary and writing skills yet also require improvement in the range, frequency, and quality of classroom participation. Activities include extensive use of new words to create increasingly complex sentences and cohesive paragraphs, application of library research skills, presentations, and peer reviews of student writings. Students work on writing and revising papers assigned in this and other courses. Writing tasks range from the informal journal to the formal essay.

DEPARTMENT X

Department X is an innovation accelerator that provides a transformational experience for teachers and learners where both are encouraged to experiment with creative content and pedagogy.

Advanced Topics: Humanities Research Seminar

Furry

9400 Full Year 1 11-12
Dept. Rec.

This course introduces students to collegiate level learning in the humanities. With the help of the instructor, students learn to create, develop, and execute their own major project over the course of the year. Depending on the student's interests and academic plans, projects can range from an art and/or performance-based project to more traditional research projects. Though projects differ by student, each requires a substantial written component. The project culminates in an oral defense to the class and instructor. With the assistance of the instructor, each student finds and utilizes an external expert to consult with on their specific project. In addition to the oral defense, assessment consists of quizzes, tests, and papers, aimed at completing the student's project. The required texts are Rebecca Moore Howard's *Writing Matters* and Cal Newport's *Deep Work*.

The Human Question: Defining Humanity in a Digital Age*

Reed

9411 Sem 1 1/2 11-12
9412 Sem 2 1/2

"What does it mean to be human in our technocentric culture?" Learners investigate this question as individuals, on teams and from a wider human perspective. Through a multidisciplinary blend of psychological concepts, philosophical thought, and modern neuroscience, they consider the blurring line between "man" and machine. Learners assess how this tension impacts their personal lives, the digital landscape, and the future of human society. They present their findings through written reflection, public debate, multimedia applications and a final independent research project. **Will not run during the 2025-26 school year.**

Fabrication and Design*

Sinclair

9418 Sem 1 1/2 10-12

This multi-disciplinary project-based course is a rapid, skills building introduction to the design process. Each week students create rapid prototypes and manufacture their creations. The class cycles through the design process as students build and test new products. Students will learn to use vinyl cutters, 3-D printers, laser cutters, small and large Computer Numerically Controlled (CNC) machines, and Sublimation Printers. Students may choose to design their own mugs, t-shirts, 3-D printed toys, wearable electronics, and more. Assessment will take the form of documenting progress on weekly projects and showcasing work in a personal portfolio. Students will self-assess and reflect on their mastery of tools and processes and will be expected to improve their skills through iteration. The course will culminate with a maker faire in which students will showcase their creations.

Art Activism in Latin America*

Duncan

9422 Sem 2 1/2

A course designed to inspire by examining the various forms artists use to express themselves politically throughout Latin America and their impact on society. Students will consider and discuss the effectiveness of visual, performing, and language arts as platforms for activism and change, both historically and currently. We will dive into a novel written by a Spanish-Cuban female author of the 1800's, reflect on lyrics in songs of protest in Latin American folk music and hip hop/rap, examine dance as a form of community building, identity, and protest, explore the impact of contemporary poetry and spoken word, and share reactions to the work of various graffiti artists, photographers, and documentary film makers. We will have the opportunity to visit the DIA (Diego Rivera Court) and partake in a mural tour of Southwest Detroit, as well as meet with Latinx artists working to raise awareness locally. Students will get the chance to create a final project highlighting their own vision for change using the art medium/platform of their choice. Prior knowledge of the Spanish language is not required. Interested students should have a genuine interest in practicing research, group collaboration, and presentation.

DEPARTMENT X

Voice and Vision: Pen to Performance and Art*

Earls

9424 Sem 1 1/2

Students immerse themselves in a multifaceted exploration of self-expression through the fusion of journal writing, performative reading, and artistic creation. Students are required to engage in daily journal writing, adopting a reflective and personal narrative style. Emphasis is placed on refining writing skills, exploring various literary techniques, and honing the craft of storytelling. Beyond the written word, participants have the opportunity to bring their narratives to life by reading them aloud, cultivating expressive and performative skills. Additionally, students create artworks that visually reflect the ideas and themes explored in the written pieces. This integration of writing, reading, and art aims to provide a comprehensive and immersive experience, fostering creativity and self-discovery through a harmonious blend of linguistic and visual expression.

Self and Place: How Do I Inhabit the World?*

Bourriaud

9426 Sem 2 1/2

This interdisciplinary, place-based course equips students with the philosophical and biological tools to understand their relationship to the place they live, develop a sense of belonging, and identify their sense of self. Looking at current affairs, global warming, consumerism and degrowth, adaptability, social media, and relationships to others, locally and globally, it inspires moments of deep thinking and moments of active community engagement. Inspired by the models of ancient Greeks' and European Humanists' teaching, it explores history, geopolitics, philosophy, sociology, biology, and gardening content aiming to draw connections between these and foster critical thinking, resilience, and joy. Students read Voltaire and other French and American philosophers, explore campus, visit the museums, learn about and from the Chippewa, Ottawa, and Potawatomi tribes, identify plant species, watch birds, grow vegetables, and, for those who sign-up, camp on the sacred land of the Gun Lake Tribe. Student performance is evaluated by active participation in class discussions, a permaculture design project, creative writing, analytical essays, quizzes, a personal final project, and three hours of volunteering.

Introduction to International Relations

Fall

9417 Sem 1 1/2

This course provides students with a comprehensive introduction to International Relations and international theory. It explores key concepts that define the dynamics between states, including power, diplomacy, cooperation, and conflict, as well as the evolving paradigms that shape global interactions. Assessments are designed to engage students in a variety of ways, including quizzes to build geographic literacy and contextualize global events, theory papers to develop analytical and writing skills, group projects to encourage collaboration and debates to hone public speaking, critical thinking, and the ability to analyze multiple perspectives.

ATHLETICS

Athletic Programs and Co-Curricular Activities

Participation in the Upper School's athletic program is an integral part of each student's day at Cranbrook Kingswood. Students' growth and development are enhanced through involvement in activities which promote teamwork, self-discipline, commitment, and physical fitness. The program is varied to accommodate a wide range of student interests and abilities.

Interscholastic sports occur over three seasons each school year (fall, winter, and spring) and encourage the student-athlete to develop their skills as they participate at a high level of competition. Interscholastic student-athletes learn the importance of commitment to teamwork and team play through team practices that meet daily for approximately two hours. NOTE: team travel and competitions require an additional significant time commitment.

Intramural sports occur over three sessions each school year (fall, winter, and spring) and allow the student to develop skills while playing in a less competitive atmosphere meeting for four hours each week.

Co-curricular Activities occur over three sessions each school year (fall, winter, and spring) and allow the student to participate in a non-athletic activity for four hours each week.

When students enroll at Cranbrook Kingswood Upper School, they are committing themselves to the full school program. Therefore, it is the School's expectation that students will complete their credits obligation.

Graduation Requirement: Cranbrook Kingswood Upper School students are required to earn a number of activity credits. Each season or session earns one credit. The total number of credits required for graduation and the suggested number of credits to be earned in a particular school year are listed below. For the student entering Cranbrook Kingswood in the:

- Ninth grade: eight credits total, three completed during this school year
- Tenth grade: five credits total, three completed during this school year
- Eleventh grade: two credits total, both completed during this school year
- Twelfth grade: none

Although credits may be earned during the senior year, it is recommended that this graduation requirement be completed by the end of the student's junior year.

Credits: Although it is possible for the student to participate in four sessions, the student can only earn a **maximum of three credits in any given school year**. Intramural and Co-curricular session credit is based on 75% attendance and completion of the session. Interscholastic season credit is determined by the head coach of each sport.

Waivers: A student may apply for an athletic waiver for off-campus activities (ex: off-season club sports, martial arts, equestrian, etc.) or for extenuating circumstances that prevent participation (medical restrictions/injury. NOTE: must be accompanied by a medical physician's note). **The waiver form must be completed and approved by the athletic department before the session begins.** Waiver activity requirements are the same as that for Intramural or Co-Curricular Activities and must be supervised. Waivers for competitive sports teams (club) will not be granted during an interscholastic sport season where Cranbrook Kingswood fields that sport.

Co-curricular Activities

Listed below are the approved activities that may be substituted for one interscholastic or after-school credit each year. Credit is based upon the time committed to the activity.

Drama (3 possible per year), Debate, Gallimaufry Editors; Michigan Youth in Government, Model UN, Newspaper Associate Editors and Editors-in-Chief, Peer 2 Peer; Robotics (two possible per year), Wilderness Prep, Yearbook Editors-in-Chief.

After-School Activities

Activities meet three or four days per week for seven weeks for at least four hours per week. The following sports and activities are options that are frequently offered.

Fall (Sep-Nov)

Crew
Gardening
Rock climbing
Sailing
Sport Training
Strength & Fitness

Winter (Nov-Mar)

Wilderness Prep
Strength & Fitness
Yoga
Boxing

Spring (Mar-May)

Gardening
Sport Training
Strength and Fitness
Ultimate Frisbee

Interscholastic Sports

Fall Season

Boys

Cross Country, Varsity, J.V.
Football, Varsity, J.V.
Soccer Varsity, J.V.
Tennis Varsity, J.V.,

Girls

Cross Country, Varsity, J.V.
Field Hockey, Varsity, J.V.
Golf, Varsity, J.V.
Swimming, Varsity
Volleyball, Varsity, J.V., Fr.

Winter Season

Boys

Basketball, Varsity, J.V., Fr.
Figure Skating, Varsity
Ice Hockey, Varsity, J.V.
Skiing, Varsity, J.V.
Swimming, Varsity

Girls

Basketball, Varsity, J.V.
Figure Skating, Varsity
Ice Hockey, Varsity
Skiing, Varsity, J.V.

Spring Season

Boys

Crew, Varsity, J.V.
Baseball, Varsity, J.V.
Golf, Varsity, J.V.
Lacrosse, Varsity, J.V.
Sailing, Varsity
Track & Field, Varsity, J.V.

Girls

Crew, Varsity, J.V.
Lacrosse, Varsity, J.V.
Sailing, Varsity
Soccer, Varsity, J.V.
Softball, Varsity
Tennis, Varsity, J.V.
Track & Field, Varsity, J.V.

LIBRARY

The Cranbrook Kingswood Upper School Library has major spaces and collections on both the Kingswood and Cranbrook campuses. The Library provides students, faculty and staff with rich resources for the pursuit of curricular and academic interests, as well as beautiful areas to encourage collaborative work, and for quiet study, reading and reflection.

The library program focuses on the introduction and instruction of new technology tools and the use of library resources in support of each department's research assignments. Emphasis is placed on teaching the methods of successful research strategies using a multitude of resources available for student use, as well as teaching new technology media to create and present research outcomes.

In collaboration with the faculty, the library supports the curriculum through a rich collection of print and online resources and instruction of skills, literacies, and media to enhance a variety of research projects. The library adheres to a strong commitment of supporting diversity through the collections, displays, and programming.

In addition to the print and ebook collections accessed through the online library catalog, the library also subscribes to online resources including *Culture Grams*; *Gale Virtual Reference Library*; *JStor*; *ProQuest Current and Historical Newspapers*; *The New York Times*; *Oxford African-American Studies Center*; *Oxford English Dictionary*; *World Book Encyclopedia*, *Global Issues in Context* and the ABC-CLIO databases on American and World History. All of these resources can be accessed online via <https://cranbrook.libguides.com/USLibrary>

OFF-CAMPUS PROGRAMS

Wilderness Expedition

For over 50 years, we have offered sophomores the opportunity of a life-changing 9 day backpacking trip in the majestic mountains of the Nantahala and Cherokee National Forests along the North Carolina-Tennessee border. The trip is designed as a physical and mental challenge in a relatively unfamiliar & beautiful environment. This type of experience is designed to engender feelings of self-worth and achievement. The feeling of self-worth is the foundation for the confidence needed to deal with the pressures of the rigorous years ahead.

Participants are organized into crews of 7 students and accompanied by two adult leaders and a student leader. During the Expedition, each crew is introduced to an exciting and beautiful wilderness environment through activities such as wilderness travel and back country camping. The emphasis is on developing in the student positive attitudes towards challenging situations while teaching specific outdoor skills.

The Wilderness Expedition takes place during the second and third weeks of March. Students who take part in the program are expected to participate in Wilderness Prep during the winter sports season, unless involved in interscholastic sports. Since the Wilderness Expedition takes place during the academic year and classes will continue as usual, those participating in Wilderness can expect to make up missed work at the discretion of the instructor.

Senior May Project

The Senior May Project allows qualified Senior students to participate in experiential projects outside the School community, during the last weeks of the academic year. In-depth development of long-standing skills and interests, serious exploration of possible career choices, or the acquisition of technical proficiency in a new field are encouraged. Interested Seniors must submit a written proposal to the Senior May Project Committee by a specified time. All school work must be completed before the student starts the project mid-May. Guidelines and description of the program and forms for application are made available on CranNet.

All Seniors are eligible to pursue a May Project, with the following qualifications and expectations:

Academic Standing: No student may do a Project who has a final grade lower than a C-. This applies to senior full-year courses and to senior second semester electives.

Athletic Requirements: Players in spring varsity sports are expected to complete the season.

Performing Arts Requirements: Students are expected to meet rehearsal and attendance obligations for spring concerts.

Conduct Probation: Seniors who have been placed on probation for a time period that extends into the Project time must submit a written petition to the Senior Administration Team for approval to pursue a Senior May Project. The petition should include a copy of their Final Project Proposal.

Disciplinary Action, after Project approval, will result in possible forfeiture of the opportunity to do the Project. The Campus Deans, in conjunction with the Head of the Upper School, will determine if the School's discipline action would disallow a student from pursuing or continuing a Project.

Suspended Students will not be allowed to pursue their Project. They will return to their full class schedule following the suspension to complete requirements for their diploma.

A Grade of Pass/Fail will be assigned to each Project and will be recorded on the Senior's final transcript. The final grade will be based on these five components: attendance in accordance with school requirements, evaluation by the Project supervisor, quality of the Abstract, the Senior's Blog, and Summary Paper, and meeting all contractual deadlines, including daily updates to the Senior's Blog.

If for any reason a Project is canceled, the student is expected to return to his/her second semester schedule.

FACULTY AND ADMINISTRATION

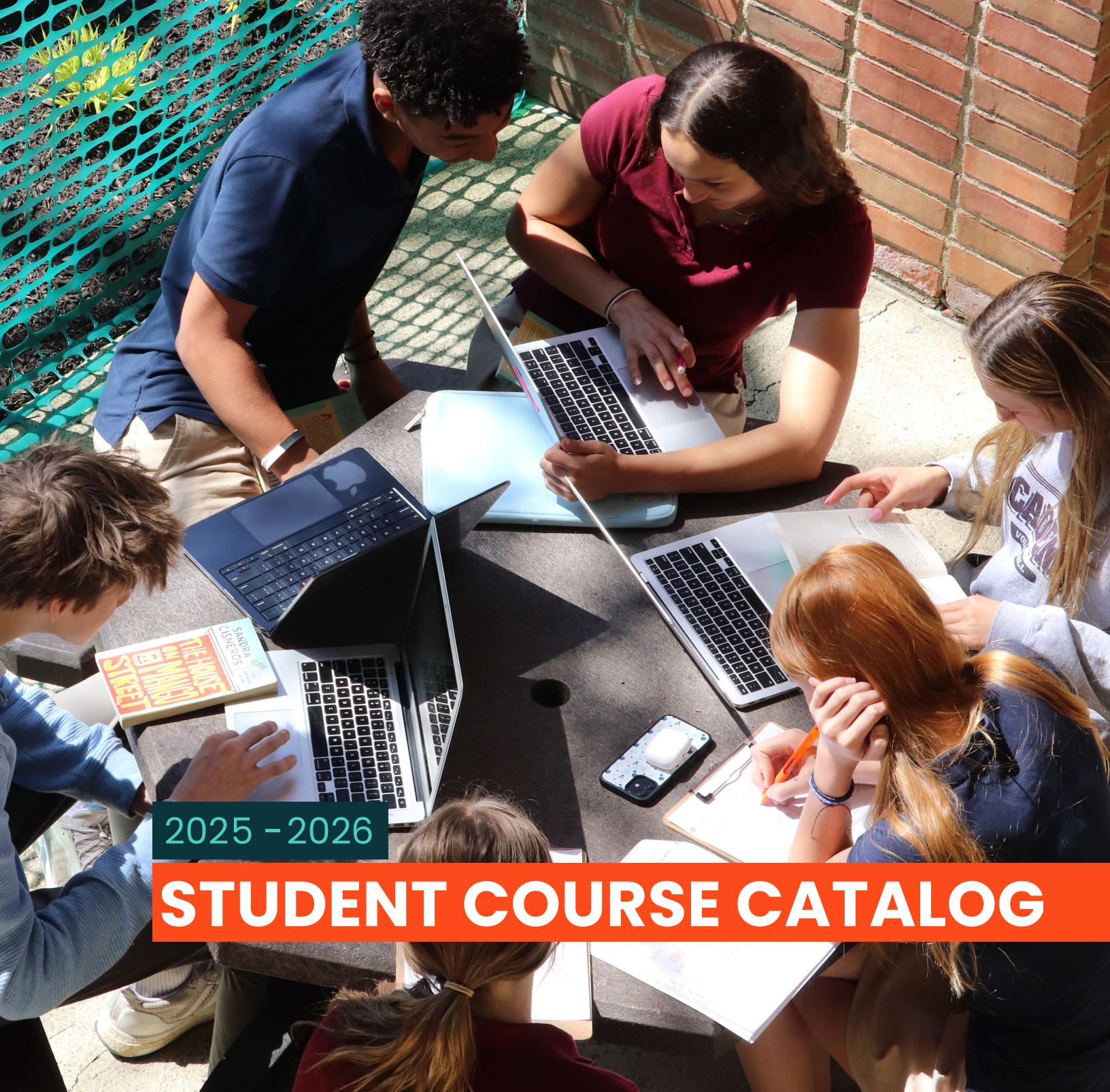
Malin Aladlouni College Counseling – Associate Dean Michigan State University, B.A. Georgetown University, M.S.	2022	Kenzi Bisbing Counseling Kent State University, B.A. Case Western Reserve University, M.S.	2023
Nick Amos Science Oakland University, B.S. University of Toledo, M.A.	2023	Jeremy Bond Mathematics Michigan State University, B.S.	2022
Rachel Applebaum English University of Michigan, B.A. University of Michigan - Dearborn, M.A.	2013	Audrey Bourriaud World Languages Université Paris-Sorbonne, B.A., M.A.	2021
Matt Archambault Science Georgetown University, B.S.	2024	Anna Bryant English as a Second or Other Language University of Illinois, B.A. Concordia University, M.A.	2017
Nicholas Artushin ('05) Performing Arts University of Michigan, B.M.	2021	Christopher Bryant History/Social Science University of Chicago, B.A. University of Wisconsin, M.S.T.	2011
Sung Baek Science St. Olaf College, B.A. St. Mary's University, M.A.	2024	Kristen Carey Health Center Valparaiso University, B.S.N. Northwestern University, M.S.N.	2021
Sheila Bailey College Counseling, Associate Dean Eastern Michigan University, B.S. Oakland University, M.A. University of Detroit, Mercy, Ed.S.	2012	Gianfranco Cataldo World Languages University of Salerno, Italy, B.A., M.A. Wayne State University, M.A.	2021
Arman Banimahd Mathematics University of Wisconsin - Milwaukee, B.A. Carroll University, M.S.	2021	Shelley Chinn Mathematics Western Michigan University, B.A. Saginaw Valley State University, M.A.	2006
Ana Baray Mathematics Universidad Autonoma Del Estado De Morelos (UAEM), B.S., M.S., Ph.D.	2024	Gail Chun Academic Dean, Grades 11 and 12 Mathematics GMI Engineering & Management Institute, B.S. Oakland University, M.S.	1999
Gania Barlow English San Francisco State University, BA. Mills College, M.A. Columbia University, Ph.D.	2021	Dominic Coccitti-Smith Science Lyman Briggs College, Michigan State University, B.S. Unity University, M.S.	2023
Todd Berry History/Social Science Indiana University, B.S.	2020	David Cohen ('90) Mathematics University of Michigan, B.S.E. Northwestern University, Ph.D.	2005
Katie Bis Robotics University of Michigan, B.A., B.S	2017	Allwyn Cole Science Grand Valley State University, B.A. University of Michigan, Ph.D.	2004

Caralie Cooke Religion and Philosophy James Madison University, B.S.W. Vanderbilt Divinity School, M. Div. Emory University, Ph.D.	2020	Tim Furry Religion and Philosophy Chaplain Huntington University, B.S. Asbury Theological Seminary, M.A. University of Dayton, Ph.D.	2012
Kate Covintree Department Head - Library Randolph-Macon Women's College, B.A. Emerson College, M.F.A. Simmons College, M.L.S.	2021	Michael German Department Head - English Marietta College, B.A. University of Michigan – Flint, M.A.	2008
Miranda Crowl English Hamilton College, B.A. University of Maryland, M.A.	2009	Pamela German History/Social Science St. Mary's College, B.A. Eastern Michigan University, M.S	2016
Daniel E. Dobrovich Performing Arts Eastern Michigan University, B.A.	2012	Karen Gomez Director of Wellness Wayne State University, B.S.W., M.S.W., M.S.A.	2019
Troy Dostert History/Social Science University of California – San Diego, B.A. Duke University, M.A., Ph.D.	2005	Anna Golwitzer Dean of Domestic Boarding and Financial Aid University of Michigan, B.A. Chonnam National University, M.A.	2024
Noël Dougherty Head of Upper School Boston College, B.A. Northeastern University, M.Ed.	2016	Anna Green English University of Michigan, B.A. Michigan State University, M.A., Ph.D.	2016
Leah Duncan World Languages Wayne State University, B.A.	2018	Matt Gump Science Hope College, B.A. Grand Valley State, M.Ed.	1997
Darlene Earls Fine Arts University Of Delaware, B.F.A. Rochester Institute of Technology, M.F.A.	2020	William Hancock College Counseling – Senior Associate Dean Union College, B.A. Edinboro University of Pennsylvania, M.A.	1998
Leah Edmond Philosophy/English University of Windsor, B.A. Concordia University, M.A.	2024	Erika Hansinger Academic Dean, Grades 9 & 10 History/Social Science Grand Valley State University, B.A. Wayne State University, M.A.	1998
Carolyn Esquivel World Languages Indiana University, B.A. Southern Oregon University, M.A.	2001	Jacob Hazard ('92) Dean of Faculty Northwestern University, B.A. Teachers College, Columbia University, M.A.	2013
Ousmane Fall World Languages Auburn University, B.A.	2023	Brent Heard World Languages University of Richmond, B.A. University of Wisconsin, M.A.	2005

Lauren Henzy Science University of Vermont, B.A.	2022	Stephanie Kokoszka Science Lake Superior State University, B.A. Wayne State University, Ph.D.	2016
Colin Hinde Department Head - Mathematics Carnegie Mellon University, B.S. University of California, Los Angeles, Ph.D.	2015	Jane LaBond English University of Michigan, B.A. Eastern Michigan University, M.A.	2022
Mark Hourigan Department Head - Performing Arts Western Michigan University, B.M., M.M.	2019	Nicholas LaFontaine Associate Dean of Students Wesleyan University, B.A. University of Albany, M.A.	2021
Kristen Hurd Performing Arts Michigan State University, B.M. Southern Oregon University, M.M.	2016	Keith Levinthal Director of Athletics Hobart College, B.A. Manhattanville College, B.S. M.S.	2022
Zaineb Hussain Assistant Director of Schools Bryn Mawr College, B.A. Bank Street College of Education, M.A. Teachers College, Columbia University, Ed.M.	2022	Anne Levy Associate Dean - College Counseling Smith College, B.A. Columbia University, M.S.	2022
Harrison Hwang Mathematics The Chinese University of Hong Kong, B.S., M.A. Michigan State University, M.A.	2016	Eric R. Lorey Department Head - Religion and Philosophy Kalamazoo College, B.A. Université de Clermont-Ferrand, D.S.F. University of Michigan, M.A. Harvard University, M.Div. Boston University, Ph.D.	2000
Myles Ivory Associate Athletic Director for Communications and Events Harris-Stowe State University, B.S.	2023	Daniel Lorts Department Head - Science University of Michigan, B.S. Oakland University, M.A.	2013
Renee Jenuwine Schools Registrar University of Michigan, B.A. The George Washington University, M.P.A.	2014	Jo Jo Macey Fine Arts Indiana University of Pennsylvania, B.S., Art Ed. Cranbrook Academy of Art, M.F.A.	1981
Julie Kang English Pomona College, B.A. University of Chicago, M.A.	2008	Karl Mathieu Mathematics University of Michigan, B.A. Eastern Michigan University, M.A.	2003
Mark Karinen History/Social Science Eastern Michigan University, B.S. Wayne State University, M.Ed.	2011	Lettie Minor Dean of Upper School Enrollment Lake Forest College, B.A. American University, M.A.	2023
Ploy Keener World Languages Oberlin College, B.A. Tufts University, M.A.	2024	Drew Miller Director of Enrollment Hamilton College, A.B. University of Hartford, M.Ed.	1994
Bruce Kohl Science University of Michigan, B.S.E. Michigan State University, M.A.	1998		

Gregory C. Miller Computer Science Hillsdale College, B.S. Oakland University, M.S.	1983	Chris Rainwater English University of Michigan, B.A. Boston College, M.A.T.	2006
Beth Mitchell Mathematics Albion College, B.A. Wayne State University, M.Ed.	2022	Kay Rediers Performing Arts Wayne State University, B.S.E.	2007
Argelia Morales University of Illinois (Urbana-Champaign, IL), B.A. Oakland University, M.A.	2024	Hannah Reed College Counseling, Associate Dean Earlham College, B.A.	2018
Nancy Mosley Fine Arts Mississippi University for Women, B.A.	1992	Jeremiah Reed English Hillsdale College, B.A. Newcastle University, M.A.	2012
Carolyn Moss ('03) Science Rochester Institute of Technology, B.S. Michigan State University, M.A.	2016	Senghor Reid Department Head - Fine Arts University of Michigan, B.F.A. Wayne State University, M.A.T.	2012
Hannah Mudar ('05) Mathematics Tufts University, B.S., M.Eng.	2014	Kieren Reynolds Department Head - Computer Science University of Portsmouth, B.S. University of Reading, PGCert University of Southampton, Ph.D.	2019
Chad O'Kulich Wilderness Specialist, World Languages Michigan State University, B.A. Michigan State University, Master's Certificate	2020	Michael Roche Health University of Michigan, B.A. Oakland University, M. Ed.	2021
Gregory Palmer Science Wayne State University, B.A.	2021	Eglee Rodríguez-Bravo Department Head - World Languages Oakland University, B.A. Wayne State University, M.A., Ph.D.	2009
Mary Perfitt-Nelson Counseling University of Michigan - Dearborn, B.A University of Detroit, Mercy, M.A.	2023	Jennifer Roebuck ('03) History/Social Science Michigan State University, B.A. University of San Francisco, M.A.	2021
Hilary Petcoff Associate Athletic Director for Compliance and Administration University of Detroit Mercy, B.A. University of Miami, M.B.A. University of Baltimore School of Law, J.D.	2023	Jordan Rossen English University of Michigan, B.A. University of Montana, M.F.A. University of Michigan Law School, JD	2015
William Pistner English University of Virginia, B.A. Yale University, M.A.R. University of Maryland, M.A.	2009	Elizabeth Ryan History/Social Science Marshall University, B.A. Wayne State University, M.A., Ph.D.	2013
Jeremy Rahn Instructional Technology Technical Theatre Michigan Technological University, B.S.	2011	Christopher Samul ('10) Mathematics Boston College, B.A. University of Michigan - Dearborn, M.Ed.	2020

Christopher Schotten Mathematics Michigan State University, B.A., EMG Johns Hopkins University, M.S. Ed.	2018	Debra Viles History/Social Science Wayne State University, B.A., M.A.	2003
Kathy Sinclair Educational Technology Smith College, B.A. Dartmouth College, B.E. University of Michigan, M.S.	2022	Hélène Vitasse World Languages University of Metz, France, License of Science and Technology. IUFM Versailles, France. Professional Diploma of Elementary Teacher.	2022
Joe Smith Fine Arts Kansas City Art Institute, B.F.A. Cranbrook Academy of Art, M.F.A.	1992	Lingzhi Wen World Languages Colorado State, B.A., M.Ed.	2019
Rebecca Smith Fine Arts Syracuse University, Studio Arts Maryland Institute College of Art, B.F.A Cranbrook Academy of Art, M.F.A.	2023	Frank Wiswall Department Head - History/Social Science Hampden-Sydney College, B.A. University of St. Andrews, M. Litt.	1998
Kelly Starkey Mathematics Purdue University, B.A.	2016	Carla Young Director of Community and Multicultural Programs Oberlin College, B.A. Marygrove College, M.A.T.	1999
Jeff Suzik Director of Cranbrook Schools Gustavus Adolphus College, B.A. Carnegie Mellon University, M.A., Ph.D.	2021		
Michelle Tang World Languages National Taiwan University, B.A. University of Illinois-Chicago, M.A.	2008		
Robert Tarchinski ('13) Science University of Michigan, B.S.	2018		
Julie Taylor-Vaz Dean of College Counseling Stanford University, B.A.	2019		
Gordon Thompson English Swarthmore College, B.A. University of Florida, M.F.A.	2002		
John B. Twedt Science Luther College, B.A. Wayne State University, M.Ed.	1982		
Kevin Van Houten Mathematics Grand Valley State University, B.S.	2010		



2025 - 2026

STUDENT COURSE CATALOG



Student Program



www.globalonlineacademy.org

Welcome to GOA!

As a nonprofit organization working together with a consortium of member schools, we are committed to reimagining learning to empower students to thrive in a globally networked society. GOA students are open to discovery, open to academic challenge, and open to new ways of thinking and learning. GOA courses are designed for academic adventurers who follow their passions to discover something new with classmates and teachers from around the world.

Inside this catalog, you'll find courses that will enable you to explore future careers or college majors, or study something you've always wanted to know more about. Our courses will help you craft the clearest and most compelling version of your story—who you are as a learner and a person. We're excited to see what you'll discover in a GOA course, about the world around you and about yourself. Whatever you learn, we're confident it will be extraordinary.



ART, MEDIA & DESIGN	COURSE TITLE	TERMS
	Architecture	Semester 1, Semester 2, Summer
	Arts Entrepreneurship	Semester 2
	Computer Science II: Game Design & Development	Semester 2, Summer
	Creative Nonfiction Writing	Semester 1, Summer
	Digital Photography	Semester 2, Summer
	Fiction Writing	Semester 2, Summer
	Filmmaking	Semester 1
	Graphic Design	Semester 1, Semester 2
BUSINESS, ECONOMICS & FINANCE	COURSE TITLE	TERMS
	Arts Entrepreneurship	Semester 2
	Business Problem Solving	Semester 1, Semester 2, Summer
	Capitalism: Past, Present & Future	Semester 2
	Entrepreneurship in a Global Context	Semester 1, Semester 2
	Introduction to Blockchain & Cryptocurrency	Semester 2
	Introduction to Branding & Marketing	Semester 1, Semester 2, Summer
	Investing I	Semester 1, Semester 2, Summer
	Investing II	Semester 1, Semester 2
	Macroeconomics	Semester 1, Semester 2
	Microeconomics	Semester 1, Summer
	Personal Finance	Semester 1, Semester 2, Summer

COMPUTER SCIENCE & ENGINEERING	COURSE TITLE	TERMS
	Computer Science I: Computational Thinking	Semester 1, Semester 2, Summer
	Computer Science II: Analyzing Data with Python	Semester 1, Semester 2, Summer
	Computer Science II: Game Design & Development	Semester 2, Summer
	Computer Science II: Java	Semester 2
	Cybersecurity	Semester 1, Semester 2, Summer
	Introduction to Artificial Intelligence	Semester 1, Semester 2, Summer
	Introduction to Blockchain & Cryptocurrency	Semester 2
	Problem Solving with Engineering & Design	Semester 1, Semester 2, Summer
GLOBAL STUDIES	COURSE TITLE	TERMS
	Applying Philosophy to Global Issues	Semester 1
	Arabic Language Through Culture I-III	Yearlong
	Capitalism: Past, Present & Future	Semester 2
	Climate Action & Sustainability	Semester 1
	Discourse Across Difference	Semester 2
	Entrepreneurship in a Global Context	Semester 1, Semester 2
	Genocide & Human Rights	Semester 1, Summer
	Global Health	Semester 1
	International Relations	Semester 1, Semester 2, Summer
	Japanese Language Through Culture I-III	Yearlong
HEALTH SCIENCES	COURSE TITLE	TERMS
	Bioethics	Semester 1, Semester 2, Summer
	Biochemistry: Medicine, Drugs & Addiction	Semester 2
	Global Health	Semester 1
	Health & Fitness	Semester 1, Summer
	Medical Problem Solving I	Semester 1, Semester 2, Summer
	Medical Problem Solving II	Semester 1, Semester 2
	Introduction to Organic Chemistry I	Semester 1
	Introduction to Organic Chemistry II	Semester 2
JUSTICE, ETHICS & HUMAN RIGHTS	COURSE TITLE	TERMS
	Applying Philosophy to Global Issues	Semester 1
	Bioethics	Semester 1, Semester 2, Summer
	Discourse Across Difference	Semester 2
	Gender & Society	Semester 2
	Genocide & Human Rights	Semester 1, Summer
	Introduction to Legal Thinking	Semester 1, Semester 2, Summer
	Prisons & Criminal Justice Systems	Semester 1, Semester 2
	Race & Society	Semester 1
	Religion & Society	Semester 2

MATHEMATICS & QUANTITATIVE REASONING	COURSE TITLE	TERMS
	Data Visualization	Semester 1
	Game Theory	Semester 1, Semester 2
	Linear Algebra	Semester 1, Semester 2
	Multivariable Calculus I: Vector and Differential Calculus	Semester 1
	Multivariable Calculus II: : Integral Calculus	Semester 2
	Number Theory	Semester 1
PSYCHOLOGY & NEUROSCIENCE	Problem Solving with Engineering & Design	Semester 1, Semester 2, Summer
	COURSE TITLE	TERMS
	Abnormal Psychology	Semester 1, Semester 2, Summer
	Developmental Psychology	Semester 1, Semester 2
	Introduction to Psychology	Semester 1, Semester 2, Summer
	Neuropsychology	Semester 1, Semester 2
	Positive Psychology	Semester 1
	Social Psychology	Semester 1, Semester 2
ADDITIONAL OFFERINGS	COURSE TITLE	TERMS
	Algebra I	Summer
	Geometry	Summer
	Precalculus	Summer
	College Essay Workshop	Summer

View GOA's Course Descriptions



- GOA is accredited by the New England Association of Schools and Colleges (NEASC) and by the Western Association of Schools and Colleges (WASC).
- GOA is a UC-approved online course publisher. Many GOA courses are NCAA-approved, as indicated in the course description. A complete list is also available upon request.



Students who take three or more GOA courses across our catalog will earn a Global Learning Certification, or they can pursue a Pathway Certification in one of our eight learning pathways to demonstrate a depth of interest and expertise.

ABNORMAL PSYCHOLOGY

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

Why Take This Course?

You’ll walk away knowing more about how the human brain can take unexpected paths and how challenging it can be to define “normal.” You’ll also develop a deeper empathy for those facing mental health challenges.

Prerequisite: This course contains content that may not be appropriate for students younger than 15 years old.

 **NCAA-Approved**

 **Pathway:** Psychology & Neuroscience

ALGEBRA I

Fast-Track Your Math Mastery: Ready to level up in math? This accelerated seven-week foundational Algebra I summer course will give you a head start in high school math by helping you master essential algebraic skills. You will be guided through solving equations, understanding the properties of numbers, and exploring mathematical relationships. Get ready to tackle linear equations, inequalities, functions, and polynomials while taking on real-world word problems that translate into algebraic equations and navigating the coordinate plane. Plus, you’ll lay the groundwork for Algebra II concepts like quadratic equations and systems of equations.

Why Take This Course?

You’ll build analytical reasoning and sharpen your math skills through hands-on problem-solving, setting you up for success in higher-level math and future studies in math and science. With a fast-paced, intensive schedule (be prepared to put in 15–20 hours a week), you’ll cover a full year’s worth of material and be prepared for Algebra II.

Many students take this course in order to go into Algebra I with a strong foundation in September, while others use this course to accelerate through their school’s Algebra I program during the summer. Upon request, GOA’s Algebra I teachers can make a recommendation to a student’s home institution as to whether the student has mastered the key competencies of Algebra I.

Prerequisite: Pre-Algebra or equivalent

APPLYING PHILOSOPHY TO GLOBAL ISSUES

Think Like a Philosopher: What would Socrates, Confucius, and Kant have to say about today’s global issues? In this applied philosophy course, you’ll uncover how great thinkers from many traditions and centuries tackled social

and political challenges across the world—both successfully and unsuccessfully. You will challenge your perspective through an interdisciplinary approach, pulling in concepts, models, and methods related to history, journalism, literary criticism, and media studies.

Why Take This Course?

You’ll do more than learn about what philosophers have written. You’ll apply ideas to develop your own personal philosophy and apply it to analyze today’s most pressing issues. By the end of the course, you’ll be ready to spark positive change, whether in your community or on a global scale.

 **NCAA-Approved**

 **Pathways:** Global Studies; Justice, Ethics & Human Rights

ARABIC LANGUAGE THROUGH CULTURE I

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

Journey Through Language and Culture: In this yearlong course, you’ll immerse yourself in Modern Standard Arabic (MSA) and spoken dialects from the Levant, Egypt, and North Africa while exploring the rich cultural landscapes of the Arabic-speaking world. You will start with the basics of the Arabic writing system and progress to spontaneous conversations on topics like family, food, preferences, history, music, social media, and environment. You’ll master everyday expressions, build listening and reading skills, and learn to form structured sentences—all with a focus on real-life conversation.

Why Take This Course?

Whether you’re interested in international business, travel, or just fascinated by one of the world’s most influential languages, this course will connect you to the heart of Arabic culture and language.

 **NCAA-Approved**

 **Pathway:** Global Studies

ARABIC LANGUAGE THROUGH CULTURE II

This course (or its equivalent) is a prerequisite to Arabic III at GOA.

Expand Your Conversation and Perspective: Ready to take your Arabic skills further? Building on your Arabic foundation, this yearlong course guides you into more complex reading and speaking, allowing you to tell stories and even write full paragraphs in Arabic. Focusing on Modern Standard Arabic (MSA) and spoken dialects of Levant, Egypt, and North Africa, you’ll immerse yourself in even more real-life conversations and interactive group projects that cover new cultural topics such as ordering food, discussing travel and the weather, and sharing your goals for the future.

Why Take This Course?

This course is your next step toward fluency and a deeper understanding of Arabic-speaking cultures. By the end of this course, you’ll be able to tell stories, describe the world around you, and hold meaningful conversations—connecting with peers from around the world.

Prerequisite: Arabic Language Through Culture I or permission from the instructor. Arabic II students have demonstrated

novice proficiency where they are able to communicate in spontaneous spoken conversations on familiar topics, including food, weather, and hobbies, using a variety of practiced or memorized words, phrases, simple sentences, and questions.

 **NCAA-Approved**

 **Pathway:** Global Studies

ARABIC LANGUAGE THROUGH CULTURE III

Master the Art of Conversation and Cultural Insight in Arabic: Elevate your Arabic skills to an advanced level through spontaneous spoken conversations on everyday topics like food, weather, and personal stories, both past and present. You'll deepen your fluency in Modern Standard Arabic (MSA) and spoken dialects of Levant, Egypt, and North Africa in this yearlong course. Plus, you'll bring Arabic culture to life by designing your own projects, creating a restaurant menu in Arabic, designing an animated cartoon in Arabic, analyzing Arabic TV commercials, reading children's stories, exploring Arabic music, films, and more.

Why Take This Course?

Whether for travel, future careers, or personal growth, this course will prepare you to connect with the Arabic-speaking world confidently and meaningfully, through a blend of highly interactive activities and rich cultural exploration.

Prerequisite: Arabic Language Through Culture I and II or permission from the instructor. Students in Arabic III have demonstrated intermediate interpersonal proficiency in Arabic (MSA or a dialect) and have demonstrated an ability to work online independently and reliably with instructors and peers in Arabic Language Through Culture or another GOA class.

 **NCAA-Approved**

 **Pathway:** Global Studies

ARCHITECTURE

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

Why Take This Course?

Whether you're curious about architecture or see yourself as a future designer, this course will push you to think creatively and bring your ideas to life. By the end, you'll have a portfolio-ready project and the foundational skills to explore a future in design and architecture.

 **Pathway:** Art, Media & Design

ARTS ENTREPRENEURSHIP

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

Why Take This Course?

Whether you dream of starting your own studio or becoming a creative entrepreneur, this course gives you the tools and insights to turn your artistic passion into a sustainable career.

 **Pathways:** Art, Media & Design; Business, Economics & Finance

BIOCHEMISTRY: MEDICINE, DRUGS & ADDICTION

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

Why Take This Course?

A must for aspiring healthcare professionals, pharmacists, or biochemists, this course will give you a deep understanding of drug mechanisms and development. You'll walk away with insights into the science of healing and the effects of drugs on the body, setting you up for future studies and a career in healthcare and the sciences.

Prerequisite: Students enrolling in this course should have taken or should be concurrently enrolled in Chemistry

 **NCAA-Approved**

 **Pathway:** Health Science

BIOETHICS

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

Why Take This Course?

If ethical questions in health and science spark your curiosity, this course will sharpen your critical thinking and broaden your perspective on complex issues. You'll gain the skills to navigate real-world challenges and form

your own stance on pivotal bioethical debates—an invaluable foundation for future studies and careers in medicine, science, or ethics.

 **Pathways:** Health Science; Justice, Ethics & Human Rights

BUSINESS PROBLEM SOLVING

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

Why Take This Course?

If you see yourself as a future entrepreneur, CEO, or business consultant, this course is a valuable opportunity to build practical problem-solving and critical thinking skills, building entrepreneurial skills along the way. By the end, you'll have a deep understanding of the pressing issues facing companies today and be prepared for a future in the dynamic world of business and leadership.

 **Pathway:** Business, Economics & Finance

CAPITALISM: PAST, PRESENT & FUTURE

Understand the Economic System That Shapes Our World: Is capitalism the source of society's problems or one of the grandest achievements in human history? In this thought-provoking course, you'll examine perspectives from both sides, exploring capitalism's components and impact on social, political, and economic systems worldwide. Through engaging case studies and historical examples, you'll dive into how capitalism has evolved and influenced societies.

Why Take This Course?

If you're interested in understanding the complexities of economic systems, this course will help you build your own ideas about capitalism. You'll apply your insights in a final project and presentation, proposing solutions to real-world issues—an important experience for anyone interested in economics, politics, or global studies.

 **NCAA-Approved**

 **Pathways:** Business, Economics & Finance; Global Studies

CLIMATE ACTION & SUSTAINABILITY

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

Why Take This Course?

If you're passionate about making a difference, this course will provide you with the knowledge and tools to tackle

climate challenges through well-informed activism. By the end, you'll be empowered to advocate for a sustainable and equitable future.

***Note:** This course is a reimagined, redesigned, retitled version of the course that was called Climate Change & Global Inequality through the 2023–2024 school year. Students who have already taken Climate Change & Global Inequality should consider choosing a different course.*

 **NCAA-Approved**

 **Pathway:** Global Studies

COLLEGE ESSAY WORKSHOP

Jumpstart Your College Application: Get a head start on your college essay this summer! In the first week of this two-week workshop for rising grade 12 students, you'll join live video sessions and hands-on work time that will guide you from brainstorming ideas to drafting your essay. The second week focuses on small-group feedback sessions with peers and teachers, helping you polish your work. By the end, you'll have a strong, refined draft of your essay, ready for those finishing touches.

Why Take This Workshop?

Ease the stress of senior year by making significant progress on your college essay. With expert guidance and constructive peer feedback, you'll craft a compelling and authentic narrative that leaves a lasting impression on admissions officers. Gain the confidence and clarity to tackle your college applications head-on!

***Note:** Unlike other GOA courses, this workshop is ungraded and non-credit-bearing.*

COMPUTER SCIENCE I: COMPUTATIONAL THINKING

This course (or its equivalent) is a prerequisite to all Computer Science II classes at GOA.

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

Why Take This Course?

Gain a foundational understanding of computer science and its real-world applications for both programmers and non-programmers. By the end, you'll have essential computational thinking skills to approach complex problems with clarity and strategy, setting you up for success in future computer science courses and beyond.

***Note:** During Summer 2025 and Semesters 1 and 2 of 2025–2026, GOA will offer one section of this course that has been designed and staffed specifically for students in grades 6–8. On the registration page, students and Site Directors should look for the offering that is specific to their age group.*

 **NCAA-Approved**

 **Pathway:** Computer Science & Engineering

COMPUTER SCIENCE II: ANALYZING DATA WITH PYTHON

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

Why Take This Course?

If you're interested in data-driven fields, this course will give you essential Python skills to tackle complex datasets. By the end, you'll be able to turn raw data into meaningful insights, preparing you for further studies in scientific research, data science, and beyond.

Prerequisite: *Computer Science I: Computational Thinking or its equivalent*

 **NCAA-Approved**

 **Pathway:** [Computer Science & Engineering](#)

COMPUTER SCIENCE II: GAME DESIGN & DEVELOPMENT

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

Why Take This Course?

For anyone interested in game development, this course will equip you with the skills to turn your ideas into playable games. Collaborate with teammates across the world to brainstorm, design, and develop games in response to unique challenges, building your skills in communication, project management, and creative problem-solving. By the end, you'll have a portfolio of game projects and a strong foundation for future studies in game design and coding.

Prerequisite: *Computer Science I: Computational Thinking or its equivalent*

 **NCAA-Approved**

 **Pathways:** [Art, Media & Design](#); [Computer Science & Engineering](#)

COMPUTER SCIENCE II: JAVA

Build Intelligent Systems: Ever wonder how your favorite apps and websites run so smoothly? In this course, you'll learn to write programs in Java—the programming language that forms the backbone of countless web applications, powers eCommerce and government websites, drives the Android operating system, and fuels essential tools in the financial world. Through interactive labs and hands-on projects, you'll master Java's core syntax and develop smart, efficient systems using object-oriented design principles.

Why Take This Course?

You'll be able to create your own programs, incorporate dynamic graphics and animations, and build a solid foundation in computer science—an essential step for future studies or a career in tech.

Prerequisite: *Computer Science I: Computational Thinking or its equivalent*

 **NCAA-Approved**

 **Pathway:** [Computer Science & Engineering](#)

CREATIVE NONFICTION WRITING

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

Why Take This Course?

Emphasizing process over product, you'll develop your unique writer's voice, style, and storytelling skills in a collaborative environment. This is a course that can help you refine your writing process so that you can use those skills in any subject. Ideal for aspiring writers, journalists, or content creators, you'll learn to transform everyday life into powerful stories.

 **NCAA-Approved**

 **Pathway:** [Art, Media & Design](#)

CYBERSECURITY

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

Why Take This Course?

If you're driven to protect the digital world, this course will provide you with the critical skills needed to navigate and secure the digital landscape, preparing you for a future in cybersecurity or simply empowering you to safeguard our interconnected world.

There is no computer science prerequisite for this course, though students with some background will certainly find avenues to flex their knowledge.

 **Pathway:** [Computer Science & Engineering](#)

DATA VISUALIZATION

Turn Numbers Into Narratives: In a world flooded with data, visualizations cut through the noise to reveal meaning. This course teaches you to collect, organize, interpret, and effectively communicate massive amounts of information. You'll master data wrangling in spreadsheets, harness the power of charts, and learn to spot both effective and misleading visuals. Using principles from information

graphics, visual art, graphic design, and cognitive science, you'll create your own compelling visualizations using tools like Datawrapper, Tableau Public, and Python.

Why Take This Course?

If you want to transform raw data into powerful insights, this course will help you develop the essential skills needed to create clear, informative visuals. Perfect for aspiring data analysts, journalists, or anyone looking to communicate statistics with impact, you'll emerge ready to use data to inform, persuade, and drive decisions.

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.

 **NCAA-Approved**

 **Pathway:** Mathematics & Quantitative Reasoning

DEVELOPMENTAL PSYCHOLOGY

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

Why Take This Course?

If you're captivated by how people learn, grow, and evolve, this course offers an in-depth look at how we become who we are. Perfect for aspiring educators, psychologists, or anyone intrigued by human behavior, you'll gain valuable insights into language acquisition, learning, and personality development from both Western and non-Western perspectives.

 **NCAA-Approved**

 **Pathway:** Psychology & Neuroscience

DIGITAL PHOTOGRAPHY

Tell Stories Through the Lens: Are you ready to see the world through a new lens? In this digital photography course, you'll learn to capture moments, places, and people in a way that tells a story only you can tell. From exploring your neighborhood to capturing diverse cultural perspectives, you'll create powerful images that showcase your creativity and refine your unique style. Along the way, you'll study the building blocks of photography, including composition and the exposure triangle, while experimenting with editing tools to bring your vision to life. You will examine the work of great photographers and experiment with techniques to turn ordinary scenes into extraordinary stories.

Why Take This Course?

Through discussions, critiques, and hands-on projects, you'll explore big questions like: What makes a photo unforgettable? How can an image communicate emotion? And how can photography address real-world issues? Whether you're just starting out or have experience behind the camera, this course will help you build a compelling portfolio that reflects your identity as a storyteller and artist. It's also a great foundation for further study in visual arts or careers where impactful imagery is key to communication.

Required Materials:

- Students must have access to a camera that allows for changing shutter speed and f-stop (lens aperture). Cannot be a cell phone. It does not need to be an interchangeable lens camera.
- Photo editing software of your choice (Adobe Lightroom, Photoshop, Pixlr X, RawTherapee).
- Google Photo or other photo storage/sharing app of your choice.

 **Pathway:** Art, Media & Design

DISCOURSE ACROSS DIFFERENCE

Navigate Today's Complex Issues: How do you engage in conversations when you don't agree? In today's interconnected world, complex social, political, and ethical issues demand thoughtful dialogue. This course will equip you with the skills to engage thoughtfully and effectively through structured conversations, debates, rhetorical analysis, and guided reflection. You'll learn to navigate challenging discussions and foster understanding across differences on pressing topics like technology's impact on privacy, environmental sustainability, and social justice reform.

Why Take This Course?

If you're interested in developing your voice in diverse or divided spaces, this course will help you engage in meaningful dialogues, even when faced with opposing viewpoints. By learning to evaluate different perspectives, ask insightful questions, and find common ground, you'll be prepared for responsible civic participation and thrive in our global, interconnected society.

 **NCAA-Approved**

 **Pathways:** Global Studies; Justice, Ethics & Human Rights

ENTREPRENEURSHIP IN A GLOBAL CONTEXT

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

Why Take This Course?

This course provides a hands-on approach to building a business, teaching you to apply innovative, design-driven strategies and creative problem-solving skills. With real-world experiences in customer research, product design, and interviews with entrepreneurs, you'll gain the tools to turn an idea into a startup ready for the dynamic business world.

 **NCAA-Approved**

 **Pathways:** Business, Economics & Finance; Global Studies

FICTION WRITING

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

world. Through engaging in discussions and exchanging feedback, you will develop your unique writing style and sharpen your skills as both a writer and a critic.

Why Take This Course?

Whether you dream of becoming a novelist or screenwriter, or you simply enjoy storytelling, this course connects you with peers from diverse backgrounds and encourages you to share stories that capture both shared and unique life experiences. By the end, you'll have honed your voice and acquired the tools to craft captivating stories, opening doors for further creative exploration.

 **NCAA-Approved**

 **Pathway:** Art, Media & Design

FILMMAKING

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

Why Take This Course?

This hands-on course is perfect for aspiring filmmakers and creative problem-solvers eager to elevate their craft. By the end, you'll walk away with a portfolio of experimental films and develop your unique style as a filmmaker, ready to bring your stories to life and captivate audiences.

Required Materials:

- Device to capture video (HD camera or newer iPhone or Android phone)
- Tripod or other stabilizing equipment (optional, highly recommended)
- Video editing software (iMovie, Premiere Pro, etc.)

 **Pathway:** Art, Media & Design

GAME THEORY

Solve Real-World Problems Like a Mathematician:

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

Why Take This Course?

If you love math, logic, or strategic thinking, this course will give you the tools to analyze and solve complex problems using mathematical models. It's perfect for future studies in mathematics, economics, or any field where strategic decision-making is key, giving you a deeper understanding of how to approach intricate challenges logically and effectively.

 **NCAA-Approved**

 **Pathway:** Mathematics & Quantitative Reasoning

GENDER & SOCIETY

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

Why Take This Course?

If you're passionate about understanding how gender influences society, this course offers a deep exploration of identity and intersectionality. You'll gain valuable insights into how gender affects social and political landscapes, making it perfect for anyone interested in social justice, cultural studies, or exploring diverse perspectives.

 **NCAA-Approved**

 **Pathway:** Justice, Ethics & Human Rights

GENOCIDE & HUMAN RIGHTS

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

Why Take This Course?

You will engage in meaningful projects, such as developing strategies to address human rights violations in your community, and build the skills to analyze, reflect on, and contribute to solutions for these critical global issues. Perfect for students passionate about history, justice, and activism, this course will empower you to make a difference in shaping a more just and humane world.

Prerequisite: This course contains content that may not be appropriate for students younger than 15 years old.

 **NCAA-Approved**

 **Pathways:** Global Studies; Justice, Ethics & Human Rights

GEOMETRY

Fast-Track Your Geometry Mastery: This seven-week summer course provides a fast-paced journey through a full year's worth of high school geometry. With a focus on Euclidean geometry, you'll explore key concepts like parallel lines, triangle congruence and similarity, quadrilaterals, polygons, and circles. Get ready to analyze lengths, areas, and volumes of both two- and three-dimensional figures, while also tackling transformations and introductory trigonometry.

Why Take This Course?

If you're eager to accelerate your math studies, this course offers a rigorous and engaging challenge. You'll develop logical thinking skills through arguments, deductions, theorems, and proofs, all while mastering a blend of

theoretical and practical applications. With an intensive schedule (expect to dedicate 15–20 hours a week), you'll be well-prepared for future advanced math courses.

Prerequisite: A strong background in Algebra 1 or its equivalent

 **NCAA-Approved**

GLOBAL HEALTH

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

Why Take This Course?

Thinking about a career in healthcare or medicine? If you're passionate about improving health outcomes and addressing disparities, this course will equip you with the tools to understand and address complex global health issues. You'll learn the importance of understanding and respecting different cultures when planning health programs and explore the impact of resource distribution, preparing you to contribute thoughtfully to the field of global health and drive positive change.

 **NCAA-Approved**

 **Pathways:** Global Studies; Health Science

GRAPHIC DESIGN

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

Why Take This Course?

If you're interested in art, design, marketing, or visual storytelling, this course will empower you to design and prototype passion-driven communication projects driven by your interests. By the end, you'll have a portfolio of creative work and a solid understanding of how design shapes the way we share and interpret information.

 **Pathway:** Art, Media & Design

HEALTH & FITNESS

Chart Your Path to Lifelong Fitness: What factors influence our bodies as we strive to maintain an active and healthy lifestyle? In this course, you'll learn about

fitness components, exercise principles, training methods, movement phases, and athletic performance. You'll set personal fitness goals, track your progress, and engage in weekly exercises to target various areas of fitness. Through reflection and feedback, you'll understand how your efforts lead to improvement. The course ends with a student-led project where you will choose and explore topics that matter to you, such as nutrition, mental health in sports, exercise science, biomechanics, careers in sport, or community-based sports initiatives.

Why Take This Course?

This course will empower you to put what you learn into action, helping you develop and achieve personal health goals that will positively impact your life. Whether you're an athlete, aspiring trainer, or simply passionate about exercise science, you'll gain the knowledge and skills needed to lead a healthy and active lifestyle. Additionally, if your school has a physical education or health requirement that you can't seem to fit into your schedule, this course is for you.

 **Pathway:** Health Science

INTERNATIONAL RELATIONS

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

Why Take This Course?

If you want to understand the complexities of international relations, this course offers an in-depth exploration of the causes and consequences of war, peace, and human rights through real-world case studies. For anyone interested in the forces that shape the global political scene, this course is a great foundation for further studies in geopolitics.

 **Pathway:** Global Studies

INTRODUCTION TO ARTIFICIAL INTELLIGENCE

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

Why Take This Course?

If you're fascinated about how AI is shaping our future, this course will provide you with a well-rounded understanding of both the technical and ethical aspects of

artificial intelligence. By the end, you'll be equipped with the knowledge and skills to thoughtfully engage with AI's potential and challenges, preparing you to be an informed and responsible contributor in the field of computer science.

 **Pathway:** Computer Science & Engineering

INTRODUCTION TO BLOCKCHAIN & CRYPTOCURRENCY

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

Why Take This Course?

If you're excited by the fast-paced world of crypto, this course is your gateway to understanding both the technology and its implications. Through engaging technologies, activities, and collaborative projects, you'll analyze how blockchain and cryptocurrency disrupt and shape various industries, preparing you to navigate and contribute to this transformative field.

 **Pathways:** Business, Economics & Finance; Computer Science & Engineering

INTRODUCTION TO BRANDING & MARKETING

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

Why Take This Course?

If you're eager to learn the strategies behind successful brands, this course is for you. You'll apply marketing theories, go beyond the classroom to interview industry experts, and analyze modern case studies to become a skilled brand strategist. The course ends with a collaborative project where you'll design an impactful brand campaign for a mission-driven organization, gaining valuable real-world experience and insight for future careers or studies in business and marketing.

 **Pathway:** Business, Economics & Finance

INTRODUCTION TO LEGAL THINKING

Think Like a Lawyer: Step into the shoes of a lawyer in this engaging, case-based course that offers much more than just an introduction. You'll dive into real legal cases, sharpening your research, persuasive writing, and public speaking skills as you navigate the complex challenges lawyers face every day. From crafting legal briefs and advising fictional clients

to delivering compelling trial statements, you'll immerse yourself in the rules and practices that define the profession. Along the way, you'll examine big ideas like justice, fairness, jurisprudence, and ethics, uncovering insights that will deepen your understanding of the legal world.

Why Take This Course?

If you're curious about the world of law, this course offers a hands-on, practical look at what it takes to be a lawyer. Ideal for aspiring attorneys or anyone fascinated by legal reasoning, it will sharpen your critical thinking and communication skills, preparing you for future legal studies or simply enhancing your ability to think and argue like a pro.

 **NCAA-Approved**

 **Pathway:** Justice, Ethics & Human Rights

INTRODUCTION TO ORGANIC CHEMISTRY I

This course is a prerequisite for Introduction to Organic Chemistry II at GOA.

Master the Building Blocks of Life: Prepare for university-level organic chemistry with this in-depth course focused on the mechanisms and reactions that form the basis of all living things as well as the principles of carbon chemistry. You'll discover the magnificent world of complex molecules, their properties, and reactions through real-world applications. This course is packed with engaging hands-on activities that will equip you with essential skills to address today's most pressing scientific challenges. You'll learn to predict electron movement for organic reactions, understand molecular structures, bond angles, shapes, polarity, and resonance, and master the fundamentals of organic nomenclature.

Why Take This Course?

If you're a future pre-health student or science major, this course is designed to build your problem-solving and pattern-recognition skills, preparing you to confidently speak the language of organic chemistry. It's the perfect foundation for success in one of the most challenging yet vital subjects in college science programs.

This course is the first in a two-part series. Organic Chemistry I is offered in Semester 1 and Organic Chemistry II is offered in Semester 2. While it is possible to take only this first course, we recommend signing up for both semester courses.

Prerequisite: Students should have taken the equivalent of one year of general chemistry prior to taking this course.

 **NCAA-Approved**

 **Pathway:** Health Science

INTRODUCTION TO ORGANIC CHEMISTRY II

Solve Global Challenges With Carbon Chemistry: What should we think about when creating materials so they don't hurt the environment when we throw them away? What types of energy can we use that are more sustainable and can help us move away from relying on fossil fuels? These are just some of the critical questions you'll tackle as you continue your journey into the fascinating world of carbon chemistry, deepening your understanding of the organic world and its impact on global challenges. You'll expand your knowledge of the language of organic chemistry as you learn about additional functional groups, classes of organic molecules, and advanced nomenclature and reaction types. You will also dive into topics like sustainable materials, medical

technology advancements, and the creation of better energy sources. With a focus on the important structures of organic molecules, you'll master predicting chemical outcomes from specific precursors and gain insights into the chemistry that impacts our everyday lives.

Why Take This Course?

If you're passionate about using science to address global problems and appreciate the interconnectedness of the organic world, this course will empower you with a greater understanding of polymerization, material science, and spectroscopy. Perfect for aspiring chemists, engineers, medical professionals, or anyone eager to make a meaningful impact through chemistry, you'll leave with the skills and knowledge to contribute to a more sustainable and innovative future.

Prerequisite: *Introduction to Organic Chemistry I*

 **NCAA-Approved**

 **Pathway:** Health Science

INTRODUCTION TO PSYCHOLOGY

Understand the Human Mind: What does it mean to think like a psychologist? In this course, you'll explore three main perspectives—behavioral, cognitive, and sociocultural—to develop a well-rounded understanding of the human mind and behavior. You'll also examine how psychologists put what they know into practice through research methods, ethics, and real-world applications. Engage in hands-on projects, like analyzing adolescent psychology and creating a case study on depression. The course wraps up with a dive into positive psychology, giving you tools to understand how to live mentally healthy and fulfilling lives.

Why Take This Course?

Curious about how the human mind works? Throughout the course, you'll engage in collaborative projects and activities and learn from peers around the world. You'll also hone your research and critical-thinking skills. Perfect for anyone interested in the science behind behavior, this course will help you build psychology skills that are valuable to both academic and everyday life.

 **NCAA-Approved**

 **Pathway:** Psychology & Neuroscience

INVESTING I

This course is a prerequisite to Investing II at GOA.

Make Smart Financial Decisions: Step into the shoes of an investor, using real-world tools, theories, and decision-making practices to make smart financial choices. You'll explore key finance concepts, like valuation and risk management, and apply them to portfolio management, venture capital, and social investing. You'll learn how to manage and grow an investment portfolio by simulating investments in stocks, bonds, and options. Take on the role of a venture capital investor, analyzing startups and forecasting their potential before they go public, as well as exploring social investing to see how finance can be a powerful force for positive change.

Why Take This Course?

With insights from finance experts and hands-on experience, you'll leave the course with a simulated investment portfolio and the skills to thoughtfully assess

financial risks and rewards. Whether you're an aspiring investor, entrepreneur, or someone curious about global financial markets, this course will prepare you to navigate the complex world of finance with confidence.

 **Pathway:** Business, Economics & Finance

INVESTING II

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

Why Take This Course?

Guided by insights from financial experts, you'll develop your own strategies for identifying value and taking calculated financial decisions. Perfect for anyone aiming to advance their investment skills or study economics and business, you'll gain a sophisticated understanding of portfolio management and the tools needed to thrive in today's dynamic global financial markets.

Prerequisite: *Investing I*

 **Pathway:** Business, Economics & Finance

JAPANESE LANGUAGE THROUGH CULTURE I

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

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

Why Take This Course?

This course provides a unique experience that seamlessly blends language learning with cultural appreciation. Perfect for beginners, this course will expand your global perspective and set you on an exciting path toward mastering Japanese language and gaining a deeper appreciation for Japanese culture.

 **NCAA-Approved**

 **Pathway:** Global Studies

JAPANESE LANGUAGE THROUGH CULTURE II

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

Expand Your Voice and Perspective: Building on your foundational skills, this course will take your Japanese language abilities to the next level, enhancing your speaking, listening, writing, and reading skills while immersing you further into Japanese culture. You'll engage in interpreting authentic Japanese material, practicing communication through speaking and writing, and delivering impactful oral and written presentations. Each unit explores fascinating cultural topics,

such as design and expression, ecology, entertainment, East meets West, harmony, and nature, with opportunities to explore your own interests. You'll learn advanced grammar forms typical of second- and third-year high school Japanese, progressing from simple sentences to more complex, coherent paragraphs.

Why Take This Course?

This course will empower you to share your voice, broaden your global perspective, and appreciate both yourself and others through meaningful language learning. By curating and creating course content through research and collaboration with global peers, you'll enjoy a highly engaging and immersive experience that blends language and cultural exploration.

Prerequisite: Successful completion of *Japanese Language Through Culture I* or permission from the instructor. Students who have completed *Japanese I* (or its equivalent) outside of GOA are required to take an oral placement assessment before beginning GOA's *Japanese II* course and should contact hello@globalonlineacademy.org to set up their oral placement. Additionally, incoming *Japanese II* students have mastered all hiragana, katakana, and *Japanese I* grammar and vocabulary.

 **NCAA-Approved**

 **Pathway:** Global Studies

JAPANESE LANGUAGE THROUGH CULTURE III

Communicate Naturally and Confidently: Take your language and grammar skills to new heights as you develop your ability to understand the nuances of the Japanese language. Through face-to-face conversations and recorded messages, you'll practice informal styles, gaining confidence in using the Plain Form in conversations with your peers and teacher. You'll also dive into authentic, real-world Japanese by curating and interpreting materials like TV commercials, news articles, movies, children's books, and cooking recipes.

Why Take This Course?

This course will help you communicate naturally and effectively in Japanese while collaborating with peers and embracing a global perspective. It's perfect for students eager to refine their language skills and engage with Japanese culture in meaningful and practical ways.

Prerequisite: Successful completion of *Japanese Language Through Culture I* and *II* or permission from the instructor. Students who have completed *Japanese II* (or its equivalent) outside of GOA are required to take an oral placement assessment before beginning GOA's *Japanese III* course and should contact hello@globalonlineacademy.org to set up their oral placement. Additionally, incoming *Japanese III* students have mastered most of the conjugation patterns (TE/TA form, dictionary form, and NAI form) that are necessary to speak and write in complex structures.

 **NCAA-Approved**

 **Pathway:** Global Studies

LINEAR ALGEBRA

Transform Math Into Meaning: Explore the algebra of vector spaces and matrices through real-world applications in computer graphics and social network analysis. Starting with how images and objects are transformed in the

plane and space, you will gain hands-on experience with core concepts. You'll dive into the practical side of math by modeling social networks and analyzing connections on platforms like Facebook and Google.

Why Take This Course?

Perfect for students interested in mathematics, computer science, or data analysis, this course will help you build problem-solving skills while providing a strong foundation in linear algebra with engaging, real-world applications.

Prerequisite: *Geometry and Algebra II* or the equivalents (no prior experience with this software or linear algebra is necessary)

 **NCAA-Approved**

 **Pathway:** Mathematics & Quantitative Reasoning

MACROECONOMICS

Understand National and Global Economies: Have you ever wondered what influences make a nation's economy tick? In this course, you'll explore key concepts like gross domestic product, unemployment, and inflation to understand how national economic activity is measured, along with the strengths and limitations of these statistics. You'll also gain an understanding of the complexities of international trade and exchange rates, and learn about monetary and fiscal policies used to influence economic activity.

Why Take This Course?

Ideal for students interested in economics, this course will strengthen your knowledge of how economies function and prepare you to think critically about global economic issues. By conducting an in-depth investigation of a national economy beyond your own, you'll gain practical insights and be prepared to analyze and propose solutions for real-world economic challenges.

 **NCAA-Approved**

 **Pathway:** Business, Economics & Finance

MEDICAL PROBLEM SOLVING I

This course is a prerequisite to Medical Problem Solving II at GOA.

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

Why Take This Course?

If you're passionate about health and medicine, this course offers hands-on experience with the principles and practices of the medical field. Through role-playing scenarios with your peers as medical professionals and patients, you'll gain a deeper understanding of the medical world, making this course perfect for aspiring healthcare professionals.

 **NCAA-Approved**

 **Pathway:** Health Science

MEDICAL PROBLEM SOLVING II

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

Why Take This Course?

If you're passionate about medicine, health, and social justice, this course offers a unique opportunity to explore these topics through a global and ethical lens. By examining complex healthcare issues and proposing ideas for change, you'll develop a deeper understanding of the challenges and intricacies of the medical world, empowering you to advocate for better health outcomes in your community and beyond. Perfect for aspiring healthcare professionals and anyone driven to make a meaningful impact.

Prerequisite: Medical Problem Solving I

 **NCAA-Approved**
 **Pathway:** Health Science

MICROECONOMICS

Understand Market Dynamics: What drives the economic choices we make? Explore how consumers and producers interact to form markets and learn about the reasons behind government intervention in those markets. You'll deepen your understanding of core microeconomic concepts through engaging discussions, debates, problem-solving activities, and reflective writing. You'll apply what you've learned by visiting a local production site and crafting a report that analyzes market principles in action.

Why Take This Course?

Gain a practical understanding of how markets operate and how economic decisions affect your everyday life. Thinking like an economist, you'll become more informed and empowered as a consumer, worker, future voter, or producer. This course is perfect for anyone eager to understand the economic forces that shape our world.

 **NCAA-Approved**
 **Pathway:** Business, Economics & Finance

MULTIVARIABLE CALCULUS I: VECTOR & DIFFERENTIAL CALCULUS

This course is a prerequisite for Multivariable Calculus II: Integral Calculus.

Explore the Math of Higher Dimensions: Embark on an exciting journey into multivariable calculus through vector and differential calculus, setting the groundwork for advanced study in three-dimensional space. You'll begin with parametric equations, polar coordinates, and space curves to explore movement and paths in higher dimensions. Then you'll progress into three-dimensional coordinate systems, mastering vectors, dot and cross products, and equations of lines and planes in space. Dive deeper into vector functions, derivatives, integrals, arc length, and

curvature to quantify the behavior of curves in space. Then you will be ready to analyze functions of several variables, using tools like limits, continuity, partial derivatives, and the gradient vector, and you'll apply these skills to optimization problems, including constrained optimization with Lagrange multipliers.

Why Take This Course?

Do you want to push your understanding of mathematics even further? Through collaborative projects and the use of a computer algebra system (CAS), you'll connect mathematical concepts to real-world applications and develop fluency in tackling multi-dimensional challenges. Perfect for students passionate about advanced mathematics, this course provides a strong foundation for further studies in calculus, physics, engineering, or applied sciences.

Prerequisite: A solid foundation in 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.

 **NCAA-Approved**
 **Pathway:** Mathematics & Quantitative Reasoning

MULTIVARIABLE CALCULUS II: INTEGRAL CALCULUS

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

Why Take This Course?

Using a computer algebra system (CAS), you'll visualize problems and enhance your understanding through collaborative projects and real-world applications. Ideal for aspiring mathematicians, physicists, or engineers, this course prepares you to tackle complex, multi-dimensional problems with confidence and precision.

Prerequisite: Successful completion of Multivariable Calculus I: Vector & Differential Calculus, and the equivalent of a university year of single-variable calculus with integration techniques, including trigonometric substitution, integration by parts, and partial fractions. Completion of the AP Calculus BC curriculum with a score of 4 or 5 on the AP Exam would be considered adequate preparation.

 **NCAA-Approved**
 **Pathway:** Mathematics & Quantitative Reasoning

NEUROPSYCHOLOGY

Understand the Brain-Behavior Connection: Have you ever wondered how the anatomy of the brain shapes behavior? Discover the fascinating connections as you learn about neural function as well as cognitive and behavioral disorders. Explore how neural communication works and examine

how environmental factors, like smartphone use, impact the nervous system and human behavior. You'll have the chance to choose research subjects that interest you and dive further into topics like Alzheimer's disease, addiction, neuroplasticity, and neurodegenerative diseases as you share your findings with your peers in creative ways.

Why Take This Course?

If you're curious about the science behind behavior and brain function, this course offers a captivating exploration into the workings of the human mind. By analyzing contemporary and historic neuropsychological case studies, you'll learn how to apply your knowledge to real-world scenarios. Ideal for students interested in psychology, neuroscience, or healthcare, this course will provide you with a strong foundation in understanding the neurological reasons behind human behavior.

 **NCAA-Approved**

 **Pathway: Psychology & Neuroscience**

NUMBER THEORY

Discover the Math Running Digital Security: Once considered the most abstract and least practical area of mathematics, number theory is now essential to our everyday digital world: every second, millions of secure internet transmissions rely on number theory for encryption. In this course, you'll explore the world of mathematical reasoning and proof, learning the tools needed to understand the RSA algorithm—the backbone of global internet security. You'll also invent your own encryption schemes and encounter games that use number theory. Alongside practical applications, you'll get a taste of the rich history of this subject, from legendary mathematicians to the proof of Fermat's Last Theorem (a famous problem solved just 20 years ago after 350 years of effort).

Why Take This Course?

You'll gain a solid foundation for upper-level university mathematics or theoretical computer science while understanding how number theory is applied in real-world encryption. This course makes mathematical reasoning and proof accessible and engaging, blending elegant concepts with practical uses. Ideal for students fascinated by math, cryptography, or computer science, you'll discover how timeless mathematical ideas power our modern, connected world.

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

 **NCAA-Approved**

 **Pathway: Mathematics & Quantitative Reasoning**

PERSONAL FINANCE

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

Why Take This Course?

This course prepares you to manage your finances wisely while thinking about how your financial decisions can have a positive impact on the world around you. Perfect for anyone looking to build a solid financial foundation and make informed, socially conscious financial choices, this is your pathway to understanding the essentials of personal finance.

 **Pathway: Business, Economics & Finance**

POSITIVE PSYCHOLOGY

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

Why Take This Course?

In a collaborative, practical learning environment, you'll design and share projects that explore what makes life meaningful, and you'll walk away with tools and insights that will inspire and guide you for years to come. This course is perfect for anyone who wants to study psychology or who may just be curious about the science of happiness and eager to create a life of fulfillment.

 **NCAA-Approved**

 **Pathway: Psychology & Neuroscience**

PRECALCULUS

Accelerate Your Advanced Math Concepts: This seven-week summer course will take you on a fast-paced journey through a full year of high school precalculus. With a focus on functions—transformations, domain and range, and visual representations—you'll also deepen your understanding of equivalence across numerical, graphical, and algebraic forms while mastering algebraic manipulation. You'll apply existing skills to new situations as you tackle projects involving polynomials, matrices, trigonometry, sequences, and series while analyzing situations, creating models, and developing solutions. The experience culminates in a final project where you'll apply everything you've learned to explore and present a complex scenario.

Why Take This Course?

Perfect for motivated students looking to accelerate their math studies, this rigorous course will prepare you for success in higher-level mathematics. Expect an intensive schedule (dedicating 15–20 hours per week) for a rigorous and engaging challenge.

Prerequisite: Algebra 2 or its equivalent

 **NCAA-Approved**

PRISONS & CRIMINAL JUSTICE SYSTEMS

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

Why Take This Course?

Through research, legal reasoning, and advocacy, you'll engage in meaningful projects that ask you to communicate with specialized audiences, such as juries, and investigate local legal systems. This course will challenge you to critically analyze justice systems and contribute to real-world solutions. Ideal for students interested in law, ethics, or social justice, this course will equip you with the tools to analyze and advocate for meaningful reforms in justice systems worldwide.

 NCAA-Approved

 Pathway: Justice, Ethics & Human Rights

PROBLEM SOLVING WITH ENGINEERING & DESIGN

Think Like an Engineer: Dive into the exciting intersection of science, technology, engineering, and mathematics by tackling meaningful, real-world challenges. In this project-based course, you'll develop essential engineering skills like design principles, modeling, and presentation techniques while leveraging a variety of computer hardware and software tools. Collaborating in teams, you'll design prototypes and explore practical applications of science and math to address issues in your home, community, and beyond.

Why Take This Course?

Step into the role of an engineer and discover the diverse ways they impact society. You'll work on projects that not only solve real-world problems but also open the door to potential career paths in science and math. Perfect for creative thinkers and problem-solvers, you'll develop the skills and experience needed to innovate and make a difference.

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!

 NCAA-Approved

 Pathways: Computer Science & Engineering; Mathematics & Quantitative Reasoning

RACE & SOCIETY

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

Why Take This Course?

This course is perfect for students who want to understand how social constructs shape our world. You'll be empowered to contribute thoughtfully to important conversations about race and culture in your other high school courses and beyond.

 NCAA-Approved

 Pathway: Justice, Ethics & Human Rights

RELIGION & SOCIETY

Examine the Power of Belief: Religion is one of the most influential forces in today's world, yet it's often misunderstood. What exactly is religion, and how does religious identity shape the way we understand ourselves and the world? Can learning more about religion make us more engaged and effective members of society? In this course, you'll learn from case studies and explore how religious identity intersects with systems of power like race, gender, class, sexual orientation, and ethnicity.

Why Take This Course?

Through thought-provoking material from history, sociology, anthropology, and psychology, you'll gain a deeper understanding of how religion and society are intricately connected. Perfect for students eager to explore the complexities of religious identity and its impact on contemporary issues, this course will prepare you to engage thoughtfully and knowledgeably with the diverse world around you.

 NCAA-Approved

 Pathway: Justice, Ethics & Human Rights

SOCIAL PSYCHOLOGY

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

Why Take This Course?

Think like a social psychologist as you analyze topics such as prejudice, persuasion, conformity, altruism, relationships, and group dynamics. Perfect for anyone curious about human behavior, this course will help you build critical skills in inquiry, experimentation, and analysis, preparing you to understand and interpret the forces that influence us every day.

 NCAA-Approved

 Pathway: Psychology & Neuroscience

Explore our course catalog and register at
www.globalonlineacademy.org