UPPER SCHOOL
COURSE CATALOG

2022-2023

LOUISVILLE COLLEGIATE SCHOOL

Louisville Collegiate School

Mission:

Louisville Collegiate School inspires academic excellence, extraordinary character and global citizenship.

Vision:

Louisville Collegiate School distinguishes itself as a preeminent college preparatory institution that instills its students with a lifetime commitment to learning, extraordinary character, and the confidence to excel in both global and local communities.

Core Principles:

- Commitment to achieve academic and personal excellence
- Determination to fulfill individual potential
- Creativity and independent thought
- Adaptability to change
- Balance in development of mind, body and spirit
- Respect for each individual
- Support for each member of the school family
- Celebration of differences
- Self-discipline in all actions
- Understanding of our global community
- Courage in the responsible exercise of freedoms
- Participation in civic life and community leadership

For information about the application process, please contact the Collegiate Admissions Office.

Louisville Collegiate School
2427 Glenmary Ave.
Louisville, KY 40204
502-479-0340

TABLE OF CONTENTS

THE UPPER SCHOOL CURRICULUM

The Upper School aims to promote individual responsibility through a robust curriculum that provides a core academic foundation enriched through academic electives, activity options, leadership opportunities, and community service choices. The individual needs and talents of upper school students are valued as they pursue educational goals. Additionally, the upper school faculty recognizes the importance of developing an interdependent learning community. Students and their families are encouraged to make choices within the framework of our college preparatory program.

ACADEMIC EXCELLENCE

Academic Excellence is a critical foundation for future success and an essential pathway to joy. Academic Excellence means preparing scholars for college and life beyond college by inspiring an enduring love of learning. Accordingly, Academic Excellence at Collegiate must be an evolving program of instruction that employs best practices and innovation to challenge Collegiate students to grow into increasingly committed and enthusiastic learners.

PERSONALIZED COURSE OF STUDY

Louisville Collegiate is not a magnet school or a one-size-fits-all school. We work to tailor each student's four-year course of study plan based on each student's needs, strengths, passions, and curiosity. Students can enroll in a minimum of five honors courses each year, or students can enroll in six to seven courses that could include a mix of AP and honors level courses, depending on the grade level. We have ninth-grade students enrolled in math classes such as Algebra I or Accelerated Precalculus; science classes such as Honors Biology or Honors Chemistry; world language courses such as French I or Spanish IV; or elective courses in Robotics or Fine Arts. As each student progresses to the next grade level, the more choices there are within his/her course selection. Students needing more than a traditional classroom to further their studies may be encouraged to enroll in an independent study, online course, or conduct research at a local university.

ADVANCED COURSE INFORMATION

Why Advanced Courses?

- Advanced courses provide the opportunity to do college-level work and perhaps obtain college-level credit.

- Students who enjoy a subject area can develop their passion through advanced-level work.
- The selection of advanced courses may affect the college admission process by increasing the strength of a transcript. Please discuss your college expectations with the college counseling office before making course selections.

General Guidelines and Expectations for Advanced Courses

- Students spend at least 50% more time on advanced courses than honors-level courses, so care must be taken to balance course load with extracurricular activities.
- The curriculum and standards for advanced courses are influenced by the College Board, an organization that manages the Advanced Placement program.
- Students who enroll in an advanced course at Collegiate are encouraged to take the corresponding College Board Advanced Placement Exam in May. Students who wish not to take the exam may appeal in writing to their advanced course teacher.
- Each Advanced Placement exam requires a financial commitment of approximately $100.
- Students wishing to take more than three advanced courses in one year must obtain permission from the Head of Upper School.
- Students requesting advanced courses must obtain the permission of the instructor/department.

ADVANCED COURSE WEIGHTING FOR GPA

GPA values in advanced classes will be multiplied by a factor of 1.15 before averaging in with other course work. This approach recognizes student achievement in a college-level course. The higher the student's grade, the more significant the advanced course weighting will have on the GPA.

Student transcripts will display weighted and unweighted GPA values. Weighted GPAs will be used to determine internal awards, study out, and honor societies. Unweighted GPAs are displayed since most colleges use their own weighting to determine applicant GPA. Students should use the weighted GPA when reporting their GPA to external organizations (colleges, universities, scholarship programs).

COLLEGE ENTRANCE REQUIREMENTS

The Louisville Collegiate School graduation requirements provide a strong preparation for college. Students also have substantial flexibility in course selection to specialize in areas of interest and strength. The Collegiate requirements, in general, will satisfy the admissions criteria of a vast majority of colleges. However, some colleges may have admissions requirements that exceed the Collegiate diploma requirements in certain areas. Students are encouraged to research the entrance requirements of colleges to which they intend to apply to tailor their upper school course of study to meet those requirements.

PROGRAMS OF STUDY ELSEWHERE

Students may apply for permission to pursue programs of study outside Collegiate for one or more semesters. The caliber and academic demands of the programs should be at least comparable to those offered at Collegiate. Applications are reviewed and resolved by the Collegiate administration in consultation with the department chairs. Students who earn approval for such programs still need to satisfy all of the diploma requirements for Collegiate, with courses taken elsewhere earning graduation credit only as approved in advance. Grades earned are not added to Collegiate transcripts and not factored into Collegiate GPAs.

UPPER SCHOOL GPA CALCULATION

The Upper School calculates GPA by multiplying the credit earned in each course for each period by the numerical translation of the alphanumeric grade, adding all of those values, and dividing by the total number of credits earned. Grades earned in The Edge and Lab Assistant appear on the grade reports and transcripts but are not calculated into the GPA. The weighted GPA column is used for advanced courses.

Grading	Scale	GPA	Weighted GPA
A+	98-100	4.33	4.98
A	93-97	4.00	4.60
A-	90-92	3.67	4.22
B+	87-89	3.33	3.83
B	83-86	3.00	3.45
B-	80-82	2.67	3.07
C+	77-79	2.33	2.68
C	73-76	2.00	2.30
C-	70-72	1.67	1.92
D+	67-69	1.33	1.53

D	63-66	1.00	1.15
D-	60-62	0.67	0.77
F	Below 60	0.00	0.00

COURSE REQUEST TIMELINE

February The 2022-23 Course Catalog will be made available on February 1 in communication from the Upper School Dean of Academics and on the school's website. The Upper School Dean of Academics and the college counselors will meet with each grade level in February to provide course selection information and hold a question and answer session. Students will consult their current teachers and adviser during class and advisory time during February.

March 2 Course Request Forms must be signed by current 9th, 10th, and 11th-grade students and parents and submitted to advisers by this day for priority scheduling.

March 8 Course request forms for current 8th-grade students and all new students are due to either the Middle School or Upper School main offices.

June A letter from Meghann Scharfenberger indicating the math and language placements for rising 9th-grade students will be mailed home.

ADDING/ DROPPING A COURSE

Once the school year starts, a student may wish to add a course to their schedule. A student may add a course up to three class meetings after the semester has begun, with permission of the teacher, Ms. Scharfenberger, and the parent or guardian. This restriction also applies to students wishing to add an independent study course or senior project. Ms. Scharfenberger will announce and post the deadline on the school calendar for adding courses each semester. A student dropping a course before the end of the sixth week of the course start date will have no record on his or her transcript. A student who drops a course after the sixth week of the course will have a notation on his or her transcript indicating "withdrawn passing" or "withdrawn failing." The grade will be based on the student's performance through the date on

which the course was dropped. Note that a student must carry at least five academic courses at all times (this includes through exams to the end of the semester). Academic courses are courses from English, fine arts, history, math, science, computer science, and world language departments.

COURSE REQUEST GUIDELINES

- Students must submit preliminary course requests to their adviser on March 2nd.
- No fewer than five and no more than six credits of academic classes may be scheduled in ninth and tenth grades. Eleventh and twelfth grade students may submit a petition to the Head of Upper School requesting seven academic classes.
- Academic classes are classes from English, fine arts, history, math, science,, and world language departments.
- When requesting semester electives, take caution in mixing electives from differing departments and consult the "semester courses offered" list for assistance.
- Rising 9th and 10th grade students may request an elective in lieu of two study halls per rotation (leaving them with one or two per rotation). A fine art, second math, technology, second history (10th), or a second language course may be chosen. To select electives please consult the student electives page of this catalog.
- Rising 12th grade students should review the graduation requirements and consult their college counselor, or advisor to ensure they are requesting the courses needed for graduation.
- If students are enrolled in five classes each semester, provided they include courses specified in the graduation requirements, they will fulfill their graduation requirements by the end of their senior year.
- A student heavily involved in extracurricular activities should strongly consider taking only five academic classes to ensure plentiful study hall time.

Staffing decisions for the 2022-23 school year are based on the number of course requests made in February 2022. Course changes cannot be guaranteed, but the school is committed to working with students during the drop/add period if a course change is requested.

UPPER SCHOOL COURSE OFFERINGS BY DEPARTMENT

ENGLISH

Required Courses:
Honors Intro to Literature and Composition
Honors World Literature and Composition
Honors English: American Studies, Advanced English: American Studies
Honors English: The Self and Other, Advanced English: The Self and Other

Electives:
Center of Writing Student Consultant

FINE ARTS

General Art Courses
Honors Art History/ Advanced Art History
2-D Studio Art
3-D Studio Art
Honors Drawing, Painting and Printmaking
Honors Art Portfolio Design
Advanced Studio Art
Graphic Design
Photography
Strings Ensemble
Contemporary Instrumental Ensemble
Honors Theatre
Honors Theatre: Second Stage
Musical Theatre Workshop
Honors Mixed Media and Sculpture
Vocal Chorale Ensemble
Independent Study in Music, Theatre, Visual Art

CHARACTER and WELLNESS

Required Courses:
Character 9th: Honor
Character 10th: Compassion
Character 11th: Respect
Character 12th: Responsibility

HISTORY

Required Courses:
Approaches to History I
Approaches to History II
Honors/Advanced History: American Studies

Electives:
Honors Human Rights
Honors/Advanced Government & Politics
Honors Women in History
Honors/Advanced Psychology

INTERDISCIPLINARY

Entrepreneurial Problem Solving
Entrepreneurship Through Startup
Maker Design and Prototyping

MATH

Required Courses:
Honors Algebra I
Honors Geometry
Honors/Advanced Algebra II

Electives:
Honors College Algebra and Trigonometry
Honors Precalculus or Advanced Precalculus
Honors Calculus
Advanced Calculus AB
Advanced Calculus BC
Advanced Statistics or Honors Statistics

PHYSICAL EDUCATION

Required Course
Lifetime Fitness and Wellness

SCIENCE

Required Courses

Honors Biology
Honors Chemistry

Electives:

Honors Conceptual Physics
Honors Physics
Advanced Biology (may be taken in place of Honors Biology)
Advanced Chemistry
Advanced Physics
Advanced Physics C
Honors Environmental Science
Robotics

COMPUTER SCIENCE

Global Online Academy, Technology Assistant

WORLD LANGUAGE

FRENCH

Honors French I
Honors French II
Honors French III
Honors French IV
Honors French: Developing Language through Culture
Honors French V
Advanced French V

SPANISH

Honors Foundations in Spanish
Honors Spanish I
Honors Spanish II
Honors Spanish III
Honors Spanish IV
Honors Spanish: Developing Language through Culture
Advanced Spanish V
Advanced Spanish Literature

Co-Edge

A quarterly co-curricular program that prepares students for life beyond Collegiate.

GRADE 10

Ethics - This course gives students an intentional space to learn the fundamentals of ethical reasoning and opportunities to practice and develop acumen for confronting challenges related to personal, professional, and public ethics.

Coding - This course begins with lessons in HTML so that students learn how to format a website and experiment with CSS to adjust the style and layout of a site.

Wayfinder - During Wayfinder, all students in the course explored a process for discovering and identifying their respective purpose--a process that can be revisited over and over throughout their life as their interests, strengths, and values shift and evolve. We utilized several pedagogical methods throughout the course, e.g. mindfulness, visualization, small group and large group discussion, journaling, and other contemplative exercises.

Respect (Character Education) - This character course focuses on our respect cornerstone. Respect in relationships, on social media, in our school, and within the community will focus on this course.

GRADE 11

Public Speaking - This public speaking course is designed to provide the student with a critical understanding and increased formal public speaking skills.

Design Principles - This project-based course will enable all students to tinker, create, and work in a makerspace using high tech tools such as a laser cutter, soldering iron, vinyl cutter, and a 3D Printer.

College 101: Self-Discover and Test Prep - College 101 with SAT/ACT Test Prep - through Method Test Preparation, the college counselors will operate a test prep lab.

Meditation/ Give: *Rooted in mindfulness-based practices, neuroscience and transformative mind-set work, this course helps students explore the fundamentals of Grounding, Nourishing, Observing & Moving in order to help manage stress and create balance in their busy lives.*

GRADE 12

College 102: College App Lab - This seminar will walk students through the college application process, including the Common Application and essay writing. All seniors will take this Quarter 1 divided into three groups between college counselors.

Life Skills- This course will introduce students to skills that are applicable to the transition from the upper school. Skills include, but are not limited to resume writing, self-defense, and basic auto mechanics.

Transitioning to College - This course will focus on transitioning to college and life beyond the high school years.

GRADUATION REQUIREMENTS
Class of 2023

Collegiate's graduation requirements include 23.25 units of classes. One unit of class is roughly equivalent to a full year class that meets every-other-day for 75-minutes.

English	**4 Credits** One English class each year.
History	**3 Credits** including Honors Global Studies, Global History electives or Adv. European History, and Honors History: American Studies or Advanced History: American Studies ***Honors or Adv. English: American Studies and Honors or Adv. History: American Studies must be taken concurrently junior year.***
Mathematics	**3 Credits** in grades 9-12, for most, Honors Algebra I, Honors Geometry, Honors or Advanced Algebra II (sequence based on placement from Middle School.) Regardless of where a student begins in the sequence, three math courses must be taken.
Science	**3 Credits** including Honors Biology and Honors Chemistry
World Lang.	**3 Credits** or **2 Credits** if courses include a level 3 language**
Fine Arts	**2 Credits**
Character	**.5 Credit**
Lifetime Fitness and Wellness	**1 Credit**
The Co-Edge	**1.75 Credits**
May Term	**0.25 Credit**
Electives	**2 credits if a student takes 3 credits of a World Language or 3 credits of electives with 2 credits of a World Language**

Senior Speech, Final Senior Project/Experience

**Units towards World Language Graduation requirements must be consecutive years of the same world language.

GRADUATION REQUIREMENTS
Class of 2024

Collegiate's graduation requirements include 23.25 units of classes. One unit of class is roughly equivalent to a full year class that meets every-other-day for 75-minutes.

English	**4 Credits** One English class each year.
History	**3 Credits** including Honors Global Studies, Approaches to History II, and *Honors History: American Studies or Advanced History: American Studies ****Honors or Adv. English: American Studies and Honors or Adv. History: American Studies must be taken concurrently junior year.***
Mathematics	**3 Credits** in grades 9-12, for most, Honors Algebra I, Honors Geometry, Honors or Advanced Algebra II (sequence based on placement from Middle School.) Regardless of where a student begins in the sequence, three math courses must be taken.
Science	**3 Credits** including Honors Biology and Honors Chemistry
World Lang.	**3 Credits** or **2 Credits** if courses include a level 3 language**
Fine Arts	**2 Credits**
Character	**.5 Credit**
Lifetime Fitness and Wellness	**1 Credit**
The Co-Edge	**1.75 Credits**
May Term	**0.50 Credits**
Electives	**2 credits if a student takes 3 credits of a World Language or 3 credits of electives with 2 credits of a World Language**

Senior Speech Final Senior Project/Experience

**Units towards World Language Graduation requirements must be consecutive years of the same world language.

GRADUATION REQUIREMENTS
Class of 2025 and beyond

Collegiate's graduation requirements include 25.25 units of classes. One unit of class is roughly equivalent to a full year class that meets every-other-day for 75-minutes.

English	**4 Credits** One English class each year.
History	**3 Credits** including Approaches to History I and II, and *Honors History: American Studies or Advanced History: American Studies ***Honors or Adv. English: American Studies and Honors or Adv. History: American Studies must be taken concurrently junior year.***
Mathematics	**3 Credits** in grades 9-12, for most, Honors Algebra I, Honors Geometry, Honors or Advanced Algebra II (sequence based on placement from Middle School.) Regardless of where a student begins in the sequence, three math courses must be taken.
Science	**3 Credits** including Honors Biology and Honors Chemistry
World Lang.	**3 Credits** or **2 Credits** if courses include a level 3 language**
Fine Arts	**2 Credits**
Character	**1 Credit .**25 each year
Lifetime Fitness and Wellness	**1 Credit**
The Co-Edge	**2.5 Credits**
May Term	**0.75 Credits**
Electives	**2 credits if a student takes 3 credits of a World Language or 3 credits of electives with 2 credits of a World Language**

Senior Speech and Final Senior Project/Experience

**Units towards World Language Graduation requirements must be consecutive

years of the same world language.

COURSES OF STUDY

The Upper School student schedule functions in 8 periods over two days- four periods per day for 75 minutes each. Sample courses of study for students in the various grades are given below. Details concerning the content of particular courses follow.

In grades 9 and 10, students may choose to enroll in a Study Hall instead of a sixth course. Students with heavy extracurricular commitments should strongly consider not taking an elective in grades 9 and 10 so that they may have additional study hall time.

Grade 9 Course of Study

1. English: Honors Intro to Literature and Composition
2. Mathematics
3. History: Approaches to History I
4. Science: Honors Biology, Honors Conceptual Physics, or Honors Chemistry
5. World Language (dependent on MS courses)
6. Elective: Fine Arts, Computer Science, or second course in academic subjects
7. Study Hall and Freshman Character: Honor
8. Physical Education: Lifetime Fitness and Wellness
9. May Term

Grade 10 Course of Study

1. English: Honors World Literature and Composition
2. Mathematics (recommended by teacher and Department Chair, next course in the department sequence)
3. History: Approaches to History II
4. Science: Honors Chemistry or Adv. Chemistry, Adv. Bio, Honors Physics, or Honors Conceptual Physics
5. Honors World Language
6. Study Hall or Elective: Fine Arts, Computer Science, or second course in academic subjects
7. Study Hall and Sophomore Character: Compassion
8. The Co-Edge
9. May Term

Grade 11 and 12 Courses of Study

Students in grades 11 and 12 have more choices in their course of study. They still have specific graduation requirements to complete, but students may choose the year in which many are completed. Shown below are three sample courses of study for students in Grades 11 and 12. The sample for a typical student with no special emphasis is given first, then one for a student with a focus in the Humanities, and

finally one for a student with a passion for Mathematics and Science. **Please note that the following courses of study are samples only.** They are not meant to prescribe particular sequences but rather to suggest the range of choices available to students.

General Studies (sample)

Grade 11

1. English: Advanced or Honors English: American Studies
2. Mathematics: Honors or Advanced Level
3. History: Honors or Advanced History; American Studies
4. Science: Advanced or Honors Elective
5. World Language: Level 3 or above
6. Elective: Fine Arts or Computer Science, or other department
7. The Co-Edge
8. Study Hall or Elective
9. May Term

Grade 12

1. English: Self & Other
2. Mathematics: Honors or Advanced Level Elective
3. History: Honors or Advanced Level Elective
4. Science: Honors or Advanced Level Elective
5. World Language: Honors or Advanced Level Elective
6. Elective: Fine Arts, Computer Science, or second course in academic subjects, could be Advanced
7. The Co-Edge
8. Study Hall or Elective
9. Final Senior Project/Experience

Humanities Emphasis (sample)

Grade 11

1. English: Advanced or Honors English: American Studies
2. Advanced or Honors Art History
3. Mathematics
4. History: Honors or Advanced History: American Studies
5. World Language: Level 3 or above
6. Fine Arts: Elective
7. Second language, second Fine Arts, or Study Hall
8. The Co- Edge
9. May Term

Grade 12

1. English: Senior Seminar
2. Mathematics
3. History: Advanced or Honors Level Elective
4. Science: Elective
5. World Language: Advanced Elective
6. Elective: Second English, Second Language or Fine Arts
7. Study Hall or Elective: Second English, Second Language or Second

Fine Arts
8. The Co-Edge
9. Final Senior Project/Experience

STEM Emphasis (sample)

Grade 11

1. English: Honors English: American Studies
2. Mathematics: Advanced level if recommended
3. Science: Advanced Elective
4. Science: Engineering Design or Advanced Elective
5. History: Honors History: American Studies
6. Elective: Science Lab Asst or Adv. Level Mathematics
7. Study Hall or Elective: Computer Science, Fine Arts, World Language
8. The Co-Edge
9. Final Senior Project/Experience

Grade 12

1. English: Self and Other
2. Mathematics: Advanced level if recommended
3. Science: Advanced Chemistry and/or Advanced Physics
4. World Language: Level 3 or above
5. Elective: Second math, science
6. Elective: Second math, science
7. Study Hall or Elective: Computer Science, Fine Arts, History
8. The Co-Edge
9. May Term

Arts Emphasis (sample)

Grade 11

1. English: Honors English: American Studies
2. Mathematics
3. History: Honors History: American Studies
4. Science: Elective
5. Fine Arts Elective
6. Fine Arts Elective
7. Fine Arts Elective or Independent Study
8. The Co-Edge
9. Final Senior Project/Experience

Grade 12

1. English: Self and Other
2. Mathematics
3. World Language: Level 3 or above
4. Fine Arts: Elective
5. Fine Arts Elective
6. Fine Arts Elective or Independent Study
7. Study Hall or Other Academic Elective
8. The Co-Edge

9. May Term

CHARACTER EDUCATION

Character courses are required each year of enrollment based on grade level. Upper School Character courses are intended to prepare older adolescents for college and adulthood. The objective is to assist students in considering personal responsibility for their own well-being and choices in terms of ethics, peer pressure, family ideals, individual goals, and society's expectations. At all levels, role-playing, discussions, stories, media, and community resources are used to present the curriculum in an exciting and multi-sensory manner. The specific focus of these classes is derived from Collegiate's Cornerstones of Character Education. Students will receive a pass/fail mark for each of these courses, and the outcome does not impact G.P.A.

Honor
Full year
9th grade

Students will discuss their morals, family values, and societal expectations of behavior. Students will look inward through various methods to discover what they stand for, who they are, and who they want to become. Students will take a personality test; discuss healthy and unhealthy relationships, drinking and drugs, sexual health, proactive and reactive behavior, and how they relate to the Honor Cornerstone.

Compassion
Full year
10th grade

The focus of this Character course is compassion. Students will examine the world around us and problem solve on how to make it better. Gender identity, microaggressions, double standards, and the role those play in our lives will be discussed in this class. Through various mediums and current events, students will have a safe environment to look into some of the more challenging issues in our world today.

Respect
Quarter
11th grade

The focus of this Character course is respect. Discussions about respect in relationships, on social media, in our school, and within the community will be an essential part of this course. This course will provide an open forum to discuss respect and the consequences when a lack of respect is present. Students will also brainstorm ideas about individual roles they can play in making a change.

Responsibility
Quarter
12th grade

With a focus on responsibility in the senior year, the students will get ready for their life's most significant transition to date. This course will provide various strategies to prepare for college and life beyond the high school years. Discussions about college life and the new responsibilities the students will encounter as young high school graduates will be essential components of this course.

ENGLISH

Sequence of Courses

Grade 9	Grade 10	Grades 11-12
Honors Intro to Literature and Composition	Honors World Literature and Composition	Honors or Advanced English: American Studies, and Honors Senior Seminar

Requirements

- **One Unit** Required every year
- **Grade 9** Honors Intro to Literature and Composition
- **Grade 10** Honors World Literature and Composition
- **Grade 11** Honors or Advanced English: American Studies*
- **Grade 12** Honors Senior Seminar

**To be taken concurrently with Honors or Adv. History: American Studies*

The English Department uses the discipline of English, the broader humanities, and the contemporary world to cultivate students who live joyfully and purposefully within their communities, large and small. In route to this goal, we foster skills and virtues inherent to literary scholarship and writing. Yet, our interests extend well beyond college preparation or particular professions. We attend to the twenty-first century's diverse literacy and interpersonal opportunities and encourage citizenship based on self-discovery, critical thinking, compassion, and action.

Honors Introduction to Literature and Composition
1 credit
Full year
9th grade

Honors Introduction to Literature and Composition is a survey course designed to ground students in upper-level literature and various forms of writing. Students will read and analyze classic novels and poems from the literary canon, non-fiction selections, and contemporary literature. In addition to this intensive reading curriculum, students will continue to build an understanding of the conventions of writing and grammar. Particular emphasis will be placed on sentence diagramming so that students will gain a functional understanding of sentence structure and parts of speech. This course serves as the foundation for advanced study of literature and composition in the Upper School.

Honors World

Honors World Literature is a reading, composition, and mechanics course centered on the novels, poems, essays, and

Literature and Composition
1 credit
Full year
10th grade

other works of writers around the world. Students engage with questions, problems, and themes that affect the global community. This exploration occurs in written assignments, class discussions, and self-reflection. Building upon the skills developed in Intro to Literature and Composition, World Literature will delve more deeply into literary analysis in the context of history, psychology, ethnography, and other disciplines. Grammar and writing mechanics will be emphasized throughout the year. This course will also engage in cross-curricular work with the study of history and social studies.

Honors English: American Studies
1 credit
Full year
11th grade

Honors English: American Studies uses a rich interdisciplinary context to enable students to develop critical twenty-first-century skills and to think deeply about pressing American issues and their roles as American citizens. This course unites with Advanced and Honors History: American Studies around essential topics, enduring understandings, fundamental questions, and several major assessments. Units encourage students to grapple with significant ideas or issues that are and have been central to life in the United States, such as the American Dream, foreign policy, American identity, and social responsibility. Assessments enable students to develop crucial twenty-first-century skills such as synthesis and to apply understanding to contemporary problems. Students read and study a variety of literature, study and practice creative and expository writing, and build upon grammar, vocabulary, research, and reading comprehension skills. *Students must take Honors History: American Studies or Advanced History: American Studies concurrently with this course.*

Advanced English: American Studies
1 credit
Full year
11th grade

Advanced English: American Studies targets the same primary interdisciplinary and discipline-specific goals as the honors course and also works in conjunction with Advanced or Honors History: American Studies. This advanced version differs from the honors in its 1) more rapid pace, 2) more complex and substantial writing assignments, 3) more reading and homework, and 4) more extensive attention to rhetorical analysis and the art of nonfiction. *Students must take Honors History: American Studies or Advanced History: American Studies concurrently with this course. The placement requirement is a B+ or higher in the previous English class and the teacher's recommendation with the possibility of the department chair reviewing writing samples. This class will prepare students for the AP English Language and Composition exam.*

Honors English: Senior Seminar
1 credit
Full year
12th grade

This course's eminent curricular aims are twofold. The first is to solidify students' skill, acumen, and enthusiasm for studies in the humanities as they prepare for college. Students will compose a series of compositions during the first semester focused on a particular author whom the student chooses. These essays will focus on different elements of English study that students have practiced in preceding years like thematic analysis, historical and biographical research, and personal response, but as seniors, students take on the challenge and reward of pursuing these studies with greater agency and independence. Additional class reads, usage and composition practice, and creative writing assignment will complement these efforts. The second aim builds on the first and is to scaffold and support seniors as they propose, design, and work to complete their senior capstone projects, a three-month long passion project which serves as a culminating educational experience at Collegiate.

Elective Course

Student Consultant, Center of Writing
.25 credits per Semester
11th-12th grade

Writing Center consultants will provide personalized writing support with students at various grade levels and across disciplines in order to help students become more confident and effective writers. In addition to working with students, consultants will prepare and record notes and create Writing Center materials. **Prerequisites:** *Students must 1) be rising juniors or seniors with a G.P.A. of 3.3 or higher in all English classes, 2) submit an application with a faculty recommendation to the Center of Writing Coordinator, 3) attend a training session in August, and 4) pass a grammar assessment with a score of an 80% or above. Rising sophomores may be accepted on a case-by-case basis depending on staffing needs; please see the C.W. Coordinator for details.*

Fine Arts

The Fine Arts at Collegiate emphasize the importance of personal development, wisdom, and the acquisition and evolution of craft. Content such as form, function, creativity, choice, character, personal aesthetic, critical thinking, emotional intelligence, and empathy provide a lexicon for the student in the creative and scholarly pursuit of art. The curricula in each discipline creates a path for the student to achieve artistic literacy, develop the ability to live creatively, and become life-long practitioners and/or patrons of the arts.

While classes in the upper school are an outlet for artistic passion and interests during the upper school years, these classes also provide a solid basis and breadth of experience for continued study of the arts beyond graduation. Students are required to earn two fine arts credits, but may choose to explore the myriad of options in arts programming during all four years of the upper school. The Collegiate Fine Arts program combines experiential learning with direct and collaborative classroom instruction, library and web-based research projects, technology integration, performance, exhibition, cultural and educational field trips and visiting artists to engage students in active learning.

General Art

Honors Art History/ or Advanced Art History
1.0 credit
Full year
11th and 12th grade

This course will study the history of western art—prehistoric to present—not only to appreciate exemplary paintings, sculpture, and architecture, but also to gain critical analysis skills and to learn how to interpret important developments in thought (technical, social, religious, and political). ***Note:*** *Students can elect to take this course as Advanced Art History with permission of the instructor understanding that extra work will be required to finish the Advanced Art History Curriculum in preparation for the AP exam.*

Music/Theatre/ Visual Art Independent Study
0.25-1.00 credit
Semester
11th – 12th grade

This program is designed to meet the needs of highly motivated students who wish to pursue an interest in theatre, music, or visual art beyond the courses offered. Examples include: film making, art portfolio creation, and music performance.

Strings Ensemble
1.0 credit
Full year
9th-12th grade

The upper school instrumental music class is the advanced level course that reinforces posture, left hand technique, right hand technique, and the importance of a consistent practice routine. Every student must keep a weekly practice journal on what they rehearse at home. The instructor will assess students weekly to make sure they are learning all concepts. The upper school student must be able to read all notes in first position on all strings of the instrument. Violin, viola, and cello students will practice third and fifth positions. Bass players must be able to play and read in first through fifth positions. Students must maintain proper posture with their instruments and produce a beautiful tone. The upper school student will be able to follow and understand bow markings, slurs, articulations, and dynamics. The students will be able to recognize phrases and enhance their musicality using vibrato and accurate articulations. The student will have the ability and the knowledge to tune his or her instrument using an electronic tuning device. Upper school students will have the knowledge to compose a piece or arrangement no shorter than thirty-two measures that may include all pitches and rhythms that they have learned over the quarter. The student will learn to use notation-based software in order to complete the composition. The upper school student will perform pieces between grade levels three through five for the end of the semester concert. The student will perform pieces in minor and major keys as well as contrasting styles and tempos. All students will record themselves or play a live audition for an assessment on every piece that is to be performed for the final concert. Upper school students should expect to play with a strong tone, accurate intonation, steady rhythm, and beautiful phrasing. Introduction to new and more complex repertoire will challenge students' musical literacy. Solo and ensemble practice strategies will also be introduced. Emphasis will be on learning how to express one's individual feelings through the music. Students will learn how to communicate their ideas to one another and lead an ensemble in a unified musical statement. Each semester will end with a final performance, which showcases the string ensemble. Performances for various school functions will also be expected. *Prerequisite: Students should have prior instrumental music instruction on the violin, viola, cello, or bass. If the student has not had previous instruction, then a meeting must be set up with the instrumental music director in order to enroll in the class*.

Contemporary Instrumental Ensemble
0.5 credit
Full Year
9th – 12th grade

Students will become performing members of the contemporary instrumental ensemble consisting of guitar, bass, vocals, keyboard, and drums. Musicians will perform at all string concerts and various school functions. Students should expect to practice one hour outside of class for each class meeting. Students must furnish their own instruments for practice and performing, but trap set, p.a. system, guitar amplifiers, bass amplifier, and keyboard are provided for rehearsal. Guitarists must bring their own instruments to each rehearsal. ***Note****: Students must provide evidence of private instruction on his or her instrument. Students must also have the permission of the instructor.*

Performing Art

Theatre I
1.0 credit
Full year
9th-12th grade

This class defines, uses, and reinforces the components of storytelling as an actor and designer. The class process and pedagogies used are reflective of what the student would encounter in a university level introduction to theatre/film class or an acting class. Students will research, workshop, craft, and perform material selected for the fall and spring drama and additional theatre scenes or monologue from antiquity to modern realism. Theatre I students also write, devise and produce a performance piece in a unit created to serve young audiences. Through this process, they also gain a new perspective about the importance and efficacy of the theatrical experience for lower and middle school students. An exploration of major contributors to the field of actor training and their contribution to the process of acting will inform process work and rehearsal and serve as an additional research component for the course. Students will also learn basic design principles and use this information to inform their work and art-making. Theatre games,voice/bodywork,energy work, and original/reflective writing will complete the process. The film component of this class offers the student to explore the process or documentary film, digital media marketing piece, basic storyboarding, and editing. Theatre I may be repeated as the course context changes based upon the plays selected for fall and spring productions.

Honors Theatre: Second Stage
1.0 credit
Full year

In functioning as a theatre company, students will take an active role in shaping material for performance and the rehearsal process used to develop that material. By mentoring students in Theatre I in the rehearsal process

10th- 12th grade

(using previously covered and new material) company members will deepen their own knowledge base and continue to develop their own personal aesthetic. Students in Second Stage take a leadership role in all areas of production for the fall play, the spring play, and the selected piece for Theatre for Young Audiences. Second Stage provides the student a way to more specifically shape their development as an artist and work in specific areas of interest whether that be in technical theatre, design, or acting. *Prerequisite: Theatre I or by consent of the instructor.*

Vocal Music

Upper School Vocal Arts
1.0 credit
Full Year
9th-12th grade

This course seeks to help the student strengthen all aspects of vocal music performance through music preparation, text analysis, solfege, breath and articulation work, and analysis and execution of performance skills, The class offers two culminating events: the Winterlude Concert or Madrigal Dinner and a spring musical program devised by the class. Performance study will align with an ongoing dialogue about the history and development of the musical vocal music form and will provide an opportunity for the student to explore a wide variety of genres and styles. The class builds a strong ensemble sound by developing each voice in the class. The student will end his or her term of study as a stronger and more confident singer and musician. *No prerequisites. The course may be repeated all four years.*

Visual Art

2-Dimensional Studio Art
0.5 credit 1st semester only
9th-12th grade

This one-semester course provides opportunities to develop students' knowledge and skills in a variety of two dimensional media, including drawing, printmaking, painting, and some photography. Students are encouraged to learn from and enjoy the process of art making (the research, idea generation, study, discipline and play), as well as the completed creative products. Students are prompted to discover the "artists within themselves" and the form, content, and subject matter appropriate for their own sensibilities. Finally, the course hopes to heighten student's awareness of aesthetics through the study of art history and exposure to contemporary art and artists. This

course requires a variety of art materials totaling roughly $50.00.

3-Dimensional Studio Art
0.5 credit
2nd semester only
9th-12th grade

This one-semester course provides opportunities to develop students' knowledge and skills in a variety of three-dimensional media, including: paper, ceramics, found object, installation, earthworks and wood sculpture. Students will be encouraged to learn from and enjoy the process of art making (the research, idea generation, study, discipline and play), as well as the completed creative products. Research and art history will be incorporated into the curriculum and oral and/or written critiques will accompany most projects. Emphasis will be on furthering student skills in critical analysis and the development of an "arts vocabulary." Exposure to local artists and artwork will take students out of the classroom and into the local museums and galleries. This course requires a variety of art materials totaling roughly $50.00.

Graphic Design
0.5 credit
9th-12th grade

In this course students will explore the fundamentals of Graphic Design using the Adobe Creative Suite Programs (Adobe Illustrator, Adobe InDesign, and Adobe Photoshop) Students will learn how to communicate and market products and ideas using graphics, text, infographics, branding, and logos. Students will assess their work and the work of others through individual and group critiques.. A Virtual Gallery will be the culminating activity for all students. The gallery will be an excellent way for students to present their finished pieces to a varied audience either personally or professionally.*Note: Students are required to have a USB flash drive available, and supply some of their own digital printing paper and mat board roughly totaling $50.00. Purchasing the Adobe Creative Suite is not required.*

Photography
0.5 credit
9th -12th grade

In this introductory course, students will gain practical skills in and an understanding of photo composition history and the basics of digital photography. This course involves camera obscura, still image composition work, creation of and shooting headshots, as well as a final portfolio of work. Students will work with a digital camera, and the complementary digital programs (such as photoshop) for still image manipulation and processing. A digital camera is supplied for each student in the class. *Note: Students must purchase a memory card for the camera at a*

cost of $12.00

Honors Drawing, Painting and Printmaking
0.5 credit
1st semester only
10th-12th grade

This is an intermediate-level art course. Students are encouraged to create personally significant work, while developing greater technical skills and experimenting with a range of processes and approaches. Representative and imaginative drawing, acrylic and watercolor painting, and relief, planographic, and intaglio printing processes will be explored. Students will participate in hands-on projects, internet and library research, class discussions, video/slide presentations, field trips and/ or artist residencies. *Prerequisite: Successful completion of 2-D Studio Art and/or teacher approval. Note: This course serves as a prerequisite course for enrolling in advanced level art courses and to complete the portfolio requirements for advanced studio art courses. This course requires a variety of art materials totaling roughly $50.00.*

Honors Mixed Media and Sculpture
0.5 credit
2nd semester only
10th-12th grade

This is an intermediate-level art course. Students are encouraged to create personally significant work, while exploring a range of mixed media and/or sculptural approaches to art making. Technical skills in two-dimensional and three-dimensional studio processes are integrated and utilized to develop original works of art in the form of collages, assemblages, artist books, installations and other hybrid forms. Materials such as clay, paper, plaster, wood, and stone are mixed with found objects and/or cast objects. *Prerequisite: Successful completion of 3-D Studio Art and/or teacher approval. Note: This course serves as a prerequisite course for enrolling in advanced level art courses and to complete the portfolio requirements for advanced studio art courses. This course requires a variety of art materials totaling roughly $50.00.*

Honors Art Portfolio Design/ or Advanced Studio Art
1.0 credit
Full year
11th and 12th grade

These courses are intended for the committed art student who intends to work independently in studio art or photography, but would like to benefit from the intensity and energy of other advanced art students. The courses provide preparation for SCHOLASTIC standards and competition. It is an alternative to the Independent Study, since it has common periods where students can dialogue about their work, participate in collaborations, and share in group critiques. There will be opportunities in class for thematic discussions. Students will prepare a portfolio of work and a solo exhibition during the course which provides valuable professional experience. The portfolio

may be used for application to college art programs and/or, for students enrolled in Advanced Studio Art, submitted to the Advanced Placement Program for possible AP credit. Advanced Studio Art students are expected to spend the equivalent of 10 periods per week on their work. *Prerequisite: Successful completion of two years of Visual Art courses in the Upper School or permission of the instructor. Note: Depending on the focus of the student, supplies can cost from $80-100.00.*

Global Online Academy Courses

Students take Global Online Academy (GOA) courses for credit at Louisville Collegiate School. GOA course workload and course intensity is equivalent to courses taken on our campus. Unlike many online courses, students are not passive receptors of pre-recorded lectures from their teachers. Instead, students collaborate on challenging and interesting projects with students from around the world. They are also expected to manage their workload and time effectively to support the asynchronous nature of the courses. GOA maintains excellence through rigorous teacher training, building on the best practices and values of leading independent schools - and by ensuring classrooms stay at a small size that fosters strong teacher-student relationships and student-to-student collaboration and interaction.

There are currently 50+ high-performing independent schools in the consortium, representing three continents, four countries, in addition to the United States. Some partner schools include Germantown Friends in Philadelphia, Lakeside in Seattle, Punahou in Honolulu, Dalton in New York City, Sidwell Friends in the District of Columbia and international schools in China, Japan, Indonesia and Jordan. All GOA courses are taught by teachers who are currently teaching at a GOA member school. With Global Online Academy, teachers and students can share their voice on a global stage, improving learning and enabling the pursuit of individual passions. You'll also be challenged to become a more independent learner. GOA courses are mostly asynchronous; you are not expected to show up at one place at one time every day. Instead, you'll have to become proactive about managing your schedule, asking for help when you need it, and overcoming obstacles and solving problems on your own.

GOA COURSES ARE…
Challenging: Similar to a course at your home school, you'll spend 5-7 hours a week working on your course.
Interactive: You'll log-in multiple times a week to engage in discussions, collaborate on projects, and apply your knowledge in creative ways. No hours of video watching or test-taking here.
Communal: Classes are capped at 18 students so you can form strong relationships as you collaborate with both your teacher and peers.

Space is limited, so to request a GOA class, students must complete a GOA application and should always have a backup plan should there be limited class availability (determined in early April). Applications can be obtained from Ms. Scharfenberger. Applications are due to Ms. Scharfenberger by **March 2, 2022.**

Art, Media and Design

Architecture 0.5 credit Second Semester	In this course students will explore the field of architecture through a series of units covering elements architectural design, materials and structure, architectural analysis and 3D design. The course will start will students learning the basic elements of Architectural design and then using Google

SketchUp to build models of these elements. In the second unit students will study buildings like the Stonehenge, the Parthenon in Athens, the Roman Aqueduct of Pont du Gard in France, and the Pantheon in Rome to develop an understanding of materials and structures. At each stage students will learn how changes in materials, technology and construction techniques lead to the evolution of architecture over time. In the third unit students will learn how to analyze structures using Ancient Greek temples as an example. The course will end with a final project in which each student will have the opportunity to design and build a sacred structure of their choice based on their new understanding of architecture, construction, and engineering.

Creative Non-Fiction
0.5 credit
First Semester

This course will focus on shaping real experiences into powerful narratives. Through the study of professional examples and their own work, students will learn how to identify great stories in their lives and in the world around them, how to develop their own voice through writing, and how to effectively and respectfully write about other people and their experiences. Feedback is an essential component of this course, and students will gain experience in the workshop model, learning how to effectively critique and discuss one another's writing in a digital environment. In addition, students will have the opportunity to use technology to transform written work into audio experiences.

Digital Photography
0.5 credit
Second Semester

In an era where everyone has become a photographer obsessed with documenting most aspects of life, we swim in a sea of images, whether posted on Instagram, Facebook, Snapchat, Pinterest, or another digital medium. Yet what does taking a powerful and persuasive photo with a 35mm digital single lens reflex (DSLR) camera require? Digital photography explores this question in a variety of ways, beginning with the technical aspects of using and taking advantage of a powerful camera then moving to a host of creative questions and opportunities. Technical topics such as aperture, shutter, white balance, and resolution get ample coverage in the first half of the course, yet each is pursued with the goal of enabling students to leverage the possibilities that come with manual image capture. Once confident about technical basics, students apply their skills when pursuing creative questions such as how to understand and use light, how to consider composition, and how to take compelling portraits.

Fiction Writing
0.5 credit
Second Semester

This course connects students interested in creative writing (primarily short fiction) and provides a space for supportive and constructive feedback. Students gain experience in the workshop model, learning how to effectively critique and discuss one another's writing in a digital environment. In addition to developing skills as a reader within a workshop setting, students strive to develop their own writing identities through a variety of exercises. The course will capitalize on the geographic diversity of the student body by eliciting stories that shed light on both the commonalities and differences of life experiences in different locations. Additionally, we read and discuss the work of authors from around the globe. Students' essential responsibilities are twofold: to engage in the class as readers and writers and to focus on

their development as writers and readers. Both require participation in discussions of various formats within our online community, as well as dedicated time outside of class reading and providing feedback on one another's work and writing original pieces for the workshop.

Filmmaking
0.5 credit
First Semester

This course is for students interested in developing their skills as filmmakers and creative problem-solvers. It is also a forum for screening the work of their peers and providing constructive feedback for revisions and future projects, while helping them to develop critical thinking skills. The course works from a set of specific exercises based on self-directed research and builds to a series of short experimental films that challenge students on both a technical and creative level. Throughout, we will increasingly focus on helping students express their personal outlooks and develop their unique styles as filmmakers. We will review and reference short films online and discuss how students might find inspiration and apply what they find to their own works.

Graphic Design
0.5 credit
First Semester

What makes a message persuasive and compelling? What helps audiences and viewers sort and make sense of information? This course will explore the relationship between information and influence from a graphic design perspective. Using an integrated case study and design-based approach, this course aims to deepen students' design, visual, and information literacies. Students will be empowered to design and prototype communication projects they are passionate about. Topics addressed include: principles of design and visual communication; infographics; digital search skills; networks and social media; persuasion and storytelling with multimedia; and social activism on the Internet.

Art Entreprene-urship
0.5 credit
Second Semester

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

Data Visualization
0.5 credit
First Semester

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

Entrepreneurship in a Global Context
0.5 credit
Second Semester

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

.

Mathematics and Technology

Problem Solving with Engineering and Design
0.5 credit
First Semester

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

Cyber Security
First Semester
0.5

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

Computer Science I: Computational Thinking
0.5 credit

This course is a prerequisite to all Computer Science II classes at GOA. It can be completed as a traditional semester class or as an intensive self-paced class. The self-paced class option is intended for those who are self-taught programmers or anyone with the self-motivation to expedite their learning.

Computational thinking centers on solving problems, designing systems,

Either Semester	and understanding human behavior. It has applications not only in computer science, but also myriad other fields of study. This introductory level course focuses on thinking like a computer scientist, especially understanding how computer scientists define and solve problems. Students begin the course by developing an understanding of what computer science is, how it can be used by people who are not programmers, and why it's a useful skill for all people to cultivate. Within this context, students are exposed to the power and limits of computational thinking. Students will also be introduced to entry level programming constructs that will help them apply their knowledge of computational thinking in practical ways. They will learn how to read code and pseudocode as well as begin to develop strategies for debugging programs. While this course would be beneficial for any student without formal training as a programmer or computer scientist, it is intended for those with no programming experience.
Computer Science II: Game Design and Development 0.5 credit Second Semester	In this course, students practice designing and developing games through hands-on practice. Comprised of a series of "game jams," the course asks students to solve problems and create content, building the design and technical skills necessary to build their own games. The first month of the course is dedicated to understanding game design through game designer Jesse Schell's "lenses:" different ways of looking at the same problem and answering questions that provide direction and refinement of a game's theme and structure. During this time, students also learn how to use Unity, the professional game development tool they use throughout the class. They become familiar with the methodologies of constructing a game using such assets as graphics, sounds, and effects, and controlling events and behavior within the game using the C# programming language. Throughout the remainder of the course, students will work in teams to brainstorm and develop new games in response to a theme or challenge. Students will develop their skills in communication, project- and time- management, and creative problem-solving while focusing on different aspects of asset creation, design, and coding. Pre-requisites: Computer Science I: Computational Thinking or its equivalent.
Computer Science II: Java 0.5 credit Second Semester	This intensive course uses Java programming language to study programming methodology, algorithms, data structures, procedural and data abstraction, and object orientation. Advanced models for reasoning and solving problems are explored. Topics include number systems, Boolean operations, Control Flow, Looping, Classes and Methods, Arrays, ArrayLists, Recursion, Inheritance and Searching and Sorting. Emphasis is placed on the design, creation, and verification of proper algorithms and programs; on programming methodology, algorithms, and problem solving, providing students with a hands-on, end-to-end experience of structured, object-oriented programming. *Prerequisite:* Completion of Computer Science I: Computational Thinking and an introductory Java course.
Computer Science II: Analyzing Data with Python	In this course, students will utilize the Python programming language to read, manipulate and analyze data. The course emphasizes using real world datasets, which are often large, messy, and inconsistent. The prerequisite for this course is familiarity with and hands-on experience using some high-order programming language, such as Java, C++, VisualBasic, or Python

0.5 credit
Second Semester

itself. Because of the powerful data structures and clear syntax of Python, it is one of the most widely used programming languages in scientific computing. There are a multitude of practical applications of Python in fields like biology, engineering, and statistics. *Prerequisite:* Completion of Computer Science I: Computational Thinking.

Game Theory
0.5 credit
Either Semester

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

Introduction to Artificial Intelligence
0.5 credit
Second Semester

Aspects of artificial intelligence permeate our lives and the algorithms power your favorite apps. How much do you really know about how AI works or how it is changing the world around us? This course will explore the history of research into artificial general intelligence and the subsequent focus on the subfields of narrow AI: Neural networks, Machine Learning and Expert Systems, Deep Learning, Natural Language Processing, and Machine Vision and Facial Recognition. Students will learn how AI training datasets cause bias and focus on the ethics and principles of responsible AI: fairness, transparency and explainability, human-centeredness, and privacy and security.

Intro to Block-chain & Cryptocurrency
0.5 credit
Semester 2

We'll explore how markets in crypto operate, where they've received practical application, and where the space may head in the future through the lenses of creators, consumers, and governments. In addition, we will take a deeper look at blockchain, the underlying technology that powers cryptocurrencies, and it's many, far-reaching implications for the future of government, business, the arts and more. Each lens represents a different way to view the complex and interrelated causes and outcomes of the changing crypto landscape. Using a variety of technologies and activities, students work individually and with peers to evaluate each lens. Students then analyze and explore how these technologies may shape and disrupt the future not only of the crypto space, but of many current and future industries.

IOS App Design
0.5 credit
Second Semester

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

Linear Algebra
0.5 credit
Either Semester

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

Advanced Multivariable Calculus
1.0 credit
Full Year

In this course students learn to differentiate and integrate functions of several variables. We extend the Fundamental Theorem of Calculus to multiple dimensions, and the course will culminate in Green's, Stokes' and Gauss' Theorems. We begin with a swift review of vectors, matrices, and parametric curves, with emphasis on those topics which are of value to multivariate calculus. We then move on to study partial derivatives, double and triple integrals, and vector calculus in both two and three dimensions. Students are expected to develop fluency with vector and matrix operations. Understanding of a parametric curve as a trajectory described by a position vector is an essential concept, and this allows us to break free from 1-dimensional calculus and investigate paths, velocities, and other applications of science that exist in three-dimensional space. We study derivatives in multiple dimensions, we use the ideas of the gradient and partial derivatives to explore optimization problems with multiple variables, and we consider constrained optimization problems using Lagrangians. After our study of differentials in multiple dimensions, we move to integral calculus. We use line and surface integrals to calculate physical quantities especially relevant to mechanics and electricity and magnetism, such as work and flux, and we employ volume integrals for calculations of mass and moments of inertia. We conclude with the major theorems (Green's, Stokes', Gauss') of the course, applying each to some physical applications that commonly appear in calculus-based physics. ***Prerequisite: The equivalent of a college year of single-variable calculus, including integration techniques, such as trigonometric substitution, integration by parts, and partial fractions. Completion of the AP Calculus BC curriculum with a score of 4 or 5 on the AP Exam would be considered adequate preparation.***

Number Theory
0.5 credit
Second Semester

This course will cover the fundamentals of this classical, elegant, yet supremely relevant subject. It will provide a foundation for further study of number theory, but even more, it will develop the skills of mathematical reasoning and proof in a concrete and intuitive way, good preparation for any future course in upper-level college mathematics or theoretical computer science. We will progressively develop the tools needed to understand the RSA algorithm, the most common encryption scheme used worldwide. Along the way we will invent some encryption schemes of our own and discover how to play games using number theory. We will also get a taste of the history of the subject, which involves the most famous mathematicians from antiquity to the present day, and we will see parts of the story of Fermat's Last Theorem, a 350-year-old statement that was fully proved only twenty years ago. While most calculations will be simple enough to do by

hand, we will sometimes use the computer to see how the fundamental ideas can be applied to the huge numbers needed for modern applications. ***Prerequisite: Precalculus (alternately, Algebra II plus exponentials and logarithms), and a desire to do rigorous mathematics and proofs.***

Science and Health

Abnormal Psychology
0.5 credit
Either Semester

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

Bioethics
0.5 credit
Either Semester

Ethics is the study of what one should do as an individual and as a member of society. In this course students will evaluate ethical issues related to medicine and the life sciences. During the semester, students will explore real-life ethical issues, including vaccination policies, organ transplantation, genetic testing, human experimentation, and animal research. Through reading, writing, and discussion, students will be introduced to basic concepts and skills in the field of bioethics, will deepen their understanding of biological concepts, will strengthen their critical-reasoning skills, and will learn to engage in respectful dialogue with people whose views may differ from their own. In addition to journal articles and position papers, students will be required to read Rebecca Skloot's *The Immortal Life of Henrietta Lacks*.

Global Health
0.5 credit
First Semester

What makes people sick? What social and political factors lead to the health disparities we see both within our own community and on a global scale? What are the biggest challenges in global health and how might they be met? Using an interdisciplinary approach to address these two questions, this course hopes to improve students' health literacy through an examination of the most significant public-health challenges facing today's global population. Topics addressed will be the biology of infectious disease (specifically HIV and Malaria); the statistics and quantitative measures associated with health issues; the social determinants of health; and the role of organizations (public and private) in shaping the landscape of global health policy. Students will use illness as a lens through which to examine critically such social issues as poverty, gender, and race. Student work will include analytical and creative writing; research, and peer collaboration; reading and discussions of nonfiction; and online presentations.

Intro to Psychology
0.5 credit
Either Semester

What does it mean to think like a psychologist? With this question anchoring Introduction to Psychology, students explore three central psychological perspectives -- the behavioral, the cognitive, and the sociocultural -- in order to develop a multi-faceted understanding of what thinking like a psychologist encompasses. The additional question of "How do psychologists put what they know into practice?" informs study of the

research methods in psychology, the ethics surrounding them, and the application of those methods to practice. During the first five units of the course, students gather essential information that they apply during a group project on the unique characteristics of adolescent psychology. Students similarly anticipate a case study on depression, which also enables application of understandings from the first five units. The course concludes with a unit on positive psychology, which features current positive psychology research on living mentally healthy lives. Throughout the course, students collaborate on a variety of activities and assessments, which often enable learning about each other's unique perspectives while building their research and critical thinking skills in service of understanding the complex field of psychology. This course is an excellent partner with, but not a prerequisite for, Neuropsychology and Abnormal Psychology.

Medical Problem Solving I
0.5 credit
Either Semester

In this course students will collaboratively solve medical mystery cases, similar to the approach used in many medical schools. Students enhance their critical thinking skills as they examine data, draw conclusions, diagnose, and treat patients. Students will use problem-solving techniques in order to understand and appreciate relevant medical/biological facts as they confront the principles and practices of medicine. Students will explore anatomy and physiology pertaining to medical scenarios and gain an understanding of the disease process, demographics of disease, and pharmacology. Additional learning experiences will include studying current issues in health and medicine, building a community-service action plan, interviewing a patient, and creating a new mystery case. Students interested in continuing their studies in Semester 2 are encouraged to take Medical Problem Solving II.

Medical Problem Solving II
0.5 credit
Second Semester

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

Neuro-psychology
0.5 credit
Either Semester

This course is an exploration of the neurological basis of behavior. It will cover basic brain anatomy and function as well as cognitive and behavioral disorders from a neurobiological perspective. Additionally, students will explore current neuroscience research as well as the process of funding that research. Examples of illnesses that may be covered include: Alzheimer's disease, traumatic brain injury, and stroke. Diagnostic and treatment issues (including behavioral and pharmaceutical management) will also be addressed, and additional topics may include attention, learning, memory, sleep, consciousness and emotional intelligence. The course culminates with students developing a fundraising campaign to support research and/or patient care initiatives related to a specific neurological condition and nonprofit foundation. Neuropsychology can be taken as a continuation of Introduction to Psychology, although it is not required.

Positive Psychology
0.5 credit
Either Semester

What is a meaningful, happy, and fulfilling life? While the focus of psychology has not historically been on this question and instead has studied human suffering, diagnosis, and pathology, in recent years positive psychologists have explored what's missing from the mental health equation, taking up research on topics such as love, creativity, humor, and mindfulness. In this course, we'll dive into what their research tells us about the formula for a meaningful life, the ingredients of fulfilling relationships, and changes that occur in the brain when inspired by music, visual art, physical activity, and more. We'll seek out and lean on the knowledge of positive psychology research and experts, such as Martin Seligman and his Well Being Theory, Mihaly Csikszentmihalyi and his concept of flow, and Angela Lee Duckworth and her concept of grit. In exploring these theories and concepts, students imagine and create real-world measurements using themselves and willing peers and family members as research subjects.

Developmental Psychology
0.5 credit
Semester 2

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

Social Psychology
0.5 credit
Either Semester

Social psychology examines how the thoughts, feelings, and behaviors of a person are influenced by the actual, imagined, or implied presence of others. Students design research projects that explore contemporary issues relevant to this course, including but not limited to social media, advertising, peer pressure, and social conflict. In order to equip students to do this work, the course begins with an overview of research methods in psychology as well as several historical studies by Solomon Asch, Stanley Milgram, and Philip Zimbardo. Students develop foundational knowledge of social psychology by exploring a diversity of topics, including attitudes and actions, group behavior, prejudice and discrimination, interpersonal relationships, conformity, attraction, and persuasion. The capstone project of this course is student-designed research project that will be submitted for publication, presentation to an audience, or used to catalyze change in local communities.

Religion & Society
0.5 credit
Second Semester

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

9/11 In a Global Context
0.5 credit
Second Semester

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

Applying Philosophy to Modern Global Issues
0.5 credit
First Semester

This is an applied philosophy course that connects pressing contemporary issues with broad-range philosophical ideas and controversies, drawn from multiple traditions and many centuries. Students will use ideas from influential philosophers to examine how thinkers have applied reason successfully, and unsuccessfully, to many social and political issues across the world. In addition to introducing students to the work of philosophers as diverse as Confucius, Kant, John Rawls and Michel Foucault, this course also aims to be richly interdisciplinary, incorporating models and methods from diverse fields including history, journalism, literary criticism, and media studies. Students will learn to develop their own philosophy and then apply it to the ideological debates which surround efforts to improve their local and global communities.

International Relations
0.5 credit
First Semester

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

Introduction to Legal Thinking
0.5 credit
Either Semester

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

Intro in Branding and Marketing
0.5 credit
Second Semester

In this course, students learn what it takes to build an effective brand that can authentically connect with consumers and create long-term brand equity. The course starts with introducing what a brand is and goes on to explore how different branding elements, such as Visual Identity, Advertising Strategy, Content Marketing, as well as the intangible elements of the Customer Journey, come together to create a unique Brand Experience. By applying marketing theories, interviewing experts, and analyzing modern case studies, students will develop and strengthen their competencies as brand strategists.

Personal Finance
0.5 First Semester

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

Gender and Society
0.5 credit
Second Semester

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

Genocide and Human Rights
0.5 credit
Second

Students in this course study several of the major genocides of the 20th century (Armenian, the Holocaust, Cambodian, and Rwandan), analyze the role of the international community in responding to and preventing further genocides with particular attention to the Nuremberg Tribunals, and examine current human rights crises around the world. Students will read

Semester	primary and secondary sources, participate in both synchronous and asynchronous discussions with classmates, write brief papers, read short novels, watch documentaries and develop a human rights report card website about a nation in the world of their choice.
Introduction to Investments 0.5 credit Either Semester	In this course, students simulate the work of investors by working with the tools, theories, and decision-making practices that define smart investment. We explore concepts in finance and apply them to investment decisions in three primary contexts: portfolio management, venture capital, and social investing. After an introduction to theories about valuation and risk management, students simulate scenarios in which they must make decisions to grow an investment portfolio. They manage investments in stocks, bonds, and options to learn a range of strategies for increasing the value of their portfolios. In the second unit, they take the perspective of venture capital investors, analyzing startup companies and predicting their value before they become public. In the third unit, students examine case studies of investment funds that apply the tools of finance to power social change. Throughout the course, students learn from experts who have experience in identifying value and managing risk in global markets.
Macro-economics 0.5 credit Second Semester	In this course students will study macroeconomic theory as it relates to domestic and global policies on employment, national income, government spending, and the impact of foreign spending on domestic economies and foreign exchange markets. Students will use real world events and data as case studies in order to develop a better understanding of the driving forces behind domestic and international macroeconomic markets. In the final portion of the course, students will have the opportunity to develop their own solutions to a local/global issue of their choice (such as poverty, environmental pollution, and limited access to education) based on their new understanding of macroeconomic theory. This course is an excellent partner with, but not a prerequisite for, Microeconomics. It can serve as a prerequisite for Advanced Topics in Economics.
Micro-economics 0.5 credit First Semester	In this course, students will learn about how consumers and producers interact to form a market and then how and why the government may intervene in that market. Students will deepen their understanding of basic microeconomic theory through class discussion and debate, problem solving, and written reflection. Students will visit a local production site and write a report using the market principals they have learned. Economic ways of thinking about the world will help them better understand their roles as consumers and workers, and someday, as voters and producers. This course is an excellent partner with, but not a prerequisite for, Macroeconomics. It can serve as a prerequisite for Advanced Topics in Economics.
Race and Society 0.5 credit First Semester	What is race? Is it something we're born with? Is it an idea that society imposes on us? An identity we perform? A privilege we benefit from? Does our own culture's conception of race mirror those found in other parts of the world? These are just a few of the questions that students in this course will explore together as they approach the concept of race as a social construct that shapes and is shaped by societies and cultures in very real ways.

Throughout the course students will learn about the changing relationship between race and society across time and across cultures. Engaging with readings, films, and speakers from a variety of academic fields (history, sociology, anthropology, literature) students will explore, research, reflect on and discuss the complex set of relationships governing race and society.

Prisons and the Criminal Law
0.5 credit
Either Semester

In this course, students become familiar with the legal rules and institutions that determine who goes to prison and for how long. Along the way, students gain a concrete, practical understanding of legal communication and reasoning while grappling with mass incarceration as a legal, ethical, and practical issue. Topics include the history and social functions of prisons; the definition of conduct that society will punish as a crime; the work of prosecutors, defense attorneys, and judges in criminal courts to resolve criminal charges through trials and plea bargains; the sentencing rules that determine what happens to people after a conviction; the alternatives to prison when selecting criminal punishments; and the advocacy strategies of groups hoping to change mass incarceration. The reading focuses on criminal justice in the United States, but the course materials also compare the levels of imprisonment used in justice systems around the world. Assignments will ask students to practice with legal reasoning and communication styles, focused on specialized audiences such as juries, trial judges, appellate judges, sentencing commissions, and legislatures. The work will involve legal research, written legal argumentation, peer collaboration, and oral advocacy.

Note: This course is offered through Wake Forest University School of Law and is designed by Ronald Wright, the Needham Y. Gulley Professor of Criminal Law. Prof. Wright is also part of the teaching team for this course. Students who take this course should expect a college-level workload (8-10 hours a week). Successful completion of this course will be rewarded with a certificate from the law school.

Climate Change and Global Inequality
0.5 credit
Either Semester

In this course students will interrogate the causes and effects of climate change, and the public policy debates surrounding it. In case studies, we will research global, regional, and local policies and practices along with the choices of decision makers and what they mean to the populations they serve. Who benefits, who suffers, and how might we change this equation? Following the Learning Studio model, in the second half of the course, students will work with their teacher to design their own independent projects reflecting their individual interests and passions. We will collaborate in workshops with classmates to deepen our collective understanding of the complex issues surrounding climate change. Throughout the semester we will also build and curate a library of resources and share findings in varied media, engaging as both consumers and activists to increase knowledge, challenge and advocate for sustainable norms. Finally, students will have the opportunity to reach a global audience by participating in GOA's Catalyst Conference in the spring 2019, as they present their individual projects to spark change in local communities through well-informed activism.

Business Problem Solving
0.5 credit
First Semester

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

World Languages

Arabic: Language Through Culture
1.0 credit
Full year

This full-year course will highlight Modern Standard Arabic and some of the dialect of the Levant. With an emphasis on Arabic culture, students will learn ly used expressions and phrases from the Levant area. Students will develop skills in listening, reading, writing, forming grammatically correct structured s, and most importantly, conversation. This will be accomplished through , videos, culture circles discussions, web conferencing, and collaborations in rojects. In addition, students will have direct conversations with native speakers c through a virtual club called "Shu Fe Maa Fe," where students are required to line with their assigned partner and learn about a certain cultural topic every uch as traditional food, greetings, gestures, values, history and more. Since s becoming one of the most functional languages in the world, especially in the commerce, business, and trade, students participating in this course can avail es of the opportunity to learn the language in a highly stimulating and rich context.

Arabic: Language Through Culture II
1.0 credit
Full year

Arabic II students have one year of Arabic Language Through Culture or have demonstrated Novice proficiency through summer coursework or other experiences. Students will 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.

Arabic: Language Through Culture III
1.0 credit
Full year

Students in Arabic III have demonstrated Intermediate interpersonal proficiency in Arabic (MSA or a dialect) through two years in Arabic Language Through Culture or other coursework, and have demonstrated an ability to work online independently and reliably with instructors and peers in Arabic Language Through Culture or another GOA class. Students in Arabic III will have opportunities to direct their own study through choice of material and topic. They will use Arabic to interact with native speakers on topics of

their choosing, and to explore topics of interest through a variety of media (written works, audio, video, face-to-face interviews).

Japanese I: Language Through Culture
1.0 credit
Full year

This full-year course is a unique combination of Japanese culture and language, weaving cultural comparison with the study of basic Japanese language and grammar. While examining various cultural topics such as literature, art, lifestyle and economy, students will learn the basics of the Japanese writing system (Hiragana and Katakana), grammar and vocabulary. Through varied synchronous and asynchronous assignments, including hands-on projects and face-to-face communications, students will develop their speaking, listening, reading and writing skills. The cultural study and discussion will be conducted in English, with topics alternating every two to three weeks. The ultimate goal of this course is to raise awareness and appreciation of different cultures through learning the basics of the Japanese language. The focus of this course will be 60 percent on language and 40 percent on culture. This course is appropriate for beginner-level students.

Japanese II: Language Through Culture
1.0 credit
Full year

Through language learning, students in this course share their voices, cultivate global perspectives, and foster appreciation of self and others. Students expand their knowledge of the basic skills introduced in Japanese Language through Culture I while further developing their speaking, listening, writing, and reading skills. Each unit follows the IPA model (Integrated Performance Assessment), blending three modes of communication: interpretation of authentic material in Japanese, synchronous and asynchronous practice in speaking and writing, and oral and written presentations. Each unit focuses on one of the following cultural topics: Design and Expression, Ecology, Entertainment, East meets West, Harmony, and Nature. In addition, students will have the opportunity to select and pursue topics of their own interest. Grammar topics will cover the essential forms that are typically introduced in the second and third year of a high school Japanese program. By learning the Dictionary Form, Nominalizer, TE form, TA form, NAI form, and Noun Modifier, students will be able to add more complexity to their sentence construction. In doing so, they will shift from forming simple sentences to communicating in a coherent paragraph. As online learners, students are expected to exhibit superb time management and communication skills, as well as to take ownership of their learning. While grammar instruction will be delivered through asynchronous work and face-to-face meetings, much of the course content will be curated and created by students through their research and collaboration. ***Prerequisite: Japanese Language through Culture I or permission from the instructor.***

Japanese III: Language Through Culture
1.0 credit
Full year

Students in Japanese III 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. While advancing their grammatical knowledge (including giving and receiving, potential form, and honorific form), students will compare and examine similar functions and their subtle differences. In speaking, students are allowed to speak in informal/casual style with each other and with the teacher in order to solidify their control of the Plain Form. Interpersonal communications will be done through face-to-face conversation and recorded messages. In reading and listening, students will curate, share, and practice with grasping the gist of authentic materials. Such material may

include TV commercials, news, movies, children's books, online newspapers, and cooking recipes. In writing, students will work on creative writing, expository writing, and analytical writing (compare-and-contrast in the AP format). Semester 1 will incorporate JLPT N5 exam material. Taking the exam is not necessary but encouraged. In Semester 2, students will participate in that GOA Catalyst Conference.

GLOBAL TRAVEL CREDITS

The chance to explore the world and become a global citizen is an opportunity that will give our students new perspectives not only on themselves, but also on the world around them. Having an international experience is a unique way to expand education beyond the classroom, experience a new culture, a new lifestyle, and a new way of thinking. Two global trips will be offered each summer to students completing grades 8-12. These trips are open to all students regardless of the world language course they are enrolled in. The trips will be priced in the range of $3,500 - $4,500, depending on the location and service component. A four-year travel rotation has been established so families can plan ahead.

World Language Immersion
0.5 Credit

The World Language Immersion credit through our World Language Department is a unique way to expand education beyond the classroom, and to engage in meaningful cultural interactions. World language students that participate in a French or Spanish language trip have the opportunity to receive credit for a world language credit on their Collegiate transcript. The trips offer a distinctive experience involving elements of cultural immersion, study of language, social services, art, family life, economics and everyday life. Students expand and deepen their knowledge of a topic through collaborative learning and an exploration of the diverse intellectual and cultural resources offered through this immersion experience.

Independent Study in Cultural Immersion
0.5 Credit

This independent study supports global citizenship and is a unique way to expand education beyond the classroom, experience a new culture, a new lifestyle, and a new way of thinking. This experience can be in the form of a Collegiate global trip or another type of cultural immersion experience that meets the independent study requirements. The independent study offers an opportunity to study components (geographical, social, political, economic, government, religious and technological) of the culture and explore the diverse resources of other countries. This independent study takes places outside the school and home for 8-14 days and is supported by a faculty member. Students that would like to enroll in this course outside of Collegiate's global trips must complete an independent study application and submit to the Head of Upper School for approval.

HISTORY
Sequence of Courses

Grade 9	Grade 10	Grades 11-12
Approaches to History I	Approaches to History II and Electives	, Honors History: American Studies or Adv. History: American Studies and Electives

Requirements

- Approaches to History I in grade 9
- Approaches to History II in grade 10
- Honors History: American Studies or Advanced History: American Studies in grade 11th.

Collegiate's History Program endeavors to instill in students an appreciation of the world in which they live by developing an understanding of the evolution of diverse cultures. It explores the contributions of those who changed the world and seeks to inspire students to be disciplined historians and inquisitive citizens on a local and global level. The History curriculum uses an inquiry and experiential based approach and connects a variety of disciplines, such as geography, rhetoric, economics, politics, art, and philosophy. In all History classes, students develop a variety of skills. The ability to formulate and present written and oral arguments are foundational aspects of the program. Students develop academic skills such as reading for comprehension, creating outlines, analyzing primary sources, conducting proper research, and taking notes. History classrooms also cultivate interpersonal and social skills, such as working in groups, respecting differences, solving problems, and presenting material. Students also develop critical thinking skills, such as identifying similarities and differences, analyzing cause and effect, and evaluating sources of information. The History department strives to develop inquisitive citizens who seek to actively change the world around them for the common good.

In the Upper School, freshmen and sophomores participate in a two-year sequence of Approaches to History I and II. Students take Honors or Advanced History: American Studies during either their junior or senior year, but must enroll in Honors or Advanced English: American Studies concurrently with Honors or Advanced History: American Studies.

Approaches to History I
1.0 credit
Full Year
9th grade

Approaches to History I: Early Societies to the 16th Century is an interdisciplinary study of world cultures from early societies to contact between the eastern and western hemispheres. The course does not try to incorporate all cultures and time periods. Rather the focus of this course is on introducing and developing historical thinking and writing skills during the first semester and then applying those skills to the Roman Republic/Empire and the eighth to sixteenth centuries with specific attention paid to Europe and Latin America during the second semester. The course will also incorporate music, drama, and visual arts of the geographic regions highlighted in an effort to help students develop a complete approach to the study of history.

Approaches to History II
1.0 credit
Full Year
10th grade

Approaches to History II: Colonialism to Globalism is an interdisciplinary study of world cultures from the mid-sixteenth century to modern times. The course does not try to incorporate all cultures and time periods. Rather the focus of this course is to build and develop the historical skills introduced and practiced in Approaches to History I: Early Societies to the 16th Century. Continued emphasis will be placed on interactions between cultures and the incorporation of the music, drama, and visual arts of the cultures. Additionally, the fourth quarter will zero in on the 21st century connecting the previous seven quarters of study to the modern world.

Honors or Advanced History: American Studies
1.0 credit
Full year
11th grade

In History: American Studies, students investigate the content of US History, develop and use the tools historians apply to interpret the past, and develop an appreciation and empathy for those that lived before them. In addition to studying US History, students are engaged in American Studies. American Studies uses a rich interdisciplinary context to enable students to develop important twenty-first-century skills and to think deeply about pressing American issues and their roles as American citizens. The combination of English: American Studies and U.S. History (advanced and honors) unite around major topics, enduring understandings, essential questions, and one or more major assessments per unit. Units encourage students to grapple with major ideas or issues that are and have been central to life in the United States: the American Dream, foreign policy, and American identity. Assessments enable students to develop crucial twenty-first century skills and to apply understanding to contemporary problems.
Prerequisite: Students must have completed Approaches to History I

and II before taking History: American Studies. Advanced European satisfies this requirement as well. Students must take Honors or Advanced English: American Studies concurrently with this course. ***Note:*** *Students can elect to take this course as Advanced History: American Studies with at least a B+ average in their previous history course and permission of the instructor.*

Elective Courses

Honors Women in History
0.5 credit
1 semester
10th - 12th grade
1st semester only

Women in History considers the experiences of women in past cultures and contemporary society. After a brief introduction to women in the ancient and medieval eras of world history, the main focus of the course becomes examining how women in the last 150 years have helped to shape the history of Kentucky, the United States, and the global community, working towards a "full and fair share" of equal rights, political participation, and socio-economic opportunity.
.

Honors Evolution of Human Rights: Understanding the Past to Lead the Future
0.5 credit
1 semester
10th - 12th grade
2nd semester only

In this course, students will examine the contextual beginnings of the concept "human rights" and its modern implications in society. Beginning with the leadership of Cyrus the Great and culminating with the Universal Declaration of Human Rights and subsequent United Nations declarations, students will be exposed to the story of efforts made to define basic human rights and the entitlements bestowed on all human beings. Further investigation will include questioning world responses to human rights violations and surveying social justice movements and their impact on our evolving view of human rights in the 21^{s} century. Though the course is designed to be studied through a chronological reasoning lens, flexibility will be exercised in the event of a current topic being relevant to course content and theme.

Honors or Advanced European History
1.0 credit
Full year
10th-12th grades
Offered in 2023-24 (and every odd year)

Advanced European History focuses on developing students' abilities to think conceptually about European history from approximately 1450 to the present and apply historical thinking skills as they learn about the past. Five themes – Interaction of Europe and the World; Poverty and Prosperity; Objective Knowledge and Subjective Visions; State and Other Institutions of Power; Individual and Society – provide areas of historical focus for investigation throughout the course. These themes require students to reason historically about continuity and change over time and make comparisons among various historical developments in different times and places. *Prerequisites for Advanced: At least a B+ average in previous history courses.*

Honors Art History/ or Advanced Art History

These history related courses are Fine Arts Department courses. The course descriptions are located in the Fine Arts section of this catalog.

Honors or Advanced US Government and Politics
Full year
10th - 12th grade
Offered in 2022-23 (and every even year)

This year-long elective is designed to teach students the basic organization, structure, and powers of the three branches of the US Government. Through the study of the three branches of the US Government, students will develop a clearer understanding of the basic principles upon which the government is founded, the process by which laws are made, and the means by which public policy is created. In addition, students will learn about their individual rights and freedoms and the role they can play in the political process. ***Note:*** *Students can elect to take this course as Advanced US Government and Politics with at least a B+ average in their previous history course and permission of the instructor.*

Honors or Advanced Macro-economics
1.0 credit
Full year
10th - 12th grade
Offered in 2023-24 (and every odd year)

This elective is designed to acquaint the student with practical yet detailed guidance in national economic decision-making. Students will be exposed to in-depth economic concepts predominantly in macroeconomics and some of microeconomics, including the acquisition, investment, conservation and management of money, the various methods of estate management and other aspects of personal economics. ***Note:*** *Students can elect to take this course as Advanced Economics with at least a B+ average in their previous history course and permission of the instructor*

Honors or Advanced

An introduction to psychological science -- the study of behavior and mental processes. This course surveys the

Psychology
1.0 credit
Full year
10th - 12th grade

major subdisciplines of the field, including such topics as the brain and neuroscience, behavioral genetics, cognitive and social development, perception, learning, memory, decision-making, language, consciousness, emotions, motivation, psychological disorders, social identity, interpersonal interactions and group and cultural processes. In addition to exploring the various schools and topics of psychology and the potential career opportunities, there will be an emphasis on application of theory in students' lives. Students will develop skills for moral growth, stress management, relationship management, time management, and pursuance of role identity. ***Note:*** *Students can elect to take this course as Advanced Psychology with at least a B+ average in their previous history course and permission of the instructor*

INTERDISCIPLINARY COURSES OF STUDY

A consensus has developed in the literature of leading educators and thinkers identifying a set of skills that students will need in the 21st Century to develop fully into engaged citizens of the world and to prosper. Core subjects and content are just the beginning. The '**5 Cs'** of creativity, critical thinking, communication, collaboration, and character will ultimately form the foundation for differentiating Collegiate into the future. ~ Louisville Collegiate School Strategic Plan

Entrepreneurial Problem Solving
0.5 credit
First semester
11th and 12th grade Only

This experiential opportunity provides students with authentic fieldwork that will develop creative problem solving skills necessary for life. The work will be directly assigned by local businesses, government, and nonprofit organizations. Students will work in project teams to solve business and community problems presented by local CEOs, government officials, small business owners, and community leaders. Using the design thinking model, students will bring individual strengths (art, creative design, analytical skills, etc.) to their project team to ultimately propose and present a solution directly to the business/organization. The business/organization leader will assess each team's solution and will provide each team with authentic feedback.
Prerequisites: *This is a semester class open to 11th and 12th grade students. Students must be willing to collaborate and communicate with leaders outside of Collegiate, think creatively, and utilize problem solving and critical thinking skills each day.*

Entrepreneurship Through Startup
.5 credit Second Semester
10th-12th Grade

Students in this course will use the Business Canvas Model as a roadmap to build and develop their own startup business, a process that will require hypothesis testing, customer research, product design, product iterations, and entrepreneur interviews. A startup pitch for the Lt. Governor's Entrepreneurship Challenge will be the culminating product for this class. Students will partner with community members that will serve as their startup mentors. Additional work will include market research, journaling, interviews, peer collaboration and case studies.

Maker Design and Prototyping
0.5 credit
Offered both semesters
9th - 12th grade

Maker Design and Prototyping is an interdisciplinary elective open to any student in grades 9 - 12 who is willing to create and explore. This unique elective takes place in The Makery, Collegiate's makerspace. In the Makery, students will have access to design and programming software, numerous wood- and metalworking tools, a laser cutter, a vinyl cutter, a 3D printer, a CNC mill, and an electronics workbench. Students will create and invent in a collaborative environment, combining art, technology, engineering, math, and science as they learn specific tool and design skills. The course will be structured around several design and prototype projects and several reverse-engineering projects. This course is offered both semesters, with different projects in spring and fall. Students may enroll in the course either one or both semesters and may take them out of order, but may not enroll in spring or fall semester more than once. * Maker Design and Prototyping can be used to contribute to a student's elective or fine arts graduation requirement. A student can earn up to 1 credit toward their fine arts requirement, but that students may not repeat the course to earn a second fine arts credit.

The Guild
0.25 credits per semester

The Guild is a process-oriented writing course that provides students with an opportunity to research a subject of interest and to produce, in stages, a long-form academic paper. Students will develop their understanding of critical exploration through guided, individualized research and writing, one-on-one mentor meetings, opportunities for peer evaluation, and class workshops. A student's topic may come from any area of study: the humanities, the social sciences, the sciences, the arts, or any other fields, and students may take the course in any scheduled block that they have available. Four to five group meetings will be required throughout the semester during common free periods. All students will take this course for a Pass/Fail grade. *Prerequisites: Students must be rising juniors or seniors with a G.P.A. of 3.3 or higher in all English classes.*

MATHEMATICS

Sequence of Courses

9th Grade	10th Grade	11th Grade	12th Grade
Honors Algebra I	Honors Geometry	Honors Algebra II	Honors Pre-Calculus, Honors College Algebra and Trigonometry, Honors Statistics, or Advanced Statistics
Honors Geometry	Honors Algebra II	Honors Pre-Calculus or Honors College Algebra and Trigonometry	Honors Calculus, Advanced Calculus AB, Honors College Algebra and Trigonometry, Honors Pre-Calculus, Honors Statistics, or Advanced Statistics
Honors Algebra II	Honors Pre-Calculus, Honors College Algebra and Trigonometry, Honors Statistics, or Advanced Statistics	Honors Calculus, Advanced Calculus AB, Honors Pre-Calculus, Honors College Algebra and Trigonometry, or Honors Statistics or Advanced	Advanced Calculus AB, Advanced Calculus BC, Honors Calculus, Honors Statistics, Advanced Statistics, Honors College Algebra and Trigonometry, or Global Online Academy courses

		Statistics	
Advanced Algebra II	Advanced Pre-Calculus or Honors Pre-Calculus and/or Advanced Statistics	Advanced Calculus AB or Advanced Calculus BC and Advanced Statistics	Advanced Calculus BC, Multivariable Calculus, and/or Advanced Statistics, or Global Online Academy courses
Honors or Advanced Pre-Calculus	Advanced Calculus AB, Advanced Calculus BC and Advanced Statistics	Advanced Calculus BC or Multivariable Calculus and Advanced Statistics	Multivariable Calculus and Advanced Statistics, Global Online Academy courses

Requirements

- Completion of Algebra II
- Completion of three full years of mathematics

The Math Department at Louisville Collegiate School offers a curriculum rich with problem solving and investigations balanced with mastery of course concepts and skills. Students make deliberate connections, construct knowledge from meaningful experiences, and apply their learning to the world around them.

Students experience a balanced curriculum, with time spent on basic skills mastery, problem solving, conceptual understanding, standardized test preparation, and use of technology. Teachers encourage students to construct representations of concepts and strive to find relevant world connections to topics. The department utilizes a range of multi-dimensional approaches while offering math courses to support a wide range of student abilities and interests.

Note: **All** math students need a TI-84 calculator which costs about $100. TI-84 calculator skills are the ones taught in classes by the teachers. If a student chooses another calculator, he/she is responsible for learning all skills on his/her own.

Required Courses

Honors Algebra I
1.0 credit
Full year

Honors Algebra 1 covers the three main topics students must master: simplifying, solving, and graphing. Students will learn to simplify using order of operations, combining like terms, exponent properties. Students will also solve equations which include linear equations, absolute value equations, and quadratic equations. These concepts will be enriched through real world applications. Graphing topics include lines, linear inequalities, and an introduction to quadratics Graphing calculators are required as Honors Algebra will teach students how to use the calculator and many vital calculator techniques for student success.

Prerequisite: *Successful completion in 8th grade math course, benchmarks met on placement test and other data points. The Mathematics Department Chair recommends placement for students new to the Upper School.*

Honors Geometry
1.0 credit
Full year

This course seeks to encourage students to expand their abilities to approach a novel situation with curiosity, logic, and confidence. Students undertake a study of the mainstays of Euclidean geometry. They not only learn the properties of triangles, quadrilaterals, polygons, and circles, but they must also apply them. They use their knowledge of the basic properties of figures to solve puzzle-like problems and to justify their reasoning; a study of logic and proof forms the backbone of the course. Students will also engage with trigonometry, learning how right triangles underpin so much of our world. Throughout the course, they will look at real-world applications of geometry, like constructing wheelchair ramps to meet ADA requirements or creating congruent diamonds on a quilting pattern. In addition to building their geometric strength, students will also undertake continuous practice with algebra skills, setting them up for success in Algebra 2.

Prerequisite*: successful completion in Algebra 1 or its equivalent, benchmarks met on placement test and other data points. The Mathematics Department Chair determines placement for students new to the Upper School. Honors Algebra II may be taken concurrently with Honors Geometry after meeting benchmarks on a placement test, an exam or test average average of an A, a strong A in Honors Algebra 1, and permission from the department chair.*

Honors Algebra II
1.0 credit
Full year

The Honors Algebra II course is designed to build on previously taught algebraic and geometric concepts. Topics include the following: advanced equation solving; systems of equations, inequalities, and linear programming; the study of functions which include quadratic, piecewise, absolute value, exponential,

logarithmic, polynomial, radical, and rational; functions exploration - domain, range, applications, and graphs using transformations; introduction to complex numbers and matrices. Throughout the course, function notation, mathematical models, graphing calculator skills, and ACT/SAT preparation will be emphasized.

***Prerequisite**: Successful completion of both Algebra 1 and Geometry or their equivalents. The Mathematics Department Chair determines placement for students new to the Upper School.*

Accelerated Algebra II
1.0 credit
Full year

The Accelerated Algebra II course is designed to build on previously taught algebraic and geometric concepts, with a quicker pace, more depth, and an expectation of independent learning. Topics include the following: advanced equation solving; systems of equations, inequalities, and linear programming; the study of functions which include quadratic, piecewise, absolute value, exponential, logarithmic, polynomial, radical, and rational; functions exploration - domain, range, applications, and graphs using transformations; an introduction to complex numbers, including all operations with them; matrices, an introduction to sequences and series; and a review of probability topics including permutations and combinations. Typically, a quarter to an entire semester of Precalculus content is taught in the class. Throughout the course function notation, mathematical models, graphing calculator skills, and ACT/SAT preparation will be emphasized. Students are expected to have proficiency in Algebra I and Geometry upon entering the course.

***Prerequisites**: A average in an Advanced or Accelerated Algebra 1 course and an Honors Geometry course, or strong A's in both Honors Algebra I and Honors Geometry, strong test and exam averages, teacher recommendations, benchmarks met on placement test, strong CTP-4 test scores, and Mathematics Department Chair approval.*

Elective Courses

Honors Precalculus
1.0 credit
Full year

In Honors Precalculus, students undertake an in-depth study of functions. Building on their understanding of basic functions from previous algebra courses, students attain a more sophisticated grasp of the role of functions as mathematical objects and as tools to model our world. We pay particular attention to the trigonometric, polynomial, logarithmic, logistic, and exponential functions. As students study the characteristics of these functions, they will use them to model a variety of situations. To further encourage their application of mathematics to the real world, students also study basic tenets of statistics and probability. This course lays the groundwork for the study of

Calculus, but it is also appropriate for students who will take their mathematical career in a different direction. Precalculus is often a preferred course by many colleges and universities. Students should have extensive conversations with their math teacher and college counselor if the decision is made to not take the course.

***Prerequisite**: at least a C+ or higher in Honors Algebra II with strong skills or at least an A- in Honors College Algebra and Trigonometry, recommendation from current math teacher, and approval from Department Chair.*

Accelerated Precalculus
1.0 credit
Full year

This course presents functions and relations, and their graphs. Specific topics include polynomial, rational, irrational, exponential, logarithmic, logistic, and trigonometric functions. It also presents analytic trigonometry and an introduction to vectors and conic sections. TI graphing calculator skills enhance student learning, as well as real-world applications. Accelerated Precalculus has a much faster pace than Honors Precalculus and provides deeper treatment of concepts, along with an expectation of strong independence in learning. The course will also cover limits and a chapter of differential calculus, including all differentiation rules, which can enable students to progress directly into Advanced Calculus BC if recommended.

***Prerequisite**: An A average in Advanced or Accelerated Algebra II or strong A's in Honors Algebra I, Honors Geometry, and Honors Algebra II, and a placement test with benchmarks met, recommendation from Algebra II teacher, and approval by the Mathematics Department Chair.*

Honors Calculus
1.0 credit
Full year

This course will begin with a review of Algebra and Precalculus concepts that are needed in the development of Calculus. Topics will include factoring, exponents, rational expressions, functions, graphing, logarithms, and trigonometry. Calculus concepts will include limits, derivatives, integrals, and their applications. The course will prepare students for college Calculus I and help students gain insight into the relationship between Calculus concepts and economic, environmental, and social trends in the world around them.

***Prerequisite**: at least a C in Honors Precalculus, recommendation from current math teacher, approval from the Mathematics Department Chair.*

Advanced Calculus AB
1.0 credit
Full year

This course will begin with a brief review of Precalculus topics, including functions, graphing, and trigonometry. Advanced Calculus AB is an introduction to differential and integral calculus and their applications. In addition to

traditional analytic techniques, numerical and graphical solutions to problems will also be stressed. Graphing calculators will be integrated throughout. Exploration and investigation are emphasized. This course will prepare students to take the Advanced Placement Calculus AB examination and for college level Calculus classes.

***Prerequisite**: at least a B+ in Precalculus, recommendation from current math teacher, and approval by the Mathematics Department Chair.*

Advanced Calculus BC
1.0 credit
Full year

This course is designed to offer a challenging treatment of the topics covered on the BC level AP exam as well as an introduction to more advanced topics and their applications. Students completing the course will have completed the first year of a typical college Calculus sequence. As in previous courses, the material will be approached from a graphical, analytical, numerical and verbal perspective. Students will be required to examine both derivatives and integrals and their approximations when functions are presented either by table, by equation, or by graph. Since answers on the AP exam require justification, students will be required to be able to write brief and coherent explanations of their solutions. A student's ability to explain a concept or a solution verbally to the rest of the class is also emphasized, as this provides one good means of assessing depth of understanding of the material.

***Prerequisite**: Successful completion of Advanced Calculus AB **or** an A in Accelerated Precalculus, recommendation from teacher, approval by Mathematics Department Chair.*

Honors College Algebra and Trigonometry
1.0 credit
Full year

Honors College Algebra and Trigonometry is designed to deepen intermediate algebra concepts through investigation and application of problem solving strategies to real-life situations. Topics will include work to master fundamental algebra and trigonometry skills, with a major focus on linear, quadratic, logarithmic, and exponential functions. Probability and data analysis will be explored to round out problem solving skills. This course is especially beneficial for students who need more time to master the necessary algebra skills before takingHonors Precalculus and college-level mathematics.

***Prerequisite**: completion of Honors Algebra II and recommendation from current math teacher and approval by Mathematics Department Chair.*

Honors

This course examines how we gather, describe, and make

Statistics/ or Advanced Statistics
1.0 credit
Full year

decisions from data. Examples used come from the areas of sports, medical research, politics, business, and numerous other areas. Students will learn how to describe data visually and numerically, how to plan a study, a poll, or an experiment, and finally how to draw reasonable conclusions from their data. While this course does serve as preparation for the AP Statistics Exam, the more important outcome of the class is that students will learn to be discerning consumers of information who can make educated determinations about the reasonableness of statistical arguments and the scope of the conclusions that can (and can't) be drawn from real world data. The ability to communicate and explain processes and conclusions using correct statistical terminology and vocabulary will be stressed throughout the course. **Note**: Students electing to take the Honors level course will complete a culminating project in lieu of AP exam preparation.

***Prerequisite**: Successful completion of Honors Algebra II, recommendation from current math teacher, and approval by Mathematics Department Chair.*

Multivariable Calculus
1.0 credit
Full year

This course is designed to cover material typically seen in Calculus III courses at the college level. Topics covered will include vectors, vector-valued functions, partial derivatives, multiple integrals, vector calculus, and, time permitting, differential equations. In each topic, the primary emphasis will be on conceptual understanding of the material covered and how each topic fits into the bigger picture. Attention will also be given to proofs of theorems (where appropriate) and computational proficiency. Topics from physics are interwoven throughout the course, with the major vector calculus theorems from the course considered through the lenses of work and flux problems. This course may be available only through Global Online Academy depending on course section numbers.

***Prerequisite**: Successful completion of Advanced Calculus BC, and approval of the Math Department Chair.*

PHYSICAL EDUCATION

Requirement

Lifetime Fitness and Wellness

The 9th grade Lifetime Fitness and Wellness course encompasses best fitness practice and essential fitness concepts, nutrition, stress reduction, weight/resistance training, lifetime physical activity, CPR and First Aid, and strategies that students' should use throughout their lifetime to maintain and improve their health, fitness and wellness. Students use technology in tracking heart rate and steps and also to research related topics. Off campus resources and guest instructors introduce students to options available in the Louisville community. Students experience leadership and support roles in various aspects of the class.

Required Course

Lifetime Fitness and Wellness
1.0 credit
Full year
9th grade

The Lifetime Fitness and Wellness curriculum is built on the philosophy that all students will need to be physically active for general health and well-being throughout their lives. This course is designed to provide the skills and knowledge to plan, manage, and implement individualized lifelong fitness strategies. The curriculum emphasizes character development, fitness, weight and resistance training, lifetime physical activity, and wellness. Lifetime fitness and wellness are at the core of the curriculum. Students work individually, with partners and/or in small groups to research fitness and wellness components. Students in this course participate in a wide variety of lifetime activities, team building initiatives, and fitness development challenges and also complete the CPR and First Aid certification. When the opportunity arises, off-campus resources such as field trips and guest presenters are used.

SCIENCE

Basic Sequence of Courses (many available)

Grade 9	Grade 10	Grades 11-12
Honors Biology or Honors Conceptual Physics	Honors Chemistry or Honors Conceptual Physics	Advanced Electives Honors Physics Environmental Science

Requirements

- Honors Biology or Advanced Biology
- Honors Chemistry
- 1 full year of either Environmental Science, any level of Physics, or any Advanced level science course.

The science curriculum incorporates the recommendations of the *National Science Standards* across all grade levels and in all courses. Emphasis is placed on skill building in the lower and middle school classes while content and process are more emphasized in upper school classes. The department involves students in the scientific process in order to prepare them for an increasingly technical and scientific world.

The goals of the upper school science program are to prepare students for college and life by supporting scientific literacy and to offer a range of courses that support the interests and abilities of Collegiate students. These goals are accomplished by inquiry based lab investigations in all year-long courses, the use of technology in teaching and laboratory investigations, the inquiry fostered during projects and laboratories, and the range of topics with connections to global and local issue

Honors Biology
1.0 credit
Full year
9th Grade

This course is a comprehensive introductory program that will help students to develop a better understanding of the living world and to think critically concerning it. Upon successful completion, students will be well grounded in the fundamentals of biology and possess a better understanding of how biology is relevant to everyday living.

Honors Chemistry
1.0 credit
Full year

This course is a comprehensive introductory program that will help students to develop a better understanding of their physical world and to think critically concerning it. The students will reinforce the scientific method through laboratory

10th grade

investigations using varied methods for gathering and processing data. Upon successful completion, students will be well grounded in the fundamentals of chemistry and possess a better understanding of how chemistry is relevant to everyday materials and processes.
Prerequisite: Successful completion of Biology. Note: Ninth grade students may be recommended to take chemistry based on consistent high achievement in science and completion of Algebra 1 and Geometry. Please contact the Science Department Chair for complete recommendation criteria.

Elective Courses

Honors Conceptual Physics
1.0 credit
Full year

This course covers the major concepts of Physics (Motion, Forces, Energy, Electricity, Light and Sound, etc) with a focus on concepts rather than mathematical problem solving. The course includes a significant amount of investigative lab work to increase skills such as experimental design, technical writing, making and interpreting graphs, and developing conclusions supported by data. Students should consider this course if they want to further develop their academic skills before taking Honors Biology or Honors Chemistry, or if they want to take a Physics course but their mathematical progression will not allow them to meet the Algebra II prerequisite for Honors Physics.

Honors Environmental Science
1.0 credit
Full year
11th or 12th grade

This course will investigate basic principles of ecology and the interactions between humans and Earth's environment. The course focuses on the flow of matter, both in terms of nutrients and pollutants, as well as the flow of energy from the sun and from humans. The course incorporates current environmental issues including current extinction threats like the decline of the world's fisheries, invasive species, and the human-related effects from environmental crises such as droughts and large-scale wildfires. *Prerequisite: Interested students should have successfully completed Biology and Chemistry.*

Honors Robotics
1 credit
Full year

Students will use the principles of engineering and programming to build and program a robot to compete in the *FIRST*® Tech Challenge (FTC). Students will work together to apply real-world math and science concepts and develop problem-solving, organizational, and team-building skills. Students must be able to work well with others to achieve a common goal. Additional time will focus on the engineering process, principles of robotics, 3D design and printing, and a community outreach component that is part of the FTC competition. The course includes a service component as it is also part of the FTC competition. Students can take the course multiple years, but will require instructor approval that will be based upon their previous

year's work. Students who have already taken the course for a full year may also apply to take it as independent study. This course takes place in the Collegiate robotics lab and also utilizes the school's Makerspace.

Honors Physics
1.0 credit
Full year

This conceptual and algebra based analytical course is an introduction to the science of physics. Topics explored include kinematics, forces, momentum, energy, and rotational motion. Students will be challenged by the exploration of mathematical relationships, and will be taught to solve complex problems. The laboratory component of the course provides hands-on experiences to enhance understanding of each physical property. Students will also complete build projects based on the concepts covered. Upon successful completion of this course, students will be prepared for the first semester of a college-level introductory physics course, including Advanced Physics, and will have a new appreciation for the physical properties found in everything. ***Prerequisite: Candidates for this course must have completed Algebra II. Concurrent enrollment in Pre-Calculus or higher is recommended.***

Advanced Chemistry
1.0 credit
Full year

Advanced Chemistry is a college level course designed to prepare students for the AP Chemistry Exam and additional chemistry courses in college. Topics are covered at a fast pace. Strong preparations in algebra and first-year chemistry are necessary. ***Prerequisite: Candidates for this course must have earned a B+ average or higher in Chemistry, completed Algebra II with at least a B average, and have permission of the Science Department.***

Advanced Biology
1.0 credit
Full year

This course is an in-depth college level study of biology. The course is designed to prepare students for the AP Exam in Biology and also give them excellent preparation for additional college level life science courses. ***Prerequisite: Candidates must have earned a B+ average or higher in Biology and Chemistry. Candidates must also have the permission of the Science Department. Note: This course may substitute for the required Biology course with prior approval of the Science Department Chair.***

Advanced Physics
1.0 credit
Full year

This course is modeled after a first year Algebra based College level Physics course and covers a broad range of introductory physics topics. The course includes a significant amount of laboratory exercises that help students visualize and experience the physics presented by description, demonstration, and mathematics in class as well as developing their technical writing skills. The course curriculum includes all topics that

form the AP Physics 1 curriculum and selected topics from the AP Physics 2 curriculum. Since only some of the topics of the AP Physics 2 curriculum will be covered, sStudents planning to also take the AP Physics 2 exam will need to complete cover additional material outside of class in order to adequately prepare. ***Prerequisites: Candidates must have completed Honors Physics or Algebra II with a B+ or higher. Concurrent enrollment in Pre-Calculus or higher is recommended. Candidates must also have the permission of the Science Department.***

Advanced Physics C
1.0 credit
Full year

This course covers the topics of a full year, calculus based, college level Physics course and is designed to prepare students for both the AP Physics: Mechanics and AP Physics: Electricity and Magnetism exams. It topically differs from Advanced Physics with a focus on only Mechanics and Electricity and Magnetism, due to the higher level of mathematical sophistication and depth of analysis required. Typically this course would be a 2nd year physics course, but motivated students with strong math skills may be approved to take this as their first Physics course, ***Prerequisites: Completion of or concurrent enrollment in Advanced Calculus AB or higher, a B+ or higher in their current science course, and permission of the Science Department.***

Laboratory Assistant
0.5 credit
Full year
11th or 12th grade

A laboratory assistant will spend three periods each week assisting a teacher-sponsor. ***Prerequisite: Candidates for this program must have the permission of the Science Department Chair.***

Independent Science Research
0.5 credit
Semester
11th or 12th grade

This semester course is designed to assist highly motivated students who are interested in a particular topic within one of the sciences (Biology, Chemistry, Physics). Library research is required and the crafting of a major paper determines the grade. The resulting thesis paper must be at least twenty-five double spaced, typed pages. Parenthetical documentation must be used and a minimum of fifteen references included on the works cited page. Successful completion of this course requires meeting all of the benchmarks and expectations set prior to course approval. An outline and rough draft of the thesis paper must be submitted for review two weeks before the semester exam due date. ***Prerequisite: Candidates for this program must be able to work independently, meet deadlines, obtain a science faculty sponsor, and have the permission of the Science***

Department Chair.

WORLD LANGUAGES

Sequence of Courses
Dependent on entry level and language

Requirements
3 **Credits** of World Language **OR** 2 **Credits** of World Language if courses include a Level III language (must be consecutive years of same language)

World Language Department Philosophy

Louisville Collegiate School's World Language Department strives to help students become global citizens who have the skills necessary to communicate proficiently in their language of study. Through their World Language studies, students also gain insight into world cultures and cultures within the Louisville community. Our expectation is that Collegiate students graduate from our program with respect and appreciation for other societies, and the desire to continue their language studies.

Curriculum

The World Language Department develops each student's academic ability, global awareness, and leadership potential through a recently revised, cohesive proficiency-based curriculum. This proficiency-based curriculum is built around the American Council on the Teaching of Foreign Languages' (ACTFL's) proficiency guidelines which put an emphasis on what students can-do with their language skills. Find the can-do statements for each proficiency level here. Find more information about ACTFL's proficiency guidelines here. The department also fosters opportunities for students to experience linguistic and cultural diversity in the local community and abroad.

Proficiency Level Goals

Language Level	Proficiency level goal
Honors Foundations in Spanish	Novice-Mid to High
Honors French, Spanish I	Novice-High
Honors French, Spanish II	Intermediate-Low
Honors, French, Spanish III	Intermediate-Mid

Honors Chinese, French, Spanish IV	Intermediate-Mid to High
Honors/Advanced Chinese V, French V, Spanish V	Intermediate High
Honors Spanish: Developing Language through Culture	Intermediate High
Honors French: Developing Language through Culture	Intermediate High
Advanced Spanish Literature	Intermediate High

World Language Options

In the Upper School, students have two language options: French, or Spanish. Both languages are offered at the introductory level and may be taken at any grade level. Generally, students who matriculate to the Upper School from Collegiate's Middle School enroll in the second or third level of the same language, however, a placement test and teacher recommendation is required. Students may also choose to study more than one language if their schedule allows.

French

Honors French I
1.0 credit
Full year

Proficiency level goal: Novice-High
This course is an introduction to the language with an emphasis on communicative skills. Students learn a great deal of vocabulary and grammatical structures that allow them to begin communicating in French very early on in the course. In class activities will be hands-on and communication centered. Classes will focus on the four main aspects of communication: listening, speaking, reading and writing. Students are exposed to the culture of France and the Francophone world throughout the course.

Honors French II
1.0 credit
Full year

Proficiency level goal: Intermediate-Low
This second-year course will help students expand their knowledge of vocabulary and grammar though language acquisition activities in order to help them speak and write in a more sophisticated manner. A variety of in-class activities, such as paired conversations, reading, skits, projects, presentations, and listening activities will allow students to improve their skills in speaking, listening,

reading and writing. Students also learn about life in France and other French-speaking countries. *Prerequisite: Successful completion of 8th grade French with teacher recommendation, Honors French I, or equivalent*.

Honors French III
1.0 credit
Full year

Proficiency level goal: Intermediate-Mid
This third year course is designed to expose intermediate French students to more nuanced grammatical structures while allowing them to practice and apply French on a broader scale. Students read, write, and discuss at a more advanced level using a variety of authentic materials, including online sources and film clips. Language acquisition activities allow students to expand their vocabulary and focus on writing and speaking. Students also study the history of France. *Prerequisite: Successful completion of 8th grade French with teacher recommendation, Honors French II, or equivalent.*

Honors French IV
1.0 credit
Full year

Proficiency level goal: Intermediate-Mid to High
This fourth year course is designed to help students hone their language skills by making connections through an integrated approach of using interrelated themes like environmental awareness, families and communities, and the media. Students read, write, and discuss at a more sophisticated level using a variety of original source materials such as online newspapers magazines. Students also explore traveling, traditions and customs by listening to short podcasts and other real-life recordings, including video clips and songs. Skills such as speaking, writing, reading, and listening are reinforced through a variety of in-class activities, grammar lessons, and regular homework, including lengthy composition. *Prerequisite: At least a B average in Honors French III and permission of the instructor.*

Honors French: Developing Language through Culture
1.0 credit
Full year

Proficiency level goal: Intermediate-High
Honors French: Developing Language through Culture is a class designed to improve students' French skills, especially their verbal fluency, through the exploration of different cultural themes related to the French speaking world. Through class discussions, debates, films, authentic reading materials, games, and songs, students will come away from the class with a better understanding of the diverse cultures of the Francophone World and will be more confident French speakers, as well as writers and listeners. Students will leave class with a great deal of knowledge about the French speaking world, and will hopefully be compelled to continue their French studies in the future. *Prerequisite: Honors French IV and permission of the*

instructor.

Honors/ Advanced French V
1.0 credit
Full year

Proficiency level goal: Intermediate-High
The level V class prepares students to further develop their language skills at an accelerated pace. Students read authentic texts (excerpts from online newspapers and blogs, and they listen to recordings from various parts of the French-speaking world. Level V students may elect to take the Advanced Placement French Language and Culture examination, as the course prepares them to focus on the three modes of communication (Interpersonal, Interpretive, and Presentational) necessary for the exam. Students read, write and converse in French daily. Themes are based on Environmental Concerns, Contemporary Francophone cultures, Families, and Personal and Public Identities. Students are expected to do significant reading and research on their own in order to prepare for the AP French Language exam. *Prerequisite: At least a B+ average in Honors French IV and permission of the instructor*.

Spanish

Honors Foundations in Spanish
1.0 credit
Full year

Proficiency level goal: Novice-Mid to High

This course is designed for students who have very little experience studying Spanish and is open to incoming Upper School students. This is also an option for incoming 8th graders who want to begin studying Spanish. The curriculum will focus on beginning level topics in Spanish in order to build the foundation necessary to find success in Spanish I and beyond. Students who do extremely well in the Foundations of Spanish course may be placed in Spanish II based on the recommendation of the teacher.

Honors Spanish I
1.0 credit
Full year

Proficiency level goal: Novice-High
Spanish 1
The course emphasizes building skills in the four modes of listening, reading, writing, and speaking. This course provides students with opportunities to communicate about themselves and the communities with whom they interact. Students are encouraged to consider the values of their own communities' cultures as they investigate aspects of the Spanish culture such as products, practices, and perspectives held. Students will learn to use the language with their peers, to interact in culturally appropriate ways through practice, and by thoughtfully working with various media and resources available. This class prepares

students for level II.

Honors Spanish II
1.0 credit
Full year

Proficiency level goal: Intermediate-Low
The course continues to build skills in the four modes of listening, reading, writing, and speaking. This course provides students with opportunities to communicate about themselves and the communities with whom they interact. Students are encouraged to consider the values of their own communities' cultures as they investigate aspects of the Spanish culture such as products, practices, and perspectives held. As students build skills they will be asked to provide personalized details, examples, and experiences in written and verbal expression.
This class prepares students for level III
Prerequisite: Successful completion of 8th grade Spanish at Collegiate with a teacher recommendation, Honors Spanish I, Honors Foundations in Spanish with a teacher recommendation or equivalent.

Honors Spanish III
1.0 credit
Full year

Proficiency level goal: Intermediate-Mid
The course is a continuation of the skills in the four modes of listening, reading, writing, and speaking. Writing with increased accuracy becomes more important as students refine their ability to communicate. It follows that Spanish novels written for language learners support and guide students with this task. Students will be asked to take perspectives and support their thinking during the study of topics and themes studies in the course. . *Prerequisite: Successful completion of 8th grade Spanish at Collegiate with a teacher recommendation, Honors Spanish II, or equivalent.*

Honors Spanish IV
1.0 credit
Full year

Proficiency level goal: Intermediate-Mid to High
In this course, students refine their speaking, listening, reading, and writing skills. Students continue learning about the diverse cultures and ways of life in the Spanish speaking world through newspapers, stories, films, and music. *Prerequisite: At least a B average in Honors Spanish III or equivalent and permission of the instructor.*

Honors Spanish: Developing Language through Culture
1.0 credit
Full year

Proficiency level goal: Intermediate-High
Honors Spanish: Developing Language through Culture is a class designed to improve students' Spanish skills, especially their verbal fluency, through the exploration of different cultural themes related to the Spanish speaking world. Through class discussions, debates, films, authentic reading materials, games, and songs, students will come away from the class with a better understanding of the diverse cultures of Latin America and Spain, and will be

more confident Spanish speakers, as well as writers and listeners. Students will leave class with a great deal of knowledge about the Spanish speaking world, and will hopefully be compelled to continue their Spanish studies in the future. *Prerequisite: Honors Spanish IV and permission of the instructor.*

Advanced Spanish V
1.0 credit
Full year

Proficiency level goal: Intermediate-High
This course prepares students to take the Advanced Placement exam for Spanish Language. Advanced grammar and further development of speaking and listening skills are essential components of this course. Class discussions based on cultural aspects of Spanish-speaking countries help students increase their fluency and also learn more about the cultural and literary heritage of Spain and Latin America. *Prerequisite: At least a B+ average in Honors Spanish IV or Developing Language through Culture and permission of the instructor.*

Advanced Spanish Literature
1.0 credit
Full year

Proficiency level goal: Intermediate-High
The Advanced Spanish Literature and Culture course provides a solid foundation for an understanding of major literary movements in Hispanic literature. Students will learn to read critically and to write and speak clearly about texts, genres, literary techniques, and themes. This course offers an opportunity to reinforce advanced Spanish language skills while learning how to recognize and analyze literary devices and techniques using primary source materials. All of the works on the official AP Spanish Literature and Culture reading list will be taught during the academic year. This course will address the socio-cultural contexts necessary to comprehend each primary text as well as to recognize relationships between texts and literary movements.This course is conducted exclusively in Spanish. *Prerequisite: Advanced Spanish V or by teacher recommendation and a placement test.*

Independent Study in World Language Immersion
0.5 credit

The Independent Study in World Language Immersion credit through our World Language Department is a unique way to expand education beyond the classroom, and to engage in meaningful cultural interactions. World language students that participate in a French or Spanish language travel experience have the opportunity to receive credit for an independent study in World Language Immersion on their Collegiate transcript. The trips offer a distinctive experience involving elements of cultural immersion, study of language, social services, art, family

life, economics and everyday life. Students expand and deepen their knowledge of a topic through collaborative learning and an exploration of the diverse intellectual and cultural resources offered through this immersion experience. *Note: This course will only be offered during years a language trip is planned.*

UPPER SCHOOL ELECTIVE COURSES

If more than one semester course is requested, selecting two courses from different departments or a schedule change is requested after semester one, this may result in a schedule conflict. Please also note the prerequisites listed in the course description section of the catalog.

SEMESTER ELECTIVE COURSES

Department	Semester 1	Semester 2
English 11th, 12th	**Center of Writing Student Consultant**	**Center of Writing Student Consultant**
Fine Arts 9th, 10th, 11th, 12th	Vocal Ensemble	Vocal Ensemble
	2-Dimensional Studio Art	**3- Dimensional Studio Art**
	Photography	**Graphic Design**
	Honors Drawing, Painting and Printmaking (prerequisite 2D Studio Art)	**Honors Mixed Media and Sculpture** (prerequisite 3D Studio Art)
History 10th , 11th, 12th	**Honors Women in History**	**Honors Human Rights**
Computer Science 9th, 10th, 11th, 12th	**Honors Computer Science** **Game Development** **Tech Assistant**	**Honors Computer Science** **Game Development** **Tech Assistant**
Interdisciplinary Electives 9th-12th	**Maker Design and Prototyping**	**Maker Design and Prototyping**

	Entrepreneurial Problem Solving (Grades 11 and 12 only)	**Entrepreneurship Through Startup (Grades 10-12)**

FULL YEAR ELECTIVE COURSES

Department	Courses
Fine Arts 9th, 10th, 11th, 12th	**Theatre, Honors Theatre Second Stage, Strings Ensemble, Contemporary Instrumental Ensemble** **(All courses with exception of Theatre may be taken multiple times)**
	Honors Art Portfolio Design or Advanced Studio Art (11th and 12th grade)
Mathematics 9th, 10th, 11th, 12th	Students may elect to take **Honors Algebra I with Honors Geometry** or **Honors Geometry with Honors Algebra II** classes concurrently. Interested students must be highly skilled in math and must obtain permission from the Math Department Chair. Other electives offered: **Honors/Accelerated Precalculus, Honors Calculus, Adv. Calculus AB, Adv. Calculus BC, Multivariable Calculus, Honors/Adv. Statistics, Honors College Algebra and Trigonometry**
World Language 9th, 10th, 11th ,12th	**Students may request an additional world language course and take two languages concurrently.**
History 10th, 11th, 12th	**Honors/Adv. Economics (every odd year), Honors/Adv. US Govt. and Politics (every even year), Macroeconomics (every odd year), Adv. European History, Honors/Adv. Psychology**
Science 10th, 11th, 12th	**Honors Conceptual Physics, Honors Physics, Adv. Physics, Adv. Physics C, Adv. Biology, Adv. Chemistry, Honors Environmental Science, Robotics**