



Upper School Curriculum Planner 2022-2023

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We Go Further

INTRODUCTION

Friends' Central's Upper School curriculum provides an exceptional college-preparatory program in an atmosphere that sets the highest of academic and personal standards. Classrooms promote independent thought, the courage to voice individual opinions, and the faith that students will listen to and value one another's opinions. Cooperative discussions, one-on-one conferences with faculty, and individual work encourage students to think and perform independently and to solve problems in innovative ways.

The coursework of the Upper School empowers students to see their community through a global lens and to craft thoughts that come from enlightened academic analysis. Information literacy skills — the ability to locate, evaluate, and use information critically — are taught in the context of research assignments in the various disciplines. Courses in the arts are required, as we believe that creativity is an important complement to analytic thinking and value its role in all aspects of life. Additional offerings in the “maker” realm, as well as varied elective offerings, combine with core courses to prepare students to be cutting-edge 21st century leaders. In addition to the core academic curriculum, every student must take courses in health and fitness to promote wellness and the mind-body integration essential to adolescent development.

This Curriculum Planner includes graduation requirements, a curriculum overview, course descriptions by department, information on our Core Teams and Global Online Academy, and elective offerings for the coming academic year. Students, in collaboration with their parents/guardians, advisors and, for older students, college counselors, should use this planner as a guide for choosing courses for the following academic year, while keeping in mind the anticipated path of study through senior year, as well as prerequisite and graduation requirements.

Students are encouraged to evaluate course selection, and they are urged to take advantage of the breadth of opportunities offered at Friends' Central School. Our courses are challenging, requiring sustained investment of time and consistent engagement; however, we also believe that meaningful participation in clubs, athletics, arts, service, and intellectual experiences, like our Core Teams in science, humanities, and justice, is central to the Friends' Central Upper School experience. We ask that students consider off-campus commitments carefully as well to leave time for a full Friends' Central experience.

While planning their Upper School academic program, students and parents may find the grid on page four useful. Graduation requirements are noted, and required courses are listed, but please remember that not all elective courses are offered every year. In addition to fulfilling the academic requirements, students must participate in after-school athletics or the fall or winter drama production, as a performer or crew member, for six seasons (three of which must be completed by the end of grade 10). During any season in which students do not participate in athletics or in the drama production, they will be required to enroll in either an on- or off-campus wellness program.

In most cases, students will be placed in the courses selected during the registration process. In the case of scheduling conflicts, students may have to choose between multiple courses they would like to take. Advanced courses and some other courses require instructor or departmental approval. Students will be notified about any problems or changes to their course selections.

Please keep in mind that Friends' Central faculty members, department chairs, and college counselors are available to make suggestions and to answer any questions you might have. For more information, please visit the Academics section of our website at friendscentral.org/academics.



CORE TEAMS AT FRIENDS' CENTRAL

Students in the Upper School are encouraged to join one (or more) of our Core Teams, a signature academic program at FCS. While we currently host three different Core Teams – science, humanities, and justice – with the possibility of more teams to come, each team offers a similar experience. A group of students from grades 9 through 12, working together with the guidance and equal participation from members of the faculty and staff, takes a deep dive into the work of a particular, scientist, artist, scholar, and/or activist. These weekly sessions, which may involve everything from analyzing a particular experiment to “performing” a play together to reviewing how activism was used to bring about change, offer students a chance to look closely at the work of an expert in their field and, in so doing, prepare for each team's capstone experience: the expert's visit to campus later in the year. On that occasion, in addition to giving a talk open to all FCS students, families, and the public, our distinguished visitor spends a day on campus visiting with members of the Core Team, who get to ask their questions, offer their insights, and hear about the visitor's current endeavors. Going a step further, members of the Science Core Team end the year with a trip to visit the distinguished scientist in their laboratory.

FCS Core Teams represent the very best of scholarship and inquiry. Modeled after intensive college-level seminars, hands-on laboratory work and active ensemble building, the Core Teams thrive on collaboration, curiosity, creativity, and the collective energy generated by learners with a shared purpose. There are no prerequisites to join a team and little, if any, homework is required. Meetings are scheduled during the school day at lunch or during community blocks. Even though no academic credit is offered to the

participants, each fall, Upper School students join the Core Teams because they are interested in a field of study, a social justice issue, or a particular artistic pursuit. Put simply, students on the Core Teams want to learn more. These teams offer students a stress-free opportunity for growth, relationship-building, and exercising their academic muscles.

Sparkling intellectual passion and a spirit of inquiry are central to our mission and vision. Bringing scholars who are at the very top of their fields to Friends' Central to work with our students is a natural extension of the scholarship they do every day with our own talented and passionate faculty. Our distinguished visitors come from major universities, research centers, and artistic hubs. In the last few years, Friends' Central has hosted, with the Science Core Team, J. Marshall Shepherd, international weather and climate expert and professor at the University of Georgia; Helen White, geochemist and associate professor at Haverford College; and Rebecca Saxe, cognitive neuroscientist and MIT professor. In that same time frame, the Humanities Core Team has welcomed Jon Grinspan '02, Curator of Political History at the Smithsonian's National Museum of American History; Daniel Immerwahr '98, author and professor at Northwestern University; and novelist and Haverford College professor Asali Solomon. The Justice Core Team, our newest team, has hosted filmmaker and activist André Robert Lee; Dr. Steve Larson, physician and co-founder of Puentes de Salud, and Dr. Mona Hanna-Attisha, a pediatrician whose research exposed the Flint water crisis. Each visitor has enriched our students' experience and, through their public lectures, shared Friends' Central's intellectual fire with the public.

Visit our [Distinguished Lecture Series page](#) for more details.



NEW PROGRAM: NATURAL LANDS BIODIVERSITY



Upper School science teacher John Gruber conducting field research

New this year, the Science Department is offering a certificate program in ecological monitoring called “Natural Lands” each semester. Those enrolled will attend three meetings/cycle as well as four weekend outings during the semester. This program is different from traditional departmental course offerings and may be taken in addition to a six-class course load. It will not carry departmental course credit, but students who complete the semester will receive a Certificate in Natural History and Ecology.

Core studies will focus on ecological field work and data analysis, coupled with exploration of the regional policy is-

ssues of greatest importance to conservation. There will be extensive field work during the warmer months (September to mid-November in semester one, mid-March to early June in semester two), studying pollinating insects (especially flower flies and native solitary bees), fungus and lichens, native wildflowers, and migratory birds. Site visits will include trips to Natural Lands preserves and other nearby natural areas. Students will generate focus study topics in connection with specific organisms and may develop web-based publications or seminar presentations outlining individual findings. (Open to students in grades 10-12)



GLOBAL ONLINE ACADEMY (GOA)

Learning Unbound

Global Online Academy is a nonprofit organization that reimagines learning to empower students and educators to thrive in a globally networked society.



Friends' Central School is a proud member of the Global Online Academy (GOA) non-profit member consortium. GOA is a group of 75 outstanding independent schools from around the world offering online courses to students in its member learning communities. GOA's stated mission is to reimagine learning to empower students and educators to thrive in a globally networked society.

In the summer of 2020, after a few months of virtual teaching early in the pandemic, Friends' Central teachers experienced GOA for themselves as learners in a weeklong professional development program. In addition to being impressed with the teaching, our faculty recognized that GOA's student-centered, intellectually engaging approach to learning speaks to our own educational philosophy.

Students take GOA courses offered during the school year for credit; however, GOA courses do not fulfill departmental graduation requirements. For instance, one would earn credit for GOA's Arabic language course, but that credit does not count towards FCS's two-year language requirement. GOA course workload and course intensity are equivalent to courses taken on campus. Students are also expected to manage their workload and time effectively to support the largely asynchronous nature of the courses. Mindful that a GOA course takes a substantial amount of time, students who plan to take a GOA course as a sixth class must first meet with Alex McDonnell, our GOA Site Director.

For more information about GOA courses, please [visit their website here](#).



GRADUATION REQUIREMENTS (REQUIRED COURSES)

DEPARTMENT	CREDITS REQUIRED	GRADE 9	GRADE 10	GRADE 11	GRADE 12
ARTS	4 semesters				
ENGLISH	8 semesters	The Journey Begins: Becoming Ourselves	In Pursuit of Justice: the Self in the World	Literature of the United States: Negotiating Identity Semester Seminar	Gods and Monsters: What Does it Mean to Be Human/ Semester Seminar
HISTORY	4 semesters	World History		United States History	
MATHEMATICS	6 semesters				
SCIENCE	4 semesters	Physics I			
WORLD LANGUAGES	4 semesters of the same language				
WELLNESS	2 semesters	Quaker School Life Human Sexuality	Health		
ADDITIONAL COURSES	6 semesters				
TOTAL	38 semesters required	10-12 semesters required	10-12 semesters required	10-12 semesters required	10-12 semesters required

The graduation requirements described in the grid above represent the minimum course of study taken by each student. Most students take more than the required number of classes in most academic disciplines, choosing elective courses beyond the requirements stated above. With permission of specific departments, approved courses of summer study may be accepted in order for a student to advance to a higher level of study during the following year. Summer courses will not be applied toward graduation requirements. Please note that summer work is supplemental and does not appear on transcripts.

Students in grade 12 are required to earn a minimum of ten (10) and a maximum of twelve (12) credits over the course of their final year on campus. The preference would be for at least five (5) classes each semester. Students may petition the Upper School administrative team if they have a compelling reason for taking fewer than ten (10) total semesters in 12th grade.

DROP/ADD POLICY

Provided that there is space available, with permission of the relevant teacher and the Dean of Students, Upper School students may add courses until 15 full school days into the semester. Students may drop courses without them appearing on their transcripts until 30 full school days into the semester. After that time, dropped courses will be noted on the transcript with the designation WP (withdrew passing) or WF (withdrew failing).

Note: Grade 12 students are expected to adhere to the initial course sign-up plan for fall and spring classes. Colleges admit grade 12 students with a yearlong plan. Any changes to course selection must be approved by College Counseling and with the schools to which students have been accepted.



CURRICULUM OVERVIEW

Courses marked with # are not yet approved by the NCAA eligibility center as core courses for Division I or II college eligibility.

	GRADE 9	GRADE 10	GRADE 11	GRADE 12
	Chorus Inst. Ensemble Music: Introduction to Theory and Composition Foundations of 2D Art Foundations of Theater	Chorus Inst. Ensemble Fundamentals of Singing* History of African-American Music from Spirituals to Hip-Hop Music: Introduction to Theory and Composition Music: Theory & Composition II Musical Theater World Music Drumming Art and Activism Design Evolution Design Thinking: Innovation & Creation Digital Design for Social Change* Digital Photography Fiber Art Fabrications Foundations of 2D Art Mixed Media: Appropriation & Reinvention Mixed Media: Connections with the Real World Studio Art I: Foundations of Studio Art Wearable Art Foundations of Theater The Classical Stage: Shakespeare in Performance* The Contemporary Stage: Ensemble Lab* The Contemporary Stage: Making a Scene The Contemporary Stage: Building a World	Chorus Inst. Ensemble Fundamentals of Singing* History of African-American Music from Spirituals to Hip-Hop Music: Theory & Composition II Musical Theater World Music Drumming Art and Activism Design Evolution Design Thinking: Innovation & Creation Digital Design for Social Change* Digital Photography Fiber Art Fabrications Mixed Media: Appropriation & Reinvention Mixed Media: Connections with the Real World Mixed Media: Advanced Topics in Abstraction* Studio Art I: Foundations of Studio Art Studio Art II: Advanced Topics in Studio Art Wearable Art The Classical Stage: Shakespeare in Performance* The Contemporary Stage: Ensemble Lab* The Contemporary Stage: Making a Scene The Contemporary Stage: Building a World	Chorus Inst. Ensemble Fundamentals of Singing History of African-American Music from Spirituals to Hip-Hop Music: Theory & Composition II Musical Theater World Music Drumming Art and Activism Design Evolution Design Thinking: Innovation & Creation Digital Design for Social Change* Digital Photography Fiber Art Fabrications Mixed Media: Appropriation & Reinvention Mixed Media: Connections with the Real World Mixed Media: Advanced Topics in Abstraction* Studio Art I: Foundations of Studio Art Studio Art II: Advanced Topics in Studio Art Wearable Art Woodworking I Woodworking II* The Classical Stage: Shakespeare in Performance* The Contemporary Stage: Ensemble Lab* The Contemporary Stage: Making a Scene The Contemporary Stage: Building a World

ARTS

* Not offered in the 2022-2023 school year

Courses marked with # are not yet approved by the NCAA eligibility center as core courses for Division I or II college eligibility.

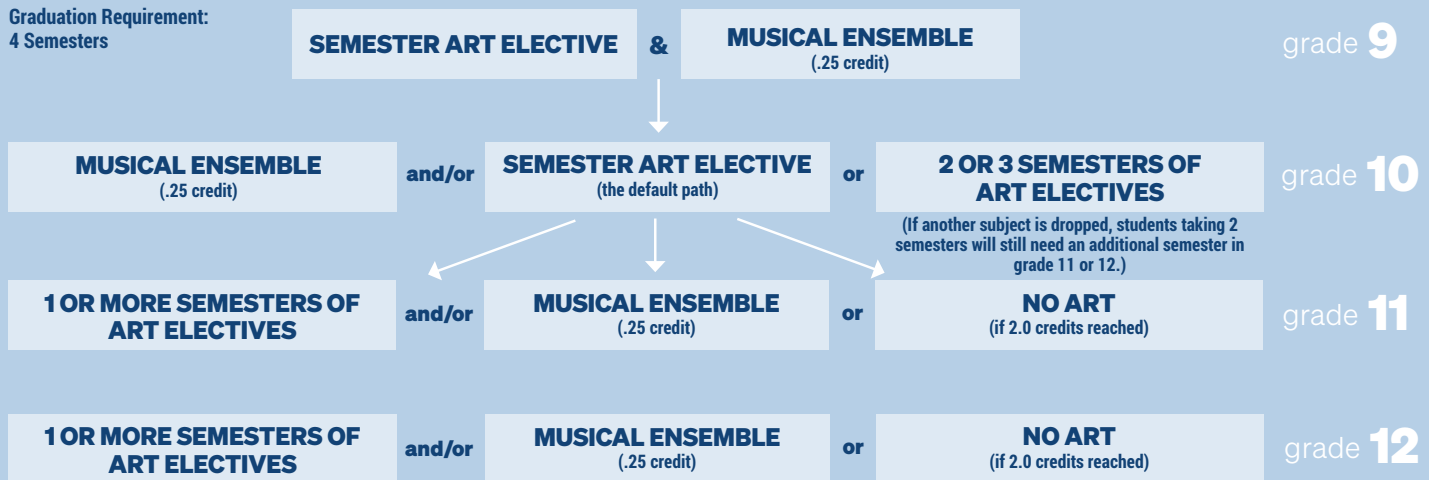
ENGLISH	GRADE 9	GRADE 10	GRADE 11	GRADE 12
	ENGLISH I The Journey Begins: Becoming Ourselves	ENGLISH II In Pursuit of Justice: The Self in the World	ENGLISH III Literature of the United States: Negotiating Identity <i>(required)</i> Semester Seminars <i>(required)</i> Writers' Workshop Adv	ENGLISH IV Gods and Monsters: What Does It Mean to Be Human? <i>(required)</i> Semester Seminars <i>(required)</i> Writers' Workshop Adv
HISTORY	Religions & Revolutions <i>(required)</i>	Contemporary Global History <i>(recommended but not required)</i>	U.S. History <i>(required)</i> Capitalism & Consumption Intro. to Philosophy International Relations Modern Chinese History Women's History in the United States The Sociological Imagination: Race, Class, and Gender in an Unequal World#	Modern European History Seminar Adv. Capitalism & Consumption Creating Africa Adv. Intro. to Philosophy International Relations Modern Chinese History Modern Africa Adv. Women's History in the United States Philadelphia Black History from Reconstruction to the Present# Constitutional Identity Adv.# The Sociological Imagination: Race, Class & Gender in an Unequal World#
MATHEMATICS	Algebra I Geometry Geometry Adv. Algebra II Algebra II Adv. Precalculus Adv. Calculus I Adv.	Geometry Geometry Adv. Algebra II Algebra II Adv. Precalculus Precalculus Adv. Calculus I Adv.	Algebra II Algebra II Adv. Precalculus Precalculus Adv. Calculus Calculus I Adv. Calculus II Adv. Statistics Statistics Adv. Intro. to Economics	Precalculus Precalculus Adv. Calculus Calculus I Adv. Calculus II Adv. Statistics Statistics Adv. Intro. to Economics Linear Algebra Adv.

Courses marked with # are not yet approved by the NCAA eligibility center as core courses for Division I or II college eligibility.

	GRADE 9	GRADE 10	GRADE 11	GRADE 12
SCIENCE	Physics I	Physics I Chemistry I Chemistry I Adv. Physics II Adv.	Biology I Biology I Adv. Chemistry I Chemistry I Adv. Chemistry II Adv. Equilibrium Chemistry II Adv. Kinetics and Electrochemistry Experiential Physics Physics II Adv. Physics III Adv. Electricity and Circuits Physics III Adv. Magnetism, Waves, and Optics	Biology I Biology I Adv. Biology II Adv. Biodiversity Biology II Adv. Designing Experiments in Molecular Biology Chemistry I Chemistry I Adv. Chemistry II Adv. Equilibrium Chemistry II Adv. Kinetics and Electrochemistry Experiential Physics Physics II Adv. Physics III Adv. Electricity and Circuits Physics III Adv. Magnetism, Waves, and Optics Astronomy Botany Biology of Bodies Atmospheric Science & Climate Change
WORLD LANGUAGES	French Latin Spanish	French Latin Spanish	French Latin Spanish	French Latin Spanish
NON-DEPT. COURSES	Introduction to Computer Science	Introduction to Computer Science	Introduction to Computer Science Introduction to Computer Hardware Advanced Python and Object-Oriented Programming Sexuality & Society Adv.	Introduction to Computer Science Introduction to Computer Hardware Advanced Python and Object-Oriented Programming Sexuality & Society Adv.
WELLNESS COURSE (REQUIRED)	Quaker School Life (required) Human Sexuality (required)	Health (required)		

ARTS

Graduation Requirement:
4 Semesters



Art is a universal language of expression offering unique views into society, history, and the human condition. At Friends' Central, we believe the arts have the power to inspire change both internally and externally. The diverse visual and performing arts courses and co-curricular activities that we offer provide students with the tools necessary to understand what they experience, express themselves, and make informed decisions. Through an exploration of traditional and new media, including digital technologies and the Makerspace, students explore design thinking in personal and collaborative projects. Visual arts offerings in an assortment of mediums and styles range from applied arts to fine arts. Music offerings provide opportunities for students to listen to, create, and/or perform. The drama program includes both modern and classical instruction, and all students are invited to participate either onstage or behind the scenes in any of the three plays produced each year.

We teach students to respond to and appreciate the arts from a range of cultures while providing opportunities to exercise their own creativity. We encourage every student to discover their individual artistic voice and to collaborate within performing ensembles to further the acquisition of skills while honing critical thinking. From their interactive arts experiences both in and out of the classroom, students emerge confident, capable, curious, well-rounded, and expressive.

FCS graduation requirements include two years of art courses. Course offerings provide a high degree of flexibility in both selection and sequence. Students often begin to fulfill these requirements in ninth grade, and many elect to surpass the requirement.

In addition to the offerings listed, students are exposed to additional art-related experiences including visiting performance art centers and collaborating with the vibrant array of arts in Philadelphia. Students can also showcase their talents throughout the year both on and off campus.





ENSEMBLES

CHORUS (*credit and non-credit options*)

The Chorus is a mixed-voice ensemble that meets during the school day twice a rotation and is open to anyone interested in singing in a group setting. No audition is necessary. The Chorus performs in two concerts a year and also sings for various community events. Repertoire is varied and represents music in several languages and from different periods and styles. Development of vocal technique and choral discipline is a part of the rehearsal process. Students may elect to receive .25 credit for participation in chorus for a full year. Please note, while it is possible to earn more, a maximum of one credit can go towards fulfilling the two-credit art requirement through music ensembles.

VOCAL GROUPS (*not for credit*)

In addition to the choral experience, there are two smaller vocal groups open to singers from the Chorus who are interested in pursuing a more challenging repertoire. Participation in these groups is by audition. They are listed below:

GRACE NOTES

Open by audition to all sopranos and altos in US Chorus, the Grace Notes sing music from a variety of genres, including traditional choral, compositions from non-Western traditions, and contemporary a cappella. They perform independently at school concerts and at other community events throughout the school year, including Singing Valentines and the Main Line A Cappella Sing-Off. Student leaders within Grace Notes help to choose and arrange songs for the ensemble, which is largely student conducted.

FOXTONES

Open by audition to all tenors and basses in US Chorus, the Foxtones sing music from a variety of genres, including traditional choral, barbershop, compositions from non-Western traditions, and contemporary a cappella. They perform independently at school concerts and at other community events throughout the school year, including Singing Valentines and the Main Line A Cappella Sing-Off. Student leaders within Foxtones help to choose and arrange songs for the ensemble, and the ensemble is largely student conducted.

INSTRUMENTAL ENSEMBLES

Upper School instrumentalists may participate in the jazz ensemble, orchestra, chamber music ensemble, and solo recitals. Private instruction is also offered. The jazz ensemble requires an audition before participating. Each of these ensembles explores a wide variety of repertoire from each tradition. Students may elect to receive .25 credit for participation in orchestra or jazz ensemble for a full year. They can earn more than one credit total over the course of their time at FCS and are always welcome to surpass requirements, but a maximum of one credit can be earned towards the two credit art requirement through music ensembles.

ART ELECTIVES

MUSIC

HISTORY OF AFRICAN-AMERICAN MUSIC FROM SPIRITUALS TO HIP-HOP (*fall or spring semester*)

This course will give each student an introduction to the major styles and genres that have defined black music



in America. We will begin with a musical and historical investigation of work songs and spirituals, making our way through ragtime, jazz, blues, R&B, and hip-hop. Students will learn about the broader cultural significance of this music, as well as its influence on Classical composers and innovators in the rock and roll and pop genres. This course is open to students in grades 10-12 and fulfills one semester of the four-semester arts requirement.

MUSICAL THEATER (fall semester)

This course will present an overview of American musical theater, highlighting the lives and careers of prominent musical theater composers, lyricists, producers, directors, and choreographers. Students will not only learn the historical contexts of composers and their works, but will also study and present historically and/or culturally significant songs (through performance and/or research presentation). This course is open to students in grades 10-12 and fulfills one semester of the four-semester arts requirement.

MUSIC: INTRODUCTION TO THEORY AND COMPOSITION (fall semester)

This course introduces students to the basics of reading and writing music, directly applying concepts learned to the creation of music compositions. Students will work on computers and learn to use music composition software/web-based programs such as Noteflight and Soundtrap. Topics include – but are not limited to – reading and writing in treble and bass clefs, rhythmic and melodic notation, major and minor scales and keys, pentatonic, whole tone, and chromatic scales, modes, intervals, triads, and solfege/sight reading. Each unit includes hands-on composition practice, playback, and critique by peers and the teacher. This course is open to students in grades 9-10 and fulfills one semester of the four-semester arts requirement.

MUSIC: THEORY & COMPOSITION II (spring semester)

In this course, students continue their development of music theory and composition skills through daily hands-on practice in a workshop context. Students will work on computers and continue to develop their facility with music composition software/web-based programs such as Noteflight and Soundtrap. Through score reading and analysis, rhythmic and melodic dictation, sight reading practice, solfege exercises, and composition, students will continue to develop their music reading and writing skills. Students will explore

project-based units that cover a range of musical genres and concepts, including minimalism, impressionism, arranging for specific voices/instruments, creating a musical work inspired by a piece of visual art, and scoring for a short film or video game. Specific music theory topics include: a review of scales and keys, modes, intervals and triads, chord progressions, the basics of four-part writing, Roman numeral analysis and figured bass. Students are encouraged to create music shaped by their unique background and musical point of view, including an individually designed final project. This course is open to students in grades 10-12 and fulfills one semester of the four-semester arts requirement. *Prerequisite: Music: Introduction to Theory and Composition or permission from instructor.*



WORLD MUSIC DRUMMING (spring semester)

In World Music Drumming, students will practice ensemble drumming while studying musical traditions from cultures around the world (including, but not limited to, music from the Caribbean, South America, Africa, Asia, and various European folk music traditions). Students of any musical background and all levels of experience are welcome. Students will develop both musical skills (reading musical notation, basic technique on a variety of world percussion instruments, musical improvisation and composition), and non-musical skills (listening, collaborating, reflecting). Through our musical journeys, students will also investigate correlations between patterns found in music, art, dance, literature, and society of the cultures they explore. This course is open to students in grades 10-12 and fulfills one semester of the four-semester arts requirement.



VISUAL ARTS

ART & ACTIVISM *(spring semester)*

In this one-semester topics course, students will look at the history of art through the lens of social change. From the French Revolution and early democratic movements of the 18th century through the 19th century labor movement to the civil rights, anti-war, and global anti-colonial movements of the 1960's and 70's – every period of social upheaval and progress has drawn power, strength, and messaging from artists and artworks of the times. The energy and purpose of those movements and world events has also contributed back to the history of art. The primary focus of the course will be looking at that exchange of imagery and ideas, but students will also be looking at how imagery, propaganda, and information networks affect the power of that imagery – historically and currently. If safe, students can also expect three out of the classroom field trip opportunities to be an experience of artworks in context and some experiential making opportunities to give voice to their own interests and beliefs through imagery. This course is open to students in grades 10-12 and fulfills one semester of the four-semester arts requirement.



DESIGN EVOLUTION *(fall semester)*

Design Evolution offers a stimulating hands-on, studio based curriculum in which students explore a broad range of 2D and 3D art and design principles. Analytical skills in schematic drawing, design, three dimensional forms, material craftsmanship and sculpture are covered as well as hand-building and digital techniques, all of which contribute

to the development and understanding of visualizing an idea from a 2D drawing into a 3D form. A variety of media including traditional (paper & chip board construction) and digital (laser etching and 3D printing) materials will be utilized. Creative and critical thinking, visual problem solving, and technique will be explored, and all students will participate in the formal critique process. This course is open to students in grades 10-12 and fulfills one semester of the four-semester arts requirement.



DESIGN THINKING: INNOVATION & CREATION *(spring semester)*

In this project-based STEAM course, students will learn to design, build, and present models and solutions that develop their empathy, encourage ideation, teamwork, and metacognitive awareness. Students will utilize the process of Design Thinking which is an interdisciplinary, human-centered, collaborative, and iterative methodology of innovation. Working with their peers, students will determine the unique needs of an identified audience, conceptualize ideas, and develop rapid prototypes as possible solutions. They will then test and improve their prototypes into three-dimensional models guided by aesthetics, research, divergent thinking, computer design, graphic design, and hands-on building. Additionally, students will practice giving compelling in-person presentations of their creations while considering the form and function of their final carefully constructed products. This course is open to students in grades 10-12 and fulfills one semester of the four-semester arts requirement.



DIGITAL PHOTOGRAPHY (*full year*)

This course covers the fundamentals of photography. From cyanotypes to Photoshop, various techniques through the history of photography will be examined, with an emphasis on modern digital photography. Through a range of assignments, topics such as motion, composition, lighting, and color will be studied; and photographic genres, such as portraiture and narrative, will be explored. The first semester focuses on mastering the technical side of the medium while developing a creative vision, all the while taking interesting photographs. The second semester builds on the previous semester and allows students more opportunities for expanded creativity in terms of the projects and post-production. Class discussions will include group critiques of projects and the introduction of the works of noted photographers. Students are expected to provide their own digital camera, which must have the capability of manually controlling features, such as aperture, shutter speed, ISO, and white balance. This course is open to students in grades 11-12 or with permission of the instructor and fulfills two semesters of the four-semester arts requirement.

FIBER ART FABRICATIONS (*fall & spring semesters*)

In this process-based course, we will explore fibers, fabrics, and textiles with a hands-on approach. We will create with fiber from among a variety of selected techniques: dye, felt, draw, coil, crochet, knit, paper-maché, stitch, or weave. Fibrous materials will be fabricated into 2D and 3D projects that may include wall art, vessels/baskets, wearable, utilitarian, or collaborative site-installation pieces. Researching



fiber, cultures, and artists through and textiles from around the world – contemporary as well as historic – will inspire individual projects and awareness. The testimony of ‘stew-ART-ship’ will include the transformation of recyclables into fibrous pieces. The growth from concept to final project will be reflected in journal entries tracking techniques, sketchnotes, research, and outcomes. The results will be visual, fiber art statements or functional pieces for the body or home, where each creative voice is encouraged as artistic self-expression. Discovering, creating, and reflecting will guide our daily process. This course is open to students in grades 10-12 and fulfills one semester of the four-semester arts requirement.

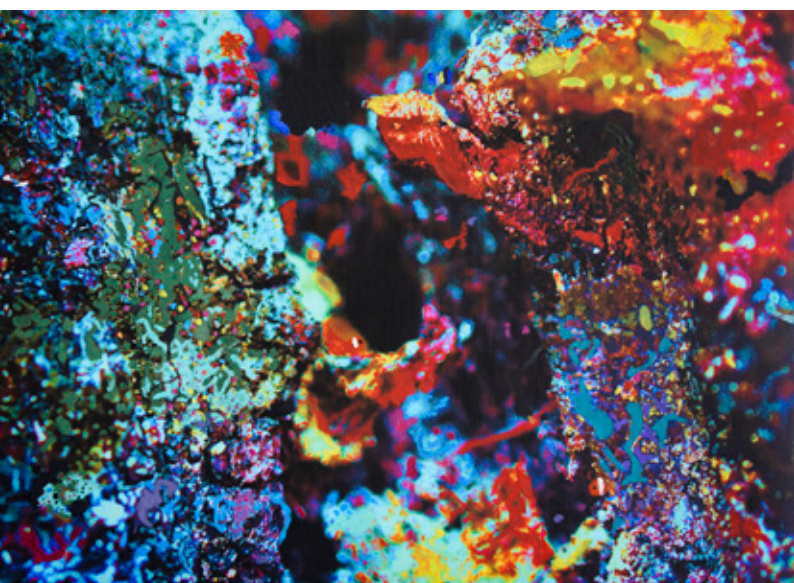
FOUNDATIONS OF 2D ART (*fall & spring semesters*)

This course introduces students to 2D art through a variety of mediums and processes which could include: observational drawing, collage, graphic design, digital imaging, and printmaking. The fundamentals of design principles: form, composition, line, shape, value, texture and content will be explored in a studio-based practice. Subject matter will range from realism to abstraction. Creative and critical thinking, visual problem solving, and technique will also be explored. This course is open to students in grades 9-10 and fulfills one semester of the four-semester arts requirement.

MIXED MEDIA:

APPROPRIATION & REINVENTION (*spring semester*)

Mixed Media: Appropriation & Reinvention is a studio art course that explores a number of media, concepts, and styles of abstraction. Strictly speaking, the word “abstract”



means to separate, remove, or change the characteristics of something, and students in Mixed Media will do all this and more. Everyday items will be recontextualized and repurposed as art, while images initially devised by others will be appropriated and altered enough to be considered an acceptable use within artistic copyright standards. Students will be presented with a variety of projects, procedures, and opportunities for artistic expression, invention, and imagination ranging from painting and printmaking to clay and Photoshop. The majority of class time will be spent producing art, although there will also be lectures/demonstrations and critiques. This course is open to beginning or experienced artists in grades 10-12 who are interested in exploring abstraction. It fulfills one semester of the four semester arts requirement.

MIXED MEDIA:

CONNECTIONS WITH THE REAL WORLD (fall semester)

Mixed Media: Connections with the Real World is a studio art course that explores a number of media, concepts, and styles of abstraction. Strictly speaking, the word “abstract” means to separate, remove or change the characteristics of something, and students in Mixed Media will do all this and more. Students will begin the semester taking inspiration from and challenging how they see our world, and before the semester is over, they will make abstract items that can serve a practical function in this same world. Students will be presented with a variety of projects, procedures, and opportunities for artistic expression, invention, and imagination ranging from painting and digital photography to clay and glass. The majority of class time will be spent producing art, although there will also be lectures/demonstrations and critiques. This course is open to beginning or experienced artists in grades 10-12 who are interested in exploring abstraction. It fulfills one semester of the four-semester arts requirement.

STUDIO ART I: FOUNDATIONS OF STUDIO ART (full year)

This yearlong exploration of observational drawing and painting is designed to advance students’ technical abilities and to give them the mental skills to see in new ways. Through a combination of short studies and longer term projects, students will be presented with different conceptual and material challenges, including work in charcoal, pencil, and oil paint. Students can expect to develop a



deeper understanding of how to draw convincing spaces and architectural forms, how to render objects realistically with depth, and how to draw faces and portraits with an introduction to paint and color. The class is run as a studio with lecture and instruction followed by demonstrations, practice, and individual/group critique. This course is open to students in grades 10-12 and fulfills two semesters of the four-semester arts requirement.

STUDIO ART II: ADVANCED TOPICS IN STUDIO ART

(full year)

Building off of observational drawing and painting skills learned in Studio Art I, students in this course will push into more advanced material concepts with opportunities for expressive and personalized subject matter. Students can expect to learn color theory, palette knife painting techniques, self-portraiture, and advanced tonal drawing, with exposure to abstraction and experimentation in new media, including virtual reality and stop motion animation. This course fulfills two semesters of the four-semester arts requirement. *Prerequisite: Studio I or portfolio approval.*

WEARABLE ART (fall semester)

Wearable Art is a studio art course that explores a variety of media and approaches to creating wearable art, predominantly jewelry. From jump rings to scarves, paper to computer, and pliers to laser cutter, the class will introduce students to both technical and creative considerations that come into play when creating tangible items that are meant to be worn. The inspiration for projects will vary from geometry to the students themselves, with the end result ranging from





recognizable subjects to non-objective pieces with a functional twist. Throughout the course, students will be presented with a variety of opportunities for artistic expression, problem solving, invention, and imagination. The majority of class time will be spent producing art, although there will also be lectures/demonstrations and critiques. This course is open to experienced or beginning artists in grades 10-12 and fulfills one semester of the four semester arts requirement. There will be a small lab fee to cover the cost of precious metal clay.

WOODWORKING I (fall or spring semester)

This class offers an introduction to innovative design and building utilizing hand and power tools and an array of construction materials including wood, acrylic, concrete, and electrical components. Students practice safety, discipline, patience, and problem-solving skills as they engage in experiential learning. Utilizing the Engineering Design Process (EDP) students learn traditional woodworking techniques and integrate modern technology to develop and implement their designs, while also evaluating and reflecting on their art process and project execution. Projects are scaffolded culminating in a “student choice” final project incorporating methods, techniques, and creative expression. This course fulfills one semester of the four-semester arts requirement.

THEATER ARTS

FOUNDATIONS OF THEATER (fall or spring semester)

This course will give students an experiential introduction to the elements of artistry that go into bringing a play from the page to the stage. It includes projects that invite students to

experiment in acting, playwriting, design, and directing. We will use a variety of classic and contemporary sources, as well as the experience of live performance, to develop our own artistic practices and a practical understanding of the spectrum of skills required to create live theatre. This class is open to students in grade 9-10 and fulfills one semester of the four-semester arts requirement.

THE CONTEMPORARY STAGE: BUILDING A WORLD (spring semester)

This class dives into the many ways that theatre artists: from Playwrights to Directors to Designers create new, exciting worlds for actors and audiences to inhabit. The course will delve deeply into the craft of playwriting, giving students the opportunity to write several of their own plays and see them through the collaborative process. Projects will include a one-act festival and an audio drama podcast. Students will simultaneously explore and develop both a design and directing practice that will deepen and expand skills in text analysis, imagination and collaboration. This course is open to students in grades 10-12 and fulfills one semester of the four-semester arts requirement.



THE CONTEMPORARY STAGE: MAKING A SCENE (fall semester)

This class will develop the fundamental skills necessary to perform in a variety of theatrical genres, utilizing some of the most innovative plays written in the 21st Century. Exercising text analysis skills and engaging in scene work, students will learn the principles of acting in contemporary plays. Students will also get the chance to read and attend a



play running in Philadelphia and meet with the artists. This course is open to students in grades 10-12 and fulfills one semester of the four-semester arts requirement.

ART ELECTIVES (NOT OFFERED IN 2022-2023)

MUSIC

FUNDAMENTALS OF SINGING

This semester course is designed to lay a foundation for proper vocal production through an overview of vocal anatomy, proper breath technique, vocal health, and song study. Materials studied may include vocal exercises, folk songs, English and Italian art songs, popular standards, and musical theater selections. Students will perform in class, and there will be opportunities for students who are prepared and interested in performing to do so for an audience outside of class. Students of any experience level in grades 10-12 are welcome – you just need to enjoy singing! Ability to read music is helpful but not required. This course fulfills one semester of the four-semester arts requirement.

VISUAL ARTS

DIGITAL DESIGN FOR SOCIAL CHANGE

In this project-based making course, students will execute assignments in different digital media as a survey of the subject. Each project will pair a new digital tool with a topic from current social discourse or alternative art histories; for example using the 3D Digital Design tool Tinkercad to design a new monument with an accompanying discussion of what it means to elevate certain histories over others. Each project will also engage with the Design Thinking process, from research to development, creation to critique. In this course students will gain experience with digital drawing (Autodesk Sketchpad), graphic design and typography, time based media (short frame animation), and code-based art making (Processing P5js). This course is open to students in grades 10-12 and fulfills one semester of the four-semester arts requirement.

MIXED MEDIA: ADVANCED TOPICS IN ABSTRACTION

Mixed Media: Advanced Topics in Abstraction is a studio art course that builds on the exploration of abstraction begun in the other two Mixed Media semester offerings. Students will continue to develop skills in a variety of mediums, some of which were introduced in previous classes, and others which, as new additions, continue to broaden the students' artistic



range. Topics such as form and function, process, sources of inspiration, and altering perceptions will be covered. Students taking this class should be prepared to push themselves creatively with the ultimate goal of producing more self-directed and ambitious projects. *Prerequisite: Mixed Media: Appropriation & Reinvention and Mixed Media: Connections with the Real World.* This course fulfills one semester of the four-semester arts requirement.

WOODWORKING II

This class builds on the skills and techniques students have developed in Woodworking I with a focus on expanding innovative design and execution with precision. Students build projects using dovetail, mortise and tenon, and mitre spline joints while also learning basic chip carving, chisel work, and wood turning projects on a lathe. Students may choose to utilize technology to enhance their design ideas and take creative risks. Emphasis is on safety, self-motivation, design execution, and well-crafted pieces. This course fulfills one semester of the four-semester arts requirement. *Prerequisite: Woodworking.*

THEATER ARTS

THE CLASSICAL STAGE: SHAKESPEARE IN PERFORMANCE

This course is an overview of performance and production skills related to classical texts, with a focus on Shakespeare. We will use these 400+-year-old plays to create performances that engage and resonate with our contemporary experience. Students will get the opportunity to work on scenes and monologues, to experience performances by innovative classical companies and to engage with professional practi-



tioners. This class is open to students in grades 10-12 and fulfills one semester of the four-semester arts requirement.

THE CONTEMPORARY STAGE: ENSEMBLE LAB

Devised theatre is a form of theatre where the script originates not from a writer or writers, but from collaborative, usually improvisatory, work by a group of people. Students in this class will form an ensemble company and will collectively explore a variety of contemporary acting and devising techniques in a lab setting. Through collaborative creation and choral work, students will create several ensemble pieces including adaptations and site-specific happenings. This class is open to students in grades 10-12 and fulfills one semester of the four-semester arts requirement.



ENGLISH

Graduation Requirement:
8 Semesters



The goal of the Friends' Central English program is to help students build skills and confidence as readers, writers, speakers, and thinkers. Students are equally challenged and supported in their path through our curriculum. 9th and 10th graders enroll in required yearlong English courses, while 11th and 12th graders take a required semester-long course in the fall and choose from a variety of seminar courses in the spring. The curriculum includes both canonical and contemporary texts; with feedback from students, the department curates a curriculum in which students can find both mirrors and windows, recognizing their own experiences and learning about people different from themselves. Our courses are discussion-based and collaborative, pushing students to take active roles in their own learning, and assignments are designed to deepen critical thinking abilities, hone analytic skills, and improve written and verbal communication of all kinds in a diverse and respectful setting. Students write often and in a range of forms, including journals, creative pieces, personal responses (the 10th grade curriculum includes a unit on the personal essay), and analytic pieces, with particular attention to the full-length thesis-driven essay. As good writing is an iterative process, we teach skills in invention, development, drafting, and revision, and we encourage students to revise and resubmit their work. These revisions allow students to develop both their writing and social-emotional skills related to agency, decision-making, responding to feedback, and pride in their work. We hope students will take advantage of the chance to serve as writing tutors in our Writing Lab and we encourage them to read for pleasure and to participate in *INK* (the Friends' Central literary and arts magazine), *Focus* (Friends' Central's newspaper), and academic opportunities like the Humanities Core Team and certain senior project seminars ([see an example of a senior project seminar here](#)).



ENGLISH I (full year)

THE JOURNEY BEGINS: BECOMING OURSELVES

Students in Grade 9 English study various literary genres (short stories, poems, novels, and plays). Texts largely focus on the individual's quest to come of age in a complex, morally ambiguous world. Skills in reading, thinking, and writing are taught through purposeful class discussion, performance-based, collaborative work with plays (as to study a play is to think of it as performance), and the medium of the five-paragraph analytical essay. In addition to analytical writing, students use creative writing (such as personal vignettes and poetry) and interdisciplinary skills (as with symbolic object and monument projects) to explore their values and their roles in their families and communities. Major works include *The House on Mango Street* (summer), *The Piano Lesson*, *The Catcher in the Rye*, *Homegoing*, and *Macbeth*. Students also read a diverse selection of poems and short stories that have in the past included William Faulkner's "A Rose for Emily," Ted Liu's "The Paper Menagerie," and ZZ Packer's "Brownies."

[Examples of English I Student Personal Vignettes](#)

[Examples of English I Student Monument Projects](#)

ENGLISH II (full year)

IN PURSUIT OF JUSTICE: THE SELF IN THE WORLD

Grade 10 English continues the development of skills in close reading and analytic writing (with increased focus on comparative analysis) and emphasizes student-facilitated discussions. The diverse body of literature in this course spans different cultures and time periods. Texts depict stories of individuals who assert themselves against powerful and systemic forces shaped by race, class, gender, and other facets of identity. While justice is a guiding premise throughout the course, the first semester focuses primarily on tragedy and redemption, and the second semester, featuring texts with more complicated timelines, emphasizes narrative craft and structure. In conjunction with this curriculum, students study and write personal essays in which they are encouraged to craft elements of their individual voice including tone, a variety of rhetorical devices, and unique structure. Ultimately, this course prompts students to envision the world they want to inhabit. Major works include *In the Time of the Butterflies* (summer) *Of Mice and Men*, *Antigone*, *Things Fall Apart*, *The Interpreter of Maladies*, *The Things They Carried*, *Ru: A Novel*, *Twelfth Night*, and *A Lesson Before Dying*.

[Examples of English II Student Personal Essays](#)

ENGLISH III (required for fall semester)

LITERATURE OF THE UNITED STATES: NEGOTIATING IDENTITY

In Grade 11 English, students hone close reading and analytical writing skills and take responsibility for leading group discussions. This course approaches literature in relation to the social and historical context from which it emerged, examining contemporary and canonical texts to note how things have both changed and not changed. Texts feature protagonists whose individual identities in the communities in which they reside are impacted by ability, gender, immigrant status, race, religion, and social class. Drawing on Audre Lorde's idea that "the master's tools will never dismantle the master's house," this course explores the ways identity is more complicated than people imagine and follows characters who try to preserve their own sense of self as they become aware of and interact with a world they do not necessarily like or understand. Supplementary psychological and sociological articles accompany the texts to help students contextualize plot events and characters' actions. Major works include *Little Fires Everywhere* (summer), *Their Eyes Were Watching God*, *The Great Gatsby*, and *There There*.

ENGLISH IV (required for fall semester)

GODS AND MONSTERS: WHAT IS IT TO BE HUMAN?

In Grade 12 English, students examine how one constructs a genuine self in the face of contrasting messages from dominant power structures. The texts' protagonists seek purpose and meaning, fight isolation, and impose order on their experiences through the telling of their stories while they navigate a multitude of forces: biological, historical, psychological, social, familial. Questions about body autonomy and the ramifications of being considered "the other" play a central role in many texts. The course also explores how concepts like creativity and the ability to both remember the past and predict the future help define humanity. Students focus on writing across texts and breaking away from the five-paragraph format, practicing both shorter and longer forms of critical writing, and learning about different literary lenses. The course concludes with a final connections project in which students chart their own path through the curriculum. Major works include *Oryx and Crake* (summer), *Frankenstein*, *Beloved*, and *Hamlet*.

[Examples of English IV Student Connections Projects](#)



ENGLISH ELECTIVE

WRITERS' WORKSHOP ADVANCED

Fall: ESSAY AND MEMOIR

Spring: CREATIVE WRITING

This advanced elective course is offered in two semesters. Students may take both or choose either semester. The course is intended for those who wish to concentrate collaboratively and in depth on the craft, purpose, and power of writing, moving beyond the skills developed in the core English curriculum. In the fall semester (Essay and Memoir) students analyze classic pieces like Martin Luther King Jr's *Letter from Birmingham Jail* and Maxine Hong Kingston's *No Name Woman* and apply what they learn to their own personal writing, argument, and opinion writing. In the spring (Creative Writing), a number of texts read in the core English courses are reframed as mentor texts for the craft of creative writing. Beyond these foundational texts, the curriculum is flexible and varied, largely co-created by the instructor and students, and focused on contemporary readings in both semesters.

Each student keeps a writer's notebook (journal) which forms the foundation for the course, and class time is often spent on writing activities. Students develop and revise several longer pieces each semester with the support of the class; in the final weeks of each semester, students work on independent projects within a more traditional workshop format. Such pieces in the past have included multimedia forms (songs, films, visual art) that incorporate text, as well as collections of poetry or short stories, memoir, and extended essays. A portfolio of work produced during the class, along with the writer's notebook and engagement with the workshop format of the class, forms the basis for grading. The course is open to students in grades 11 and 12 and does not fulfill graduation requirements in English.

[Examples of Student Writers' Workshop Pieces](#)

ENGLISH SPRING SEMINARS

In the second semester, students in grades 11 and 12 select a Semester Seminar. These classes, focused on particular themes or genres, give students a chance to explore an aspect of literature in depth. All seminars begin with shared study of a text selected by the English department as a whole; in 2023, that text will be Tony Kushner's *Angels in America*. Semester Seminars for Spring 2023 include:

MODERN TO CONTEMPORARY BLACK AMERICAN STORIES

This course uses the frame of Afrofuturism as a lens through which to see stories of Americans with African heritage. Students will study texts from a variety of genres in order to consider the black American experience from many angles. Guiding queries include:

- What does it mean to privilege black voices? How does this challenge the hegemony?
- When and how do we label or name racial groups? What does it mean to identify as black?
- How do we have healthy conversations about race in multiracial settings?
- What does it mean to have a white and a black teacher leading discussions on race in a multiracial setting?
- What is the role of storytelling in the black experience/history?

Possible texts: *Between the World and Me* by Ta-Nehisi Coates; *Passing* by Nella Larsen; *Citizen* by Claudia Rankine; Essays of James Baldwin; "Bloodchild" by Octavia Butler; *Song of Solomon* by Toni Morrison; *The Color Purple* by Alice Walker; *Fences* by August Wilson; *for colored girls who considered suicide/when the rainbow is enuf* by Ntozake Shange; *Kill Move Paradise* by James Ijames; *A Raisin in the Sun* by Lorraine Hansberry; poetry of Gregory Pardlo, Natasha Trethewey, Claude McKay, Terrance Hayes, Langston Hughes, James McBride, Richard Wright, Gwendolyn Brooks, Rita Dove; films include *Get Out* directed by Jordan Peele and *Moonlight* directed by Barry Jenkins.

LITERATURE OF THE HOLOCAUST

This course will examine literature written during the Holocaust and about the Holocaust. We will see how historical accounts, fictional stories, essays, poetry, and even children's books can be used as tools for survival, revolution, and remembering. While not a comprehensive study of the Ho-



locust, this class will include historical information, discussions of the continuing impact of the Holocaust, and how the literature of the Holocaust draws from and influences other literature.

Possible texts: *The Men with the Pink Triangle* by Heinz Heger; *The Shawl* by Cynthia Ozick; *The Sunflower: On the Possibilities and Limits of Forgiveness* by Simon Wiesenthal; *This Way for the Gas, Ladies and Gentlemen* by Tadeusz Borowski; *Maus* by Art Spiegelman.

CATASTROPHES OF THE NEAR FUTURE: SPECULATIVE FICTION

An extraordinarily fertile and expansive artistic territory, fiction is a limitless field. Speculative fiction, the particular area of study for this class, uses somewhat recognizable settings and tropes to reveal difficult truths and potential solutions to problems we face today or may face tomorrow. Margaret Atwood, author of *Oryx and Crake* (from grade 12) and “Death By Landscape” (from grade 9), believes “speculative fiction” refers to stories about things that really could happen but just hadn’t completely happened when the authors wrote the texts. This course will look to see what this type of literature has to teach us about ourselves and our world.

Possible texts: Ishiguro’s *Never Let Me Go*; Mandel’s *Station Eleven*; Le Guin’s *The Lathe of Heaven*; Burgess’s *A Clockwork Orange*; Dick’s *Do Androids Dream of Electric Sheep?* and stories by writers such as Borges, Link, Millhauser, Butler, Hand, and Vonnegut. We may also look to film (*Blade Runner*) and television (*Black Mirror*) for other compelling speculative stories.

THE GRAPHIC NOVEL

In the past few years, the graphic novel has drawn increasing attention in English classrooms. Once thought to be only for geeks, artists, or reluctant readers, this genre has become a powerful method for telling all kinds of stories. In blending the mediums of writing and artwork, graphic novels offer a literary experience that is ripe for analysis. In this class we will study the graphic novel as a tool for sharing memoir, myth and superheroes, socio-political commentary, and classic literature. Some works will be taught alongside excerpts of their prose versions, others will be taught solely in graphic novel form. Works studied have included: *American Born Chinese*; *X-Men: God Loves, Man Kills*; *Batman: Year One*; *Pride of Baghdad*; *Macbeth*; and *City of Glass*.

“EXPLAINING MYSELF TO MYSELF”:

CONTEMPORARY AMERICAN MEMOIR BY WOMEN

This course focuses on memoir, the exploration of a significant, even defining, period in the life of a writer, as understood by herself. What does it mean to be an American woman coming of age in the society we share? The women whose works we read examine and recount their experiences from a variety of perspectives: as anthropologists, detectives, artists, psychologists, and historians. As they also tell their stories in many different ways, we will focus on the relationship between form and content. We approach memoir from the perspective of both readers and writers, writing our own stories as well as analyzing and responding to the memoirs we study. The course begins with excerpts from influential 20C American memoirs, including Susanna Kaysen’s *Girl, Interrupted*; Maxine Hong Kingston’s *The Woman Warrior*; and Lucy Grealy’s essay *Mirrorings*. Full-length memoirs include Tara Westover’s *Educated*, Natasha Tretheway’s *Memorial Drive*, and Michelle Zauner’s *Crying in H Mart*.

SKEPTICISM AND SPIRITUALITY

Have you ever wished you understood the seemingly cryptic biblical references in works of literature? This course will address the religious features of selected American works, giving you the tools to understand these allusions and feel culturally literate. We will not only look at the biblical narratives and images in these works, but grapple with spiritual rebels and the “doubting Thomases” of the literary world. We will read selected works by Philip Roth, Flannery O’Connor, Zora Neale Hurston, James Baldwin, Emily Dickinson, Allen Ginsberg, and Charles Wright. We also will engage with non-fiction accounts in the form of interviews, essays, and documentaries, such as *Jesus Camp*, about contemporary “outsider” religious sects. No prior biblical knowledge is necessary!

HAUNTED HOUSES AND GHOST STORIES

Haunted houses are the stuff of legends, and ghosts are the ultimate metaphors. We understand the conventions of Gothic literature without thinking about them – old houses, hidden spaces, ghosts, crimes, darkness, family curses, and mystery. In this course, we will examine works through the lens of the Gothic genre and how the supernatural in fiction can reflect aspects of real life. We will think about how houses can become characters and how even the suggestion



of a ghost can shift reality for characters. While the Gothic genre originated often by exoticizing or othering people from outside of western Europe, BIPOC authors have taken the genre and turned it on its head to explore the concept of otherness. We will also look at the texts with attention to feminist readings as the genre frequently features women as protagonists. Possible texts include *Rebecca* by Daphne du Maurier, *Jane Eyre* by Charlotte Bronte, *Wuthering Heights* by Emily Bronte, *The Haunting of Hill House* by Shirley Jackson, *Mexican Gothic* by Silvia Moreno-Garcia, *The Bluest Eye* by Toni Morrison, “The Fall of the House of Usher” by Edgar Allan Poe, “The Yellow Wallpaper” by Charlotte Perkins Gilman, and ghost stories by Edith Wharton

ASIAN-AMERICAN LITERATURE

Towards the end of Charles Yu’s award-winning novel, *Interior Chinatown*, a character challenges us to consider why he doesn’t “register as American,” wondering whether it’s because his story is “too complicated,” making it hard to discern “whether it’s a tragedy or a comedy or something in between.” In this course, we will consider a diverse sampling of the work of Asian-American authors who address these and related questions. We will cover as many genres and perspectives as we can in this broad and varied literary landscape. *Interior Chinatown* will be a core text for us. Other possible works from this rich literature for our study include Maxine Hong Kingston’s *Woman Warrior*, Ocean Vuong’s *On Earth We’re Briefly Gorgeous*, *The Refugees* by Viet Thanh Nguyen, *The Thousand Crimes of Ming Tsu* by Tom Lin, the graphic novel *American Born Chinese* by Gene Luen Yang, and the plays *The Great Leap* by Lauren Yee and *M Butterfly* by David Henry Hwang.

LOVE IN THE ANTHROPOCENE

While climate change is technically the force that brings us together, this is ultimately a course about home – why we

love it, why we leave it, what it means to watch it change. In recognition of the scale of influence that human beings have had on our home planet, many scientists have proposed a new term for the present geologic era: The Anthropocene. The implications of such change, of course, stretch far beyond the boundaries of weather. As such, this course will take an interdisciplinary approach to the topic, incorporating texts and media from a variety of genres including the emerging genre of “cli-fi” or climate fiction. Above all, we will challenge each other to engage courageously with the crisis at hand, considering what it means to come of age, live, and love in the Anthropocene.

Major texts include *Braiding Sweetgrass* by Robin Wall Kimmerer, *A Children’s Bible* by Lydia Millet, *Exit West* by Mohsin Hamid, as well as film segments from *Big Little Lies*, *Parasite*, *Don’t Look Up*, and *Interstellar*. Additionally, students will have an opportunity to create their own original piece of speculative fiction at the end of the course.

THE STORY’S THE THING:

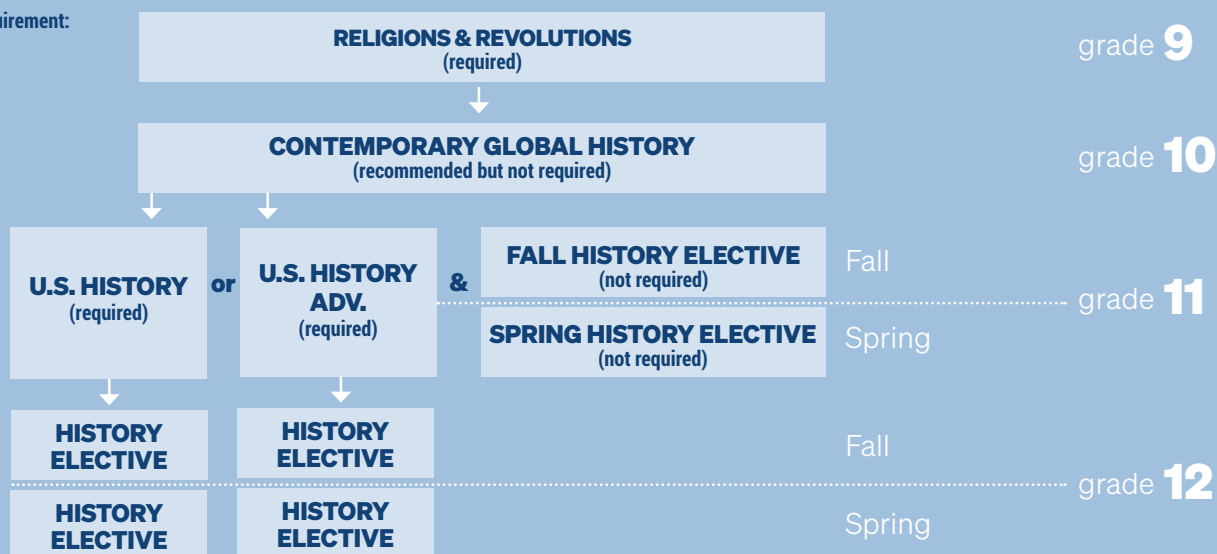
FINDING OURSELVES IN STORIES

Contrary to Hamlet’s claim that “the play’s the thing,” the story, in all its forms and functions, is the cornerstone of our existence. In this course, we’ll read short fiction in an attempt to examine how a story “works” and how complex issues of identity can be conveyed in tales far shorter than a novel. We will read stories that center on the “Big 8” identifiers (Ability, Age, Ethnicity, Gender, Race, Religion, Sexual Orientation, and Socio-economic Status) in order to explore our own lives and our relationships to others whose lives may be very different from our own. Personal and analytic writing will be equally important in this class.



HISTORY

Graduation Requirement:
4 Semesters



An appreciation of historical context is central to understanding the world around us. Our study of history is an exploration of human experience; the ways diverse peoples have differed in their ideas, institutions and cultural practices, the ways experiences vary by period and nationality and social circumstances, and the ways people(s) have struggled with each other. We ask our students to make connections between the past and the world they now inhabit and to ponder the question – How did we get this way?

All Upper School students take Religions and Revolutions in grade 9 and U.S. History in grade 11. Most students also take Contemporary Global History in grade 10, and virtually all take a history elective in grade 12. See below for a listing of our broad range of electives. Our history courses emphasize the analysis of primary sources in the development of critical thinking and original argument. Grade 11 students complete a capstone, primary source-based piece of original research as part of the U.S. History course.

Interested students may also join clubs such as Model United Nations, History Bowl, World Affairs Council, the Debate Team, and Mock Trial, where knowledge and a deep understanding of the origins of current events is essential.

RELIGIONS AND REVOLUTIONS (required)

This course introduces students to the Upper School history curriculum. First, we address Chinese philosophies, Hinduism, Buddhism, Judaism, Christianity, and Islam. We then examine periods in history covering themes, ideas, and movements beginning with the Reformation in the 16th century and ending in the late 19th century. Themes include: the Scientific Revolution, the Enlightenment, the Atlantic revolutions, industrialization, class and gender, along with 19th century movements such as nationalism, liberalism, and

imperialism. The course emphasizes analytical reading and writing and the analysis of primary sources. In addition to traditional quizzes, tests and writing exercises, students will complete two research projects. They will also participate in a conflict resolution role-play exercise and a character project where they use their research skills to play a historical character. *This course is required for all grade 9 students.*

CONTEMPORARY GLOBAL HISTORY (recommended but not required)

To understand the present and contemplate the future, it is essential that we attempt to discover what caused the world



to be the way it is today. This course covers events and ideas from the last 100 years that have shaped the world we live in now. Students will examine the 20th and 21st centuries closely as they begin doing more of their own analysis of primary sources and practice looking at events through particular historical lenses. Students will study social and political movements of the century, such as nationalism, communism, feminism, and environmentalism. They will learn some of the basics of micro and macroeconomics, along with studying major 20th century events, such as World Wars, ensuing treaties, and the changing face of the world during and after the Cold War. In addition to written sources, examples of 20th century art, architecture, and film are viewed as historical artifacts. Scheduled current events days help students make connections between the past and the present. Six historical role plays flesh out the dynamics of international issues. Students will improve their argumentative and persuasive writing, as well as their online research skills, with historical databases offered through the Blackburn Library. The themes of conflict resolution, civil disobedience, and reconciliation permeate the entire course. *Though this course is not required, it can be helpful in preparing students for the grade 11 course while also providing engaging opportunities for students to connect events from the recent past with current situations.*

UNITED STATES HISTORY ADVANCED (required)

The objectives of this faster-paced course include exposing students to a wide range of primary sources relating to U.S. history, giving them an opportunity to work directly with the sources, sharpening their communication skills – both oral and written – and improving their ability to see the present in terms of the past. Students will be able to work with the sources with depth on initial contact, requiring little support before they can offer sound interpretations. The course encompasses the period from the early colonization by England in the 17th century to the beginning of the 21st century. Particular emphasis is placed on the Constitution in the latter part of the fall. The middle of the course surveys the 19th century from the election of Jefferson in 1800 to the Progressive Era. The final study covers a series of units on 20th century topics, among them, the World Wars, the Depression, the Civil Rights Era, the Cold War, and Feminism. During the second half of the year, each student works on a primary source-based, thesis-driven research project beginning in January with topic selection and continuing to the beginning

of May when final drafts of the papers are due. *This course or U.S. History is required for all grade 11 students.*

UNITED STATES HISTORY (required)

The objectives of this course include exposing students to a range of primary sources relating to U.S. history, helping them learn to decode the meaning of the sources and moving into more analytical interpretations of them. Students will also sharpen their communication skills – both oral and written – and improve their ability to see the present in terms of the past. The course encompasses the period from the early colonization by England in the 17th century to the beginning of the 21st century. Particular emphasis is placed on the Constitution in the latter part of the fall. The middle of the course surveys the 19th century from the election of Jefferson in 1800 to the Progressive Era. The final study covers a series of units on 20th century topics, among them, the World Wars, the Depression, the Civil Rights Era, the Cold War, and Feminism. Throughout the year students will build their analytical writing skills. During the second half of the year, students will do a directed research project. *This course or U.S. History Advanced is required for all grade 11 students.*

HISTORY ELECTIVE COURSES (most are open to grade 11, and all are open to grade 12)

With the exception of Modern European History Seminar Advanced, all history electives are one semester long. To take an advanced history course, students' performance in previous history courses (especially grade 11) will be considered, along with an in-class writing exercise and paragraph of intent. Rarely are grade 11 students eligible.

CAPITALISM AND CONSUMPTION:

“GETTING AND SPENDING”

(fall semester)

This semester-long class looks at consumption in history: how we buy and sell, what is made for buying and selling, and what goods mean to a society. The focus is on the period since industrialization, with some emphasis on the contemporary United States. Readings, discussions, and written assignments will cover topics like advertising, manufacturing, and the depictions of goods in literature and film. In addition, students engage in more focused individual study and research on a topic of their choice and examine their roles as shoppers and consumers.



CONSTITUTIONAL IDENTITY ADVANCED (fall semester)

This semester-long course covers the 230+ year history of the Supreme Court of the United States and its role in shaping and, ultimately, providing protections for identities in the U.S. Source material will predominantly be federal caselaw, and students will be asked to write analytical research papers regarding the Court's jurisprudence. By studying the precedent and highlighting the good and the bad of the Court's history, we aim to answer the questions: Has the Supreme Court served the U.S. citizens regarding racial, gender, and socioeconomic inequity? A foundational knowledge of the Court allows for a deeper exploration of identity politics in the United States, providing a greater perspective of the competing aims of the Court and the structures that hold up institutional bigotry.

CREATING AFRICA ADVANCED: EUROPEAN RACISM, THE DIASPORA, COLONIALISM AND IDENTITY (fall semester)

The goal of this class is to recenter our discussion of history on Africa and Africans instead of Europe and Europeans over a long span of time. How does it change the way we see the world when we focus on the place of Africa and Africans as creators of civilization and agents of economic, social and political change? The course will also explore the creation and development of European notions of race and racism. The class covers a very large span of time from Classical civilizations to the emergence of the Pan African movement that linked Africa and Africans and the African diaspora community in the struggle for justice and racial equity in the 19th and 20 centuries. As an advanced course it is reading intensive and students will be expected to work with a broad range of information.

INTRODUCTION TO PHILOSOPHY: THE GOOD, THE TRUE, AND THE BEAUTIFUL (fall semester)

This semester-long course is a theme-based introduction to philosophy. The study of philosophy allows students to explore their own views as they encounter many of the ideas from the traditional western canon. We tackle classic questions, such as how we explain existence (ontology) and how we know anything in the first place (epistemology). We also address proof of the existence of God and of the immortality of the soul. We examine selfishness as we do a broad theoretical and practical examination of ethics. Political philosophy is examined, as well as the philosophy of art.

Themes are examined historically to see how philosophers have built on each other's ideas throughout the ages. Our main text, Donald Palmer's *Does the Center Hold?* is supplemented by various writings by philosophers from ancient to modern times.

INTERNATIONAL RELATIONS (fall semester)

It is critical to understand how the world works. This international relations course introduces the core theories of the discipline. To make these theories less abstract and divorced from the way the world actually operates, students spend 8-10 weeks playing an in-depth online roleplay called Statecraft. The whole class is transported to an online world where students are grouped into countries and take on the roles of world leaders. Statecraft creates situations which allow students to understand course concepts on a personal level; they must apply the lessons they've learned in class to succeed. Parallel to the simulation, we look at big patterns of globalization and global challenges, and international systems to give students a framework to make sense of this complicated and interconnected world. We also look at "hot-spot" issues on an ad-hoc basis. If an international crisis arises, we stop everything and dive deep into understanding the crisis.

The basics of Model United Nations are also taught in this course so students can play the role of expert and learn more about the essential institution that is the United Nations. Finally, students are given 20% of the semester to work on a passion project. Students need to make a product. They also need to interview an expert in the field and in lieu of a final test, we host a Ted-talk style evening in which students share their findings with parents and others in the community.

PHILADELPHIA BLACK HISTORY FROM RECONSTRUCTION TO THE PRESENT (fall semester)

This course focuses on the agency of the Philadelphia Black community to define and redefine itself as it addressed political, social, economic, and racial concerns in key moments from the period following the passage of the 13th, 14th, and 15th Amendments to the present day. Building on knowledge they have attained in prior courses, students will develop their skills analyzing secondary sources, like historiographic journal articles, and exploring primary sources, such as oral histories from both prominent and ordinary Philadelphians. Topics addressed include the well-documented develop-



ment of the community in the 7th ward, the Great Migration, and the growing power of community activism in the 20th century with attention to specific actions like the 15-year effort that brought an end to segregation at Girard College in 1968. There will be opportunities to explore different kinds of social science methodologies and opportunities for independent research.

THE SOCIOLOGICAL IMAGINATION: RACE, CLASS & GENDER IN AN UNEQUAL WORLD (spring semester)

This course offers students the opportunity to develop their sociological imagination to understand social stratification and inequality. The sociological imagination highlights the intersection between our individual experiences and the larger movements of history. Through this lens, students study social stratification, a social process whereby people are sorted into categories such as class, race, and gender. Students begin with a core understanding of the history and theory of sociology. They develop their sociological imaginations applying these concepts to issues of stratification and inequality in their lives and in society. Students have opportunities to examine their own experiences and those of others in the classroom, in the community, and in the larger world. Each unit advances student knowledge through classroom experiences and independent application of social scientific research skills and methods. This is a semester-long course.

MODERN AFRICA ADVANCED (spring semester)

This semester-long course will explore the development of independent African states in the aftermath of WWII and some aspects of the complex colonial legacy. This course will address issues of national identity, as well as cultural, social, economic, and political themes. We will also look at Africa's changing role in the world through the Cold War and its growing significance in the 21st century world. Semester one, Creating Africa, is not a prerequisite for this course.

MODERN CHINESE HISTORY (spring semester)

This semester-long course covers modern Chinese history, starting with the rise of the Qing Dynasty in the mid-17th century to the end of the 20th/beginning of the 21st century as the Chinese Communist Party shapes and reshapes itself, opening doors to international trade and interaction. It will be a survey course of important internal events in China,

as well as foreign interactions, both of which shape China as an independent country and as a player on the world stage. After building the scaffolding of knowledge about events in China, students will use the skills they have already acquired to interpret various primary sources. We will find ways to utilize art, performance, and religion to enhance our understanding. David Kenley's *Modern Chinese History*, as well as other secondary sources, will be used. We will also read primary sources, many coming from David G. and Yurong Y. Atwill's book *Sources in Chinese History: Diverse Perspectives from 1644 to the Present*.

MODERN EUROPEAN HISTORY SEMINAR ADVANCED (full year)

This yearlong course surveys European history from the era of absolutism and the Enlightenment through the end of the Cold War. Traditional landmarks of the period (the French and Industrial Revolutions, Imperialism and the New Imperialism, and the Great War among them) form the core of our progress through the last three centuries. We also examine smaller and human-sized phenomena, such as the development of the modern family and the changing nature of work. Readings for this class include a text, primary sources, and several brief works on the history of culture and technology. Active participation in class discussions is expected, and students write several short research papers. *Open only to grade 12 students.*

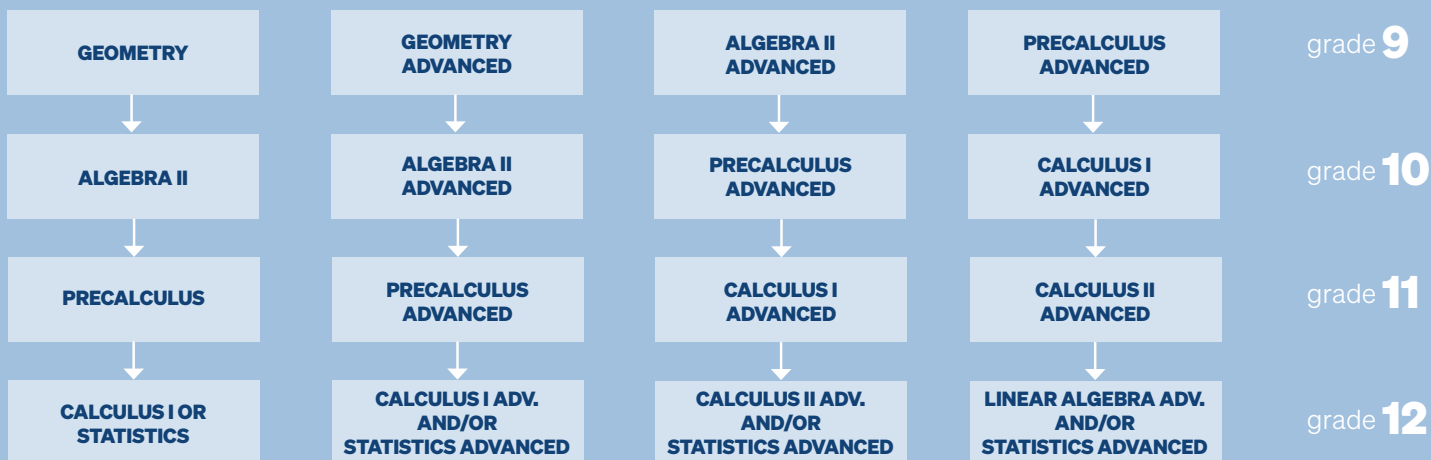
WOMEN'S HISTORY IN THE UNITED STATES (spring semester)

This class will roughly follow the grade 11 American History course but focusing on American women, moving from Colonial America to the present day. Along the way, we will look at women's health, clothing, writing, sexuality, marriage, and activism. We will focus on primary sources that reflect women's experiences, as well as the movies and documentaries that will give us a clearer sense of what society demanded of women. Our readings will be split between the historical and the present day; we will read a women's studies text to help us discover what is happening in the United States today.



MATHEMATICS

Below are just four typical paths through the math curriculum. It is important to note that there are many different paths that students may choose to take.



Graduation Requirement: 6 Semesters

Completing a year in a non-advanced course does not preclude you from taking an advanced course in the following year. Permission required.

Friends' Central's math department combines a belief in the ability of our students to rise to intellectual challenges and a program that offers a high degree of flexibility in course selection and sequence. For example, students can design a sequence that includes a year of calculus without doing additional summer work. More advanced students have the opportunity to progress through Linear Algebra within our curriculum. Friends' Central facilitates independent study or enrollment in math classes at nearby colleges and universities for students who exceed Linear Algebra.

All students are required to take three math courses; the majority take one each year. Most classes have both a regular and an advanced level offered. Some students choose to accelerate by taking a summer course. A typical Upper School path includes algebra II, precalculus, and calculus.

While many students take two years of calculus before graduating, others choose statistics over a second year of calculus. We also offer a year of Linear Algebra for students completing two years of Calculus.

We have an active math team, and many students compete successfully in national and international mathematics competitions.

ALGEBRA I

Algebra I focuses on the study of elementary functions, including linear equations, linear systems, and quadratic equations. The course also includes work on polynomials, rational algebraic expressions, laws of exponents, and simplifying radicals. An introduction to the use of the TI Nspire graphing calculator app (a graphing calculator) is also part of the course. A major emphasis of the course will be the ways that mathematics is used to solve "real world" problems. Students will also have the opportunity to apply their skills in a variety of mathematics projects throughout

the year. *(This course will be different in structure from the two-year course offered in Middle School; however, all major first year algebra topics will be covered.)*

GEOMETRY

This course includes an in-depth analysis of plane, solid, and coordinate geometry as they relate to both abstract mathematical concepts as well as real-world problem situations. Topics include logic and proof, parallel lines and polygons, perimeter and area analysis, volume and surface area analysis, similarity and congruence, trigonometry, and analytic geometry. Emphasis will be placed on developing critical



thinking skills as they relate to logical reasoning and argument. *Prerequisite: Algebra I*

GEOMETRY ADVANCED

Geometry is the study and measurement of shapes, and its study is both extremely useful and very beautiful. Moreover, we discover geometric truths by carefully applying the rules of logic, which are valuable in their own right throughout our lives. In Geometry Advanced, we explore directly the rules of symbolic logic and Boolean Algebra, distinguishing assumptions, definitions and proven statements. Using these tools, we consider points, lines and planes and apply these notions to in-depth studies of two-dimensional shapes – triangles, more complex polygons, and circles and three-dimensional shapes – polyhedrons and spheres – while integrating concepts from algebra at every step to establish the foundations of analytic geometry. After comparing the notions of congruence and similarity, we go on to develop the foundations of trigonometry. Throughout our work, we study both theory and real-world applications, and we discuss the historical and cultural context in which geometry developed and has been used over the centuries. These studies form the theoretical and practical foundation for all the advanced studies in our Upper School curriculum, including Algebra II, Precalculus, Calculus, Statistics and Linear Algebra. *Prerequisite: Algebra I and recommendation of the department*

ALGEBRA II

In the first part of this course, students study the properties that make a mathematical relationship a function. They learn how various elements of the function equation determine transformations of the graph of the specific function. The functions that are studied are linear, quadratic, rational, radical, exponential and logarithmic functions. In a world that is data driven, it is important that students be introduced to the topics of matrices, data analysis, and probability. Each of these topics introduces the student to a way of organizing and analyzing data that will help them in a decision-making process. *Prerequisite: Algebra I*

ALGEBRA II ADVANCED

The difference between our advanced and regular sections is in the speed at which information is introduced and the difficulty of the problems required of the students. In addition, the advanced class studies two units not included in our regular Algebra II curriculum.

In the first part of the course, students study the properties that make a mathematical relationship a function. They learn how various elements of the function equation determine transformations of the graph of the specific function. The functions that are studied are linear, quadratic, rational, radical, exponential and logarithmic functions. In a world that is data driven, it is important that students be introduced to the topics of matrices, data analysis, and probability. Each of these topics introduces the students to a way of organizing and analyzing data that will help them in a decision making process. In addition to the above topics which are also covered in our Algebra II regular course at a more elementary level, this class includes an introduction to the study of sequences and series in one unit, and an introduction to conic sections in another unit. Both of these units are necessary for success in our Calculus I Advanced class. *Prerequisite: Algebra I and recommendation of the department*

PRECALCULUS

This course is designed to advance the student's understanding of mathematical functions, trigonometry, and modeling and give students an introduction to data analysis and statistics. Students are asked to investigate functions, their graphs, and their applications. The course strives to help students understand the connections between the representations of functions graphically, numerically, and analytically. Students also develop mathematical models for various "real world" situations. In this course, more of an emphasis is placed on applications than on theory. Students will also make extensive use of the Desmos online graphing calculator. *Prerequisite: Geometry and Algebra II*

PRECALCULUS ADVANCED

Students in Precalculus Advanced explore challenging problems and concepts throughout the curriculum. They work in groups and independently and use the desmos graphing calculator to explore new functions and to ask new questions. The course's main focus is an intensive look at mathematical functions in all their various forms. This is a significantly more conceptual course than Precalculus. Topics include polynomial, rational, exponential, logarithmic, and trigonometric functions, as well as their transformations and inverses. Time permitting, additional topics may be included such as probability or conic sections. *Prerequisite: Geometry and Algebra II Advanced and recommendation of the department. There is a placement test for this course.*



CALCULUS I

Students in Calculus I work in groups to explore conceptual calculus concepts. Instead of a textbook, the CalcMedic curriculum has been adapted for this course. Students explore concepts together in groups first, and then we formalize them together as a class. This course covers differential calculus and integral calculus. For differential calculus, the importance of the connection of instantaneous rate of change to the slope of tangent lines to a curve is emphasized as a way of thinking about the first derivative. For integral calculus, the visual basis of the understanding of area under a curve is the accumulation of an increasing number of rectangles determined by the curve. We will cover the basic derivative rules and integration rules for the functions that were studied in Precalculus. **Prerequisite:** *Precalculus or Advanced Precalculus*

CALCULUS I ADVANCED

This course is a more rigorous development of single variable differential and integral calculus from multiple perspectives (algebraic, graphical, numerical, and verbal). For differential calculus, the importance of the connection of instantaneous rate of change to the slope of tangent lines to a curve is emphasized as a way of thinking about the first derivative. We will look at the application of the derivative to solve related rate questions, optimization questions and the application of derivatives to the graphing of functions. For integral calculus, the visual basis of the understanding of area under a curve is the accumulation of an increasing number of rectangles whose height is determined by the curve. We will use the definite integral to find the area under a curve or between curves, volumes of revolution around an axis using the disk method and the shell method. We end the course looking at integration by parts. We will cover the basic derivative rules and integration rules for the functions that were studied in Precalculus. **Prerequisite:** *Precalculus Advanced*

CALCULUS II ADVANCED

This course is for students who have excelled in Calculus I Advanced. The Calculus II Advanced curriculum is even more challenging and typically includes advanced techniques of integration, calculus in polar coordinates, graphing, infinite series, first-order ordinary differential equations and ap-

plications, and three-dimensional coordinate systems. In addition to a deep understanding and retention of material covered in Precalculus Advanced and Calculus I Advanced, successful Calculus II Advanced students will have demonstrated both successful completion of assigned work and an intuitive grasp of the subject matter. **Prerequisite:** *Calculus I Advanced*

STATISTICS

This course provides a foundation for future statistics courses and develops the student's ability to understand data in the world at large. Students develop their ability to gather, organize, interpret, and present data, as well as learn how to use the basic tools of probability. These topics are presented through activities, projects and group problem solving. We use Desmos, applets, and other statistical software programs as computational and analytical tools. In this course, as opposed to Statistics Advanced, there is additional focus on exploring data, planning a statistical study, and anticipating patterns using probability and the unit on confirming models through statistical inference is deemphasized. **Prerequisite:** *Algebra II*

STATISTICS ADVANCED

This course is equivalent to an introductory, non-calculus based college course in statistics. This accelerated course is intended to introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students are exposed to four broad themes: 1. Exploratory data analysis, such as using graphical and numerical techniques to study patterns and departures from patterns. 2. Data collection and planning a statistical study so that valid data are obtained. 3. Anticipating patterns using probability, and 4. Confirming models through statistical inference. In and out of class students often work in groups to complete activities and projects. The course makes significant use of the R programming language, applets, and calculators to perform most of the statistical calculations, leaving the analysis and interpretation of the results to the students. Students who successfully complete this course have the option of taking the Advanced Placement test in Statistics and are adequately prepared for the AP Exam. **Prerequisite:** *Precalculus*



LINEAR ALGEBRA ADVANCED

The Linear Algebra course offered at Friends' Central School is comparable to a college-level first course in Linear Algebra for math, engineering, and computer science majors and is an excellent choice for students who plan to pursue these disciplines in college and beyond. Points of emphasis include matrices, vector operations, vector space basics, linear dependence/independence, basis, span, and invertibility. Students are introduced to basic mathematical proof, a small but important component of the course, and are able to shape their own Linear Algebra experience through selection of projects and applications. There is, indeed, more to life – and math! – than Calculus, and we are pleased to offer this relevant and challenging option to our upper-level math students. *Prerequisite: Calculus II Advanced, a willingness to work independently, and an interest in mathematics and abstract thinking*

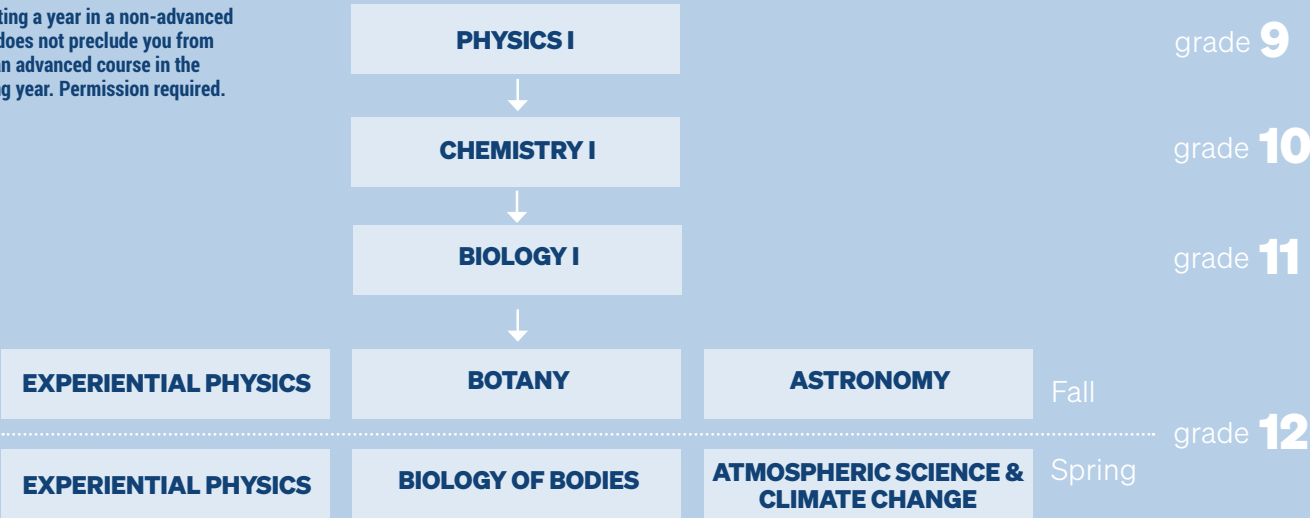
MAKING DECISIONS: AN INTRODUCTION TO ECONOMICS (spring semester)

Economics is the science of decision making, the study of choice - where the costs and benefits of alternatives are evaluated. This semester-long course will be an exploration of certain concepts in economics. The main goal of the course is two fold: 1. to understand basic economic concepts and 2. strengthen critical thinking skills needed to understand and respond to various complex situations. The course will require utilization of various mathematical skills to comprehend the economic concepts presented. The course will be split into three units: Microeconomics, Macroeconomics, and Business Ethics. Upon completion, students will understand fundamental economic concepts, appreciate how the principal concepts of economics relate to each other, and understand the structure of economic systems. Students will be able to use economic concepts in a reasoned, careful manner in dealing with personal, community, national, and global economic issues. *Prerequisite: Algebra II*



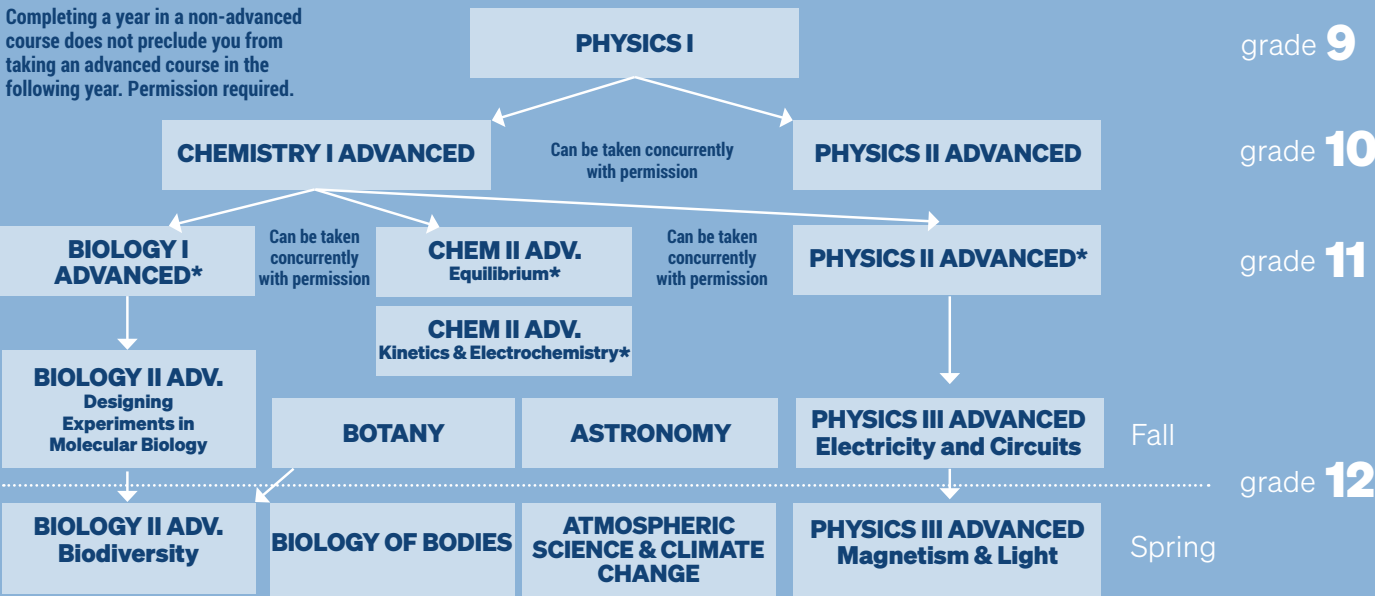
SCIENCE

Completing a year in a non-advanced course does not preclude you from taking an advanced course in the following year. Permission required.



SCIENCE ADVANCED

Completing a year in a non-advanced course does not preclude you from taking an advanced course in the following year. Permission required.



An * indicates that it can also be taken in senior year



SCIENCE

The Friends' Central science curriculum strives to foster a deep appreciation for the meaning and relevance of science, while cultivating the development of independent learners skilled in critical thinking and original analysis.

The sequence begins with Physics I, taken by all students in grade 9. Developed by Friends' Central teachers, this distinctive course explores central concepts in physics as a foundation of the course. It then integrates basic theories of chemistry and biology into the curriculum and finishes with a final culminating project that asks students to reflect and connect many of the concepts. Students learn the process of gathering, organizing, and interpreting scientific data in regular laboratory investigations.

Following Physics I, students enroll in regular and advanced chemistry, biology, and physics classes which are available to students in grades 10, 11, and 12. Students passionate about science may choose to take more than one science course and can pursue a second level of advanced chemistry, biology, and physics.

Each class has an active and integrated lab program. Interested students in all grades may participate in the Distinguished Visiting Scientist Program over the course of the year. This program offers a regular seminar meeting for instruction and dialogue, visits and conversation with the visiting scientist, and summer travel to see scientists at work in the laboratory or the field. **New this year, the Science Department is offering a certificate program in ecological monitoring called "Natural Lands" each semester. For details, see page 3 of this Curriculum Planner.**

GUIDE TO COURSE OFFERINGS IN SCIENCE:

GRADE 9

Physics I is a keystone in the science program and a strong preparation for advanced work in all science disciplines in following years. This course counts as one of the two required years of science in the Upper School.

GRADE 10

In grade 10, most students choose from three different science courses: Chemistry I, Chemistry I Advanced, or Physics II Advanced. Grade 10 students new to Friends' Central may be placed in Physics I. Students entering grade 10 who are not certain which science elective is best for them should speak to any of the science teachers for guidance in course selection. Students who wish to take Chemistry I Advanced and Physics II Advanced concurrently in grade 10 must have taken or been co-enrolled in Precalculus Advanced and have the approval of their current grade 9 science teacher. Students electing to take Chemistry I Advanced or Physics II Advanced should have solid skills in algebra and be comfortable with the use of multivariable equations. A math placement examination is offered to help guide students in their selection of the Physics II Advanced course. Completing a year in a non-advanced course does not preclude you from taking an advanced course in your grade 11 year, but permission from your teacher is required.

GRADE 11

Students who have completed Chemistry in their grade 10 year may elect to take Biology I or Biology I Advanced in grade 11. Students who completed Chemistry I Advanced in grade 10 may elect to take Chemistry II Advanced in grade 11. Students who have completed Physics II Advanced in grade 10 may elect to take Physics III Advanced in grade 11. Grade 11 students also have the option of taking Chemistry I or Chemistry I Advanced or Physics II Advanced. Completing a year in a non-advanced course does not preclude you from taking an advanced course in your grade 12 year but permission from your teacher is required.

GRADE 12

Science course offerings for grade 12 offer many opportunities for students who are interested in a variety of fields. Many but not all courses are either fall or spring semester courses. The semester options allow for greater student choice in the many exceptional courses we offer. In addition, students who have completed Biology I Advanced may take the Biology II Advanced with the permission of the instructor. Just as in the Grade 11 description, Chemistry II and Physics III Advanced remain options, as well, with permission from the instructor.



PHYSICS I

This is the core course in the Upper School science program. The premise of this course is that the big ideas serving as the foundation of science are elegant in their simplicity but intricate in their many diverse applications. The course begins by examining how we distinguish between truth and beliefs. Following this, students explore central concepts in Physics: measurement, Newtonian motion, work/energy, thermodynamics, electricity and magnetism, electromagnetic radiation, sound waves, atomic and molecular architecture, and the interconvertibility of matter and energy. These concepts serve as a core background to much of science theory and practice. Considerable class time is devoted to the use of problem-solving skills to explore the quantitative applications of these ideas. Given this groundwork, the final weeks of the course consider these ideas as they apply more specifically to atomic structure, molecular bonding, and selected topics in life science, particularly nucleic acid and protein chemistry in living organisms. Experiments are conducted during regular lab meetings and are chosen to illustrate important ideas and observations in the discovery of first principles of scientific understanding. Finally, there is a project at the end of this course that asks students to reflect and show how many of the concepts are interconnected. This course is standard and required for all grade 9 students.

BIOLOGY I

A major goal of the Biology course is to introduce students to basic biological processes, such as cell division and respiration, and to relate them to structural properties of cells and organisms. Another goal is to familiarize students with the concepts of modern biology, including patterns of inheritance and the molecular basis of heredity. Experiments in cellular respiration, enzyme function, and insect genetics present opportunities to refine students' understanding of the scientific method as they collect and analyze data. Students study units in cellular biology, human physiology, genetics, and ecology. This course is open to students in grades 11 and 12.

BIOLOGY I ADVANCED

The Biology I Advanced course draws strongly on students' chemistry training to gain a foundation in biochemistry, cell biology, classical and molecular genetics, and evolutionary

biology. Students use this foundation to read scientific papers and interpret primary literature data, think about how complex systems function, and gain health and scientific literacy. Students do extensive work on developing critical thinking through labs and simulations and learn how to organize and think about large amounts of detailed information. The laboratories explore a variety of scientific techniques and give students experience in analyzing their own original data. *Prerequisite: Chemistry I or Chemistry I Advanced*

BIOLOGY II ADVANCED

Designing Experiments in Molecular Biology (fall semester)

This course introduces students to cutting edge topics in molecular genetics from a research perspective. Through laboratory experiment and analysis of past and current literature, students will be introduced to the fundamentals of epigenetics, optogenetics, gene editing, and gene therapy - all of which are changing our understanding of life, complicating ethical perspectives and offering hope in treating disease. Students will be exposed to multiple model organisms and multiple techniques that are used in research laboratories around the world. They will also be asked to analyze lay and professional literature and begin to develop the scholarly skepticism required for critical research. Preparation for and attendance at the annual Annenberg High School Symposium, where students present on recent developments in a topic of their choice, will also be a part of this course. *Prerequisite: Biology I Advanced. Permission Required.*

BIODIVERSITY (spring semester)

The Biodiversity Studies course will focus on the role of ecological studies, evolutionary biology and molecular phylogenetics to understand the diversity of life on Earth. Central questions addressed in the course will include definitions of biodiversity and ways to measure it, how scientists estimate species richness in different habitats, and how conservation biologists work to address threats to biodiversity. The course will make use of a fine textbook, frequent readings from the scientific literature, and recorded interviews with scientists, together with video footage of biodiversity hotspots. The class will have a significant lab component that will develop molecular techniques in gene



sequencing that are used to study relationships among species or look for unrecognized cryptic species, building on a ten-year research program in our lab. Students will have the opportunity to join one or more of the several trips to museums or field sites that focus on biodiversity studies and unique species assemblages. Open to grade 11 and 12 students. *Prerequisite or co-requisite: Biology I Advanced or Biology I/Botany with permission*

CHEMISTRY I

This course is an introduction to chemistry. Students build an understanding of fundamental concepts of chemistry and examine the nature of matter and of the physical world. The course emphasizes problem-solving strategies, methods of interpreting data, and the ability to explain scientific concepts. Lab sessions reinforce course topics and introduce students to fundamental laboratory practices. Beginning with atomic structure and the nature of the atom and extending through molecular structures and chemical reactions. Other topics covered include nuclear chemistry, bonding, stoichiometry, thermodynamics, intermolecular forces, and gas laws. Open to students in grades 10, 11, and 12.

CHEMISTRY I ADVANCED

Chemistry I Advanced, an introduction to chemistry for students who want to examine its fundamental concepts in more depth, explores the details of atomic structure, chemical reactions, molecular structure theory, and bonding mechanisms, gas laws, and electrochemistry. Advanced analytical problem-solving techniques are developed as students are introduced to abstract concepts in chemistry. Laboratory experiments offer opportunities to correlate experimental data collection and analysis with classroom content and to gain experience in laboratory-report writing and graphical representation of data. The course emphasizes quantitative reasoning and analytical thinking in both classroom and lab; strong quantitative skills are essential. Open to grades 10, 11, and 12. *Permission required.*

CHEMISTRY II ADVANCED

Chemical Equilibrium (fall semester)

The reversibility of many chemical reactions that occur in nature, and others used in industrial processes, offer students the opportunity to explore the ideas of chemical equilibrium, where concentrations of reactants and products co-exist. Mathematical calculations determining the relative

concentrations of the chemical species within reaction types are central to this course. Evaluating changes in concentrations during reaction fluxes is considered. Examples of chemical systems discussed include: ocean carbonate equilibria as it relates to climate change, acid/base/buffer reactions in biological systems, atmospheric oxygen content and hemoglobin-oxygen complex formation, solubility of metals in surface water, Haber process in the production of ammonia, and pharmaceutical applications of equilibrium. *Prerequisite: Chemistry I Advanced. Permission required.*

CHEMICAL KINETICS AND ELECTROCHEMISTRY (spring semester)

Chemical kinetics is studied using experimental data gathered by each student at the start of the semester. Students use calculus to derive chemical reaction Rate Laws and apply those theoretical equations to their own experimental data. The integration of theory with experimentation is the foundation of chemical reaction kinetics, and students experience first hand how math and science overlap. However, calculus is not a prerequisite or corequisite for success in the class. Assessments are project-based and give each student the opportunity to apply, and refine, their fluency with graphical techniques and constructing laboratory reports. The final study in the two-year chemistry sequence is thermodynamics and electrochemistry. Chemical reaction spontaneity is defined, and equilibrium, entropy, enthalpy, and Gibbs Free energy are explored. Electrochemistry is studied through the functionality of batteries, solar energy, and the industrial electroplating process. *Prerequisite: Chemistry I Advanced. Permission required.*

EXPERIENTIAL PHYSICS (fall or spring semester)

This semester course focuses on the major themes of physics, emphasizing the exploration and development of key concepts before taking up mathematics and applications in problem solving. Conceptual understanding is a fundamental goal of the course. The big ideas of the physical universe are actually few in number and widely interrelated. This course will emphasize the concepts of physics in a manner that will make these interrelationships easier to recognize. Our study of physics will include careful observations of nature and thoughtful interpretation of why things happen the way they do. In the process, we will also consider applications of these ideas in the everyday world. Open to grades 11 and 12 only. *Prerequisite: one year of Upper School science*



PHYSICS II ADVANCED

This course provides a survey of the most important topics in mechanics, with attention to analysis of one- and two-dimensional kinematics and dynamics, as well as rotational kinematics and dynamics. The class also includes some introduction to relativity to consider changes in space and time when traveling near light speed and thermodynamics, with a focus on the role played by energy in physical problems. Our goal is to present physics in a logical and coherent way while exposing students to problem-solving skills and some contemporary applications of physics in everyday life. Students enrolled in physics should have an adequate background in mathematics. This course is open to grades 10, 11, and 12 but students must be fluent in trigonometric functions. *Prerequisite: Chemistry I Advanced, Biology I Advanced, or permission of the instructor*

PHYSICS III ADVANCED

Electricity and Circuits (fall semester)

In this course, students will build on the problem-solving and analytical skills developed in Physics I Advanced to study the classical laws governing electric charges. Through lecture, laboratory experimentation, and problem sets, the topics studied will include electric fields, electrical potential, current, circuit components, and AC and DC circuits. Group work is encouraged, exposing students to the collaborative nature at the heart of scientific inquiry. Both trigonometry and calculus will be used to examine the theory behind physical phenomena (although previous study of calculus is not required). *Prerequisite: Physics II Advanced and Precalculus Advanced. Permission required without previously taking Physics II Advanced.*

Magnetism, Waves, and Optics (spring semester)

Grounded in their knowledge of electric forces and circuits, students will study magnetism, electromagnetic theory (incorporating Maxwell's equations), light, and optics. After completing these classical topics, modern physics topics will be explored, such as relativity, quantum mechanics, particle physics, material science, and fluid dynamics. This course will challenge students to apply rigorous mathematical analyses to physical problems and to question their intuition about the physical world. *Prerequisites: Precalculus Advanced and Physics III Advanced Electricity and Circuits*

BOTANY (fall semester)

This course is offered as a fall semester class for seniors who have an interest in the biology and ecology of plants and fungi, particularly those of economic importance to humans. The course will begin with a study of systematic biology and nomenclature, introducing students to the system of naming and classifying plants across diverse families. Additional topics will develop an understanding of the anatomy and life history of flowering plants, with special attention to the structures of the flower, seed dispersal strategies, plant-pollinator relationships, and the cellular makeup of leaf and stem tissues. Extensive outdoor fieldwork and active participation in regular discussions are important components of the course. Detailed investigations will be made in the areas of food plants, issues in modern food production systems and agriculture, and the chemistry of medicinal and drug plants. Open to grade 12 students. *Prerequisite: Biology, Biology I Advanced, or permission of the instructor*

BIOLOGY OF BODIES (spring semester)

This course is for seniors who have taken Biology I or Biology I Advanced and delves into the anatomy, physiology, and pathology of vertebrate animals, including humans. Topics will vary with student interest and will range from reviews of specific organ systems to developmental biology to the biological basis for diagnosis, therapies, and advances in the health and medical sciences. Anatomical dissection of biological material may be included in the course laboratory experience. *Prerequisite: Biology, Biology I Advanced, or permission of the instructor*

ASTRONOMY (fall semester)

This course will guide students through a tour of the universe in four units. It starts with basic celestial orientation, and then the students learn how to find and then map significant markers in the sky over time. Students will study the changes in the sky over time, such as the seasonal movement of the Sun along the horizon and the phases of the Moon. We will also look at how astronomers analyze light from distant objects to probe their inner nature and the kinds of telescope specifications necessary for exploring different regions of the electromagnetic spectrum. Our second unit, a study of stars, will start with our Sun. We will look at how and



why stars change over the course of their lifetimes, and how astronomers are able to understand these changes. Next, we will move beyond our own neighborhood to study the collections of stars we call galaxies, considering even the exotic types like QSOs and other active galaxies, and how all these play a role in understanding the origin and potential fate of the universe. Lastly, we will turn back to much more familiar territory, looking deeply at what has been learned about the worlds in our very own Solar System, and how understanding the geology near to us may help us in our search for other habitable worlds around other stars. This course will involve a laboratory component that will require occasional evening observing sessions on campus and at least one field trip to a local planetarium and/or observatory.

ATMOSPHERIC SCIENCE AND CLIMATE CHANGE **(spring semester)**

This course is designed to consider the sources of the individual atmospheric chemical constituents that are known to be the greenhouse gases, or gases that trap earth-borne ra-

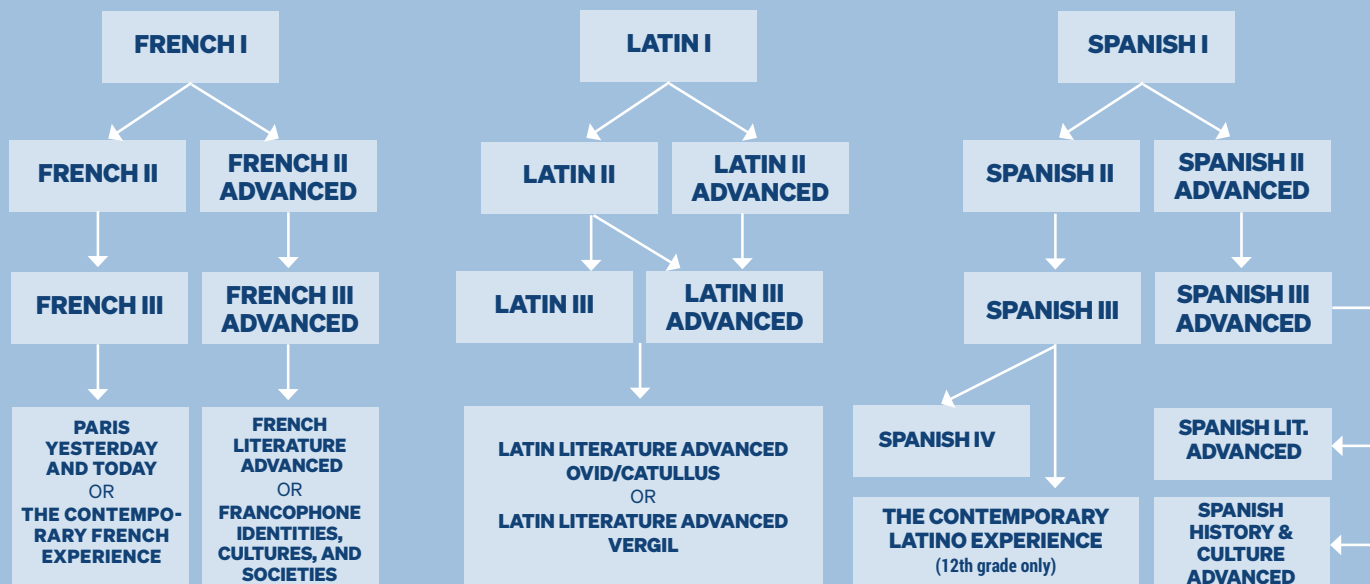
diation from escaping thus causing the rise in average global temperatures, how the constituents differ in their Greenhouse Warming Potential, and subsequent climate change impact that the constituents will likely impose on the global communities. Although global climate change is often discussed by considering average rise in global temperatures, there are select global regions that are being impacted to a greater extent by climate change than others. Students will consider these regions, specifically the Arctic region, explore the impact the melting ice sheet, the thawing permafrost, and the deterioration of Greenland's ice mass will have on the state of the global climate, and evaluate the human toll in the regions by the rapidly changing conditions. A consideration of the scientific predictions for the future climate change impact on weather, ocean temperatures, and sea level rise will be made. We will also discuss climate policy and solutions, looking at how nations plan to both lessen the effects of climate change and adapt to our changing world.



WORLD LANGUAGES

Graduation Requirement: 4 semesters of the same language

Completing a year in a non-advanced course does not preclude you from taking an advanced course in the following year. Permission required.



The benefit of knowing another language contributes to Friends' Central's commitment to developing globally minded, culturally aware graduates. Students are required to take two consecutive years of a language, and most take a language for four years. The majority of students enter the Upper School having already completed the first level of French, Spanish, or Latin and further their studies for two more years and beyond to the advanced level. Other students start their language studies or begin a new language in grade 9. In French and Spanish, the curriculum is rich with opportunities for speaking, listening, reading, and writing. In Latin, the focus is on developing translation skills through the mastery of grammatical concepts and the acquisition of vocabulary. Courses in each language range from introductory to advanced literature and analysis.

The process of teaching a modern language begins with the belief that each student can attain advanced proficiency. Our approach is multidisciplinary and contemporary, taking advantage of technology to expose our students to a variety of native speakers and cultures and to stress that language is a communication tool. Students are encouraged to speak and write in the target language, gaining confidence in their abilities with practice. Latin is not spoken in class and prose composition is not emphasized. Understanding the cultures of antiquity and the medieval world is essential in placing literary works in context and an important component in instruction.

Each language's classroom experience is supplemented by opportunities for travel abroad. Latin students may travel to Italy to see the monuments of the Romans – ancient and modern – and read their Latin inscriptions. French and Spanish students may take part in exchange opportunities with schools in Lyon, France and Seville, Spain. Summer service programs in Costa Rica and Peru may also be available to students to further their study of the Spanish language.

Finally, interested students may take part in national language competitions and join clubs such as Le Club Francophone, Latin Club, or the Latino Culture Club.



FRENCH

FRENCH I: INTRODUCTION TO FRENCH LANGUAGE AND CULTURE

In this course, students develop their communication skills through listening, speaking, reading, and writing in French. Videos, dialogues, skits, and e-textbook activities are used to practice vocabulary, grammar, listening comprehension, and pronunciation. A supportive classroom atmosphere helps students develop the confidence to talk about themselves. We emphasize the diversity of the French culture by studying authentic documents that show French people from diverse social and ethnic backgrounds. For example, in our unit about family, we study a song from Black M “Le plus fort du monde,” which portrays the admiration of the singer for his father who had to overcome many difficulties as an African immigrant in France. As the year progresses, the course is taught increasingly in French.

FRENCH II/II ADVANCED

This course initially reviews and then builds on the skills developed in French I, reinforcing pronunciation and essential grammatical, lexical, and cultural material while providing more advanced material in each domain. Students develop greater confidence and facility in expressing themselves in French, as well as in understanding others. Taught in French, this course encourages students to talk about themselves, their families, and their world, as well as to explore the lives and cultures of people of the French-speaking world, emphasizing the beauty and diversity of other traditions and lifestyles. For example, in our unit about food and nutrition, not only do we look into classical French culinary specialties but we also discover the diversity of culinary traditions from the Francophone world like couscous or nems. Skits and presentations help students internalize new vocabulary and grammatical structures and use them in context. Students increase their oral proficiency through active practice using a variety of listening comprehension materials. Along with the *D'Accord-2* program and films, students explore online resources and, in the spring, read short texts in French.

Enrollment in the advanced level is by teacher recommendation.

FRENCH III/III ADVANCED

Film is the critical component in this course. Taught in French, the course emphasizes discussion, oral and written proficiency, and listening comprehension. Students learn

about important cinematographic movements, different film genres, and how to understand the role of the camera, while developing increasing confidence and oral proficiency; they discuss themes, relationships, and character development through their study of the films. Students in the advanced course become significantly more proficient in their mastery and use of complex grammatical structures; students in the non-accelerated course focus on improving their oral and written expression to convey their perceptions. The text, *Cinéphile*, coordinates the study of most of the program's 10 films, along with current events, geography, culture, grammar, and vocabulary development. Building upon the study of film, viewing and analyzing short films, or “courts métrages,” is also an integral part of the course. One 7-minute film, titled *Très Touchant*, sparks a discussion of social justice and poverty, wealth and class, the haves and the have-nots, the northern and southern hemispheres – as a wealthy boy offers his shoes to another who is barefoot. As an introduction to literature, the course ends with the study of *Le Petit Prince* by Antoine de Saint-Exupéry, providing the foundation for studying essential themes, such as the meaning of life and death, as well as understanding the human experience – especially concerning the role of interpersonal openness and compassion towards others. This course is meant to serve as a bridge from the early levels where we do a lot of talking about ourselves, to connecting with other French speakers around the world, one of the primary goals of language study!

Enrollment in the advanced level is by teacher recommendation.

PARIS YESTERDAY AND TODAY (2023-2024)

This course focuses on cultural units about Paris, France's capital city. We will look below the surface of this amazing tourist destination and investigate what really makes the City of Light tick. Grammar and vocabulary are studied in the context of these cultural units, not as separate units unto themselves. The objective is to encourage students to develop their French comprehension, expression and cultural understanding via their study of Paris – past and present.

Units of study are historical and sociological. *Hier et Aujourd'hui (Today and Yesterday)* examines historic and modern Parisian layout, architecture, and populations – including the wide range of immigrant experiences. The unit, *Grèves, Manifestations et Révolutions (Strikes, Demonstrations and Revolutions)*, covers the French Revolution of 1789 to the student uprisings of May 1968 to today's yellow vests, the



French approach to demanding large scale social change. This unit also serves a public purpose, where we use an illustrated version of the French novel *Les Misérables* to compare and contrast French and American experiences of unions, strikes, demonstrations and revolution. Other units take social media, gastronomic or artistic views of Paris. In *Infogram et Snapchat à Paris (Infogram and Snapchat in Paris)* students research Paris using Infogram and Snapchat. *Le film parisien (Parisian Film)* looks at movies, such as *Amélie*, made in and about Paris. *La Chanson parisienne: French music* is specifically about Paris. Two songs we study demonstrate both the heart and the periphery of Parisian life. “Il est cinq heures du matin” (“It’s five o’clock in the morning”) runs the students through the rat race of the city as it awakens. “DKR,” a Senegalese song by the rapper Booba, shares how he did not leave Paris, but rather Paris left him to leave to return to his home in West Africa. Finally, a fun and tasty unit brings French bread to the forefront – *Le meilleur croissant de Philly (Philly’s Best Croissant)* is about finding the very best local croissant and visiting a local bakery to see how they are made.

This course is open to students who have successfully completed French III or above.

THE CONTEMPORARY FRENCH EXPERIENCE (OFFERED IN 2022-2023)

This course will focus on continuing the development of students’ French skills via cultural units of current interest for the students and the teacher. Grammar and vocabulary are typically studied in the context of those cultural units, not as separate units unto themselves. The objective is to develop the students’ comprehension, expression, and cultural understanding via their study of the French-speaking world: France, Africa, Asia, The Pacific, The Caribbean, Québec, and the USA. An important theme in the study of France and Paris is the racial injustice found in the suburbs of Paris, particularly towards youth of Arab and African descent. The film *Les Misérables* engages the class to observe this forced underclass and their dire social situation in the Parisian suburbs. Global engagement is an important goal during our study of language and culture beyond the borders of France. Our focus is primarily on Africa, the fastest growing French-speaking region in the world. Other units of study include *Le Pain Quotidien*, where we taste and rank baguettes from local bakeries and then bake our own baguettes; *Les Franco-*

phones, looking at French speakers outside of France; and *La Chanson*, exploring many styles of French music – traditional, pop, rap/hip-hop. An important movie we study, *La Vie en Rose*, serves a public purpose. It is about Edith Piaf’s life, during which the singer suffered from serious substance abuse. We discuss the role it played in making her a famous, talented, yet isolated and self-destructive, performer.

This course is open to students who have successfully completed French III or above.

FRENCH LITERATURE ADVANCED (OFFERED IN 2022-2023)

This course is structured like an introductory college level course. Thematically organized, it focuses on famous plays, short stories, pieces of poetry and novels from the 17th through 21st centuries by Maupassant, Molière, Reza, Camus, Faye, and Sartre, among others. The course explores themes such as fear and folly, class and gender equality, satire and philosophy. All works are integral texts in the original French. Lively and provocative discussions, led by the teacher or students, focus on the evolution of the protagonist, the narrator’s point of view, and structural components of the works which enhance the students’ understanding. Films offer an additional layer to help students further grasp the historical period and the author’s message. Students will search the Internet for current events related to French government, politics, and society to increase their awareness of French culture, mores, and thought.

This class is the most advanced French class. Enrollment in this course is by teacher recommendation.

FRANCOPHONE IDENTITIES, CULTURES AND SOCIETIES ADVANCED (2023-2024)

This advanced class will focus on the rich history of francophone cultures and societies throughout the world. Where and why is French spoken in the world? How does the feminist movement in France relate to the current gender questions in the US? From the Paris Accord to the controversial carbon tax abandoned by president Macron after the Yellow Vest protests, what are the challenges and the limits of an environmental movement outside the US? Who were the Francophone intellectuals from the Pan-African movement that emerged during the civil rights struggles of the 60s and 70s? What are the similarities and differences in the immigration debate in Europe compared to those in the US? Why do we call the millennials in the francophone world the



“génération engagée”? Do their fights relate to yours? What are the current debates about race and multiculturalism in France and Québec?

The course will enable students to gain a better understanding of these topics while becoming more proficient in French. We will explore a variety of authentic materials, including recordings, videos, newspaper articles, and podcasts which will trigger class discussions entirely in French. The vast majority of the assessments will be based on tasks which will develop project management skills as well as comprehension/expressions competencies in the target language. Grammatical structures are reviewed and applied to the written analyses.

By reflecting on “otherness,” the final aim of this course is to rethink our own identities. In what ways do our language, our institutions, and our history shape our identities?

This class is the most advanced French class. Enrollment in this course is by teacher recommendation.

FRENCH TRAVEL ABROAD OPPORTUNITY: FRENCH EXCHANGE IN LYON

French students have the opportunity to make lasting friendships and immerse themselves in French culture and language by participating in French exchanges – a two-week exchange or a three-month exchange with the Cité Scolaire Internationale, Lyon. CSI has been our partner school in France for close to 22 years. The school is organized in different sections: Japanese, Italian, Polish, English, Spanish, Chinese, Arabic, German, and Portuguese. With the French school, our students get to meet friends from around the

world as well as local residents who come from diverse ethnic backgrounds.

Our students can choose whether to participate in the two-week exchange program or the three-month exchange program. Each exchange runs every two years. During the two-week exchange program, the French students are first hosted in the fall by their American partners and attend Friends’ Central, taking field trips to New York, Washington DC, and Philadelphia landmarks. The following spring of the same academic year, FCS students and their French teachers travel to France, where they spend four days in Paris and then two weeks in Lyon, staying with the CSI student they hosted in the fall. This exchange focuses on sightseeing and discovering a rich culture while being accompanied by FCS teachers. The three-month exchange program constitutes a true immersive experience. During this time, our students share the experience of a French family and get a deep knowledge of the French school system on their own. It is an intense and rewarding program as they learn to be independent travelers and how to adapt to a foreign environment.

LATIN

LATIN I

Latin I employs a traditional, printed textbook, *Wheelock’s Latin*, by Wheelock and LaFleur, as well as extensive online resources in Friends’ Central’s online learning management system, Canvas. Students become proficient in the structure and syntax of Latin and begin reading short pieces of original Latin by the end of the year. Cultural, artistic, and historical elements are included in the course as well, creating a strong foundation for reading and understanding the literary works left to us from the Romans.

LATIN II

The theme of Latin II is “Language, Structure, and Discovery.” In addition to completing the basics of Latin grammar, students read and translate selections in prose adapted from various ancient Roman authors. The focus is on the development of translation and grammar skills. By approaching Latin from a design point of view, students will discover much about their own language and about human languages generally. They can expect their own reading and writing to develop new levels of sophistication. Students explore ancient beliefs about power, justice, and violence that are encoded in language and story.



LATIN II ADVANCED

Advanced second year students complete their study of Latin grammar at an accelerated pace. The goal is to acquire and master the skills necessary to read and translate passages of text as written by the ancient Roman authors. Prose composition exercises are included in the syllabus and students will develop skill in sight-reading simple Latin prose.

LATIN III

The theme of Latin III is “Language, Power, and the State.” Students will read selections of non-fiction prose by such authors as Cicero, Julius Caesar, and Pliny – contemporary, primary sources writing about critical issues of their time in the Roman world – examining the texts through the lens of political science. They will examine the use of language by individuals and by the state: how it can advance the aspirations of a civilization and how it can be weaponized. Students will analyze and explain an aspect of Roman government and politics relating to the authors we have read as a capstone project in the course employing various media in imaginative ways. They will explore cultural norms concerning justice and violence that are encoded in the texts we read.

LATIN III ADVANCED

Advanced third year students complete the curriculum of Latin III at an accelerated pace with more challenging assessments and increasing focus on the ability to translate passages at sight. Prose composition from English into Latin is included in the syllabus.

LATIN LITERATURE ADVANCED: CATULLUS AND OVID (Offered in 2022-2023)

In this course, students are introduced to both the love poetry of Catullus and the epic poem *The Metamorphoses* of Ovid. Students will read progressively more challenging tiers of Latin culminating in sections of the original poetry of both authors. They will work collaboratively to read and translate classic stories such as the tragedy of Pyramus and Thisbe, the father-son relationship of Icarus and Daedalus, and the eternal love of Orpheus and Eurydice. They will also examine the literary style of Catullus and his tortured relationship with Lesbia. In learning to read the Latin of this great tradition, students will strengthen and solidify their knowledge of Latin grammar and vocabulary, build their skills in literary analysis and interpretation, hone their literary discussion skills, and

develop their analytical writing and critical thinking skills. Every other year a trip is offered to Italy to deepen the cultural understanding of the Roman world.

LATIN LITERATURE ADVANCED: VERGIL (Offered in 2023-2024)

The focus of this course is the translation of selections of Vergil's epic poem, *The Aeneid*. Students will work collaboratively to translate sections of this great epic, examining the ways in which reading the text in the original gives an understanding of how the author used language to create an impact on meaning. In learning to read the Latin of this great tradition, students will strengthen and solidify their knowledge of Latin grammar and vocabulary, build their skills in literary analysis and interpretation, hone their literary discussion skills, and develop their analytical writing and critical thinking skills. As they explore the *Aeneid*'s central themes and the Roman values expressed therein, they will become versed in the epic tradition and its influence on literature and the arts to this day.

LATIN TRAVEL ABROAD OPPORTUNITY

On alternate years, a trip to Rome, Pompeii, and Herculaneum is offered for all Upper School students taking Latin.

SPANISH

SPANISH I: INTRODUCTION TO SPANISH LANGUAGE AND CULTURE

In the first year, students develop their communication skills (listening, speaking, reading, and writing in Spanish) while exploring cultural, historical, and contemporary Spanish-speaking identities. The course is project-based, and materials include cultural discussions, music, skits, games, and video resources to practice, reinforce, and develop the grammar and vocabulary found in the online textbook. Later in the year, the curriculum includes 10-minute films, many of which might explore contemporary social issues. One example is *Uno*, a film about a Spanish fisherman who finds the floating cell phone of an Arab migrant in a story that comments on the refugee crisis in Europe. This course provides a supportive atmosphere to help build community as students develop the confidence to communicate in Spanish while connecting to and learning about the Spanish-speaking world.



SPANISH II

This course begins with an extensive formal review of grammar, and students are expected to keep building on foundational vocabulary, verb forms, and grammar structures introduced in Spanish I. Emphasis is given to the development of listening and speaking skills, though much importance is given to developing a connection with the Latin culture. Taught largely in Spanish, this class, like Spanish 1, is project-based. Material includes cultural discussions, skits, games, music, short books and videos all designed to teach Spanish language skills that can be used in everyday life conversation or while traveling. Students will record mini movies, create story books and write their own cartoon strips. Outings might include lunch at a Latin restaurant or visits to local Latin art exhibits, where the Latin culture can be experienced first hand. Students will also partake in the celebration of traditional South American festivities, such as Día de Los Muertos, by making their own Latin dishes in class (this year's winning recipes included our Mexican Tortilla Soup and our Pastelitos de Guayaba, both of which were highly lauded by students and parents alike!) and creating a variety of Latin crafts, such as giant Mexican flowers, Ojos de Dios tapestries and elaborate Mexican sugar skulls. Play and building a sense of community, of course, are extremely important elements of this class as well. Students will find themselves gaining fluency in Spanish as they play popular Spanish online and in person games, learn songs by artists such as Mana and Juanes and participate in a variety of community building activities.

SPANISH II ADVANCED

This course is designed to challenge students who have demonstrated a high level of proficiency during Spanish 1, and is by invitation only. In this course, students expand – in an immersion-style environment – grammatical concepts presented to them during their first-year course. Besides building on listening and speaking skills, an increased focus is given to the acquisition of vocabulary and grammar skills through extensive exposure to reading and writing assignments. This course is project based and designed to encourage students to engage with one another as they become increasingly proficient with Spanish. To supplement the text, students will participate in activities that include one-on-one conversations with our Spanish partners in Latin America, cultural discussions, skits, games, music, short books, and

videos. Students will work in groups to produce mini movies, create storybooks and even make YouTube vlogs. Outings might include lunch at a Latin restaurant or visits to local Latin art exhibits, where the Latin culture becomes very tangible to all. Students will also partake in celebrations of traditional Latin American festivities such as Día de Los Muertos, making their own Latin dishes during class. Dishes might include Mexican chicken tortilla soup, empanadas, pastelitos de guayaba, chocolate caliente estilo mexicano and more. We will also be working on our creative skills, designing traditional South and Central American crafts such as giant Mexican flowers, Ojos de Dios tapestries, and elaborate Mexican sugar skulls. Because play and building a sense of community are extremely important elements of this class, students will find themselves gaining fluency as they play popular Spanish online and in-person games, learn songs by popular Latin artists such as J. Balvin, Mana and Juanes, and participate in a variety of bonding activities. In the second semester, more time will be dedicated to watching movies in Spanish and analyzing these movies. An example of the type of movies students will be exposed to is *Frida*, which addresses Kahlo's unparalleled tenacity throughout her life, her immense creativity, and her highly unconventional views on sexuality and politics. ***Enrollment in this course is by teacher recommendation.***

SPANISH III

This course begins with an extensive review of the grammar principles covered in the previous years, followed by a study of advanced grammar structures. Students are expected to use their growing knowledge to communicate in different situations that are relevant to them such as asking for directions when traveling. For example, students use tourist maps of Seville, Spain or Mexico City, and they have to ask and give directions to different parts of the cities. When learning vocabulary about cars and learning how to drive, students watch videos and describe what they see in Spanish. The focus is on developing communicative skills. As students learn advanced grammatical skills, compositions are assigned to strengthen writing skills. Throughout the year, students read and/or watch a variety of short writings or short films about Hispanic history and culture, forming the basis for both written and oral production. They discuss the material to further their proficiency in reading, writing, and speaking.



SPANISH III ADVANCED

This course continues the immersion-style environment introduced in the previous years. After a thorough review of grammatical principles, advanced grammatical structures are studied and applied to oral and written communication. Special attention is given to vocabulary building, oral proficiency, and strengthening writing skills. Film units are used to improve listening comprehension and promote class discussion. For example, students watch the movie *El Orfanato* in Spanish with Spanish subtitles. Students then discuss the movie in class, practicing grammar structures and vocabulary based on the movie. Students work individually to answer comprehension questions, and in groups, they talk about the movie, and they write their first [essay](#) in Spanish. Students do [creative projects](#) like designing a house using online software while learning vocabulary about the house. Students are expected to discuss Latino cultures through music, documentaries, films, short readings, and current events. As students learn advanced grammatical skills, compositions are assigned to strengthen writing skills. The second semester ends with the reading of an adaptation of *Lazarillo de Tormes*. Classes are focused on discussions of the reading entirely in Spanish. The book offers a great opportunity to introduce important historical events in Spain and do some literary analysis. The focus is the development of written and oral communicative skills to prepare the students for advanced courses such as Spanish History and Culture and Spanish Literature. Furthermore, throughout the school year each student is paired with an English student in Spain. The pairs record two conversations each month – one in English, which the Spanish student submits to their English teacher in Spain, and one in Spanish, which the FCS student submits to their Spanish teacher. *Enrollment in this course is by teacher recommendation.*

SPANISH IV

This course strengthens and reviews the language skills students have developed through their first three years of study. Students improve listening comprehension by listening to Latin music and watching films and shows in Spanish. For example, the Day of the Dead is explored through contemporary music, short videos, and the film *Coco*. Themes of social justice, gender roles, and class are explored and discussed in the series [Street Food Latino America and accompanying articles](#). [Grammatical concepts are reviewed to allow the students to clearly express their ideas. Writing is](#)

[developed and focused on comparing and contrasting these cultural traditions and experiences. Student discussions are encouraged to bring their own stories and perspectives to the class while at the same time exploring the Spanish speaking world. Furthermore, each student is paired with an English student in Spain. The pairs record two conversations each month – one in English, which the Spanish student submits to their English teacher in Spain, and one in Spanish, which the FCS student submits to their Spanish teacher. This course is open to students who have completed Spanish III.](#)

THE CONTEMPORARY LATINO EXPERIENCE

The goal of this course is to familiarize students with the Latino communities in the United States. The course focuses on the different cultures and backgrounds of Latin American immigrants, as well as the economic, political and environmental conditions in their countries of origin. The general outline of the class is to study one country each month. All of the materials in the course are authentic and in Spanish. Spanish is spoken exclusively in the classroom, and all of the writing and research is in Spanish. Units include Puerto Rico, Mexico, Cuba, Venezuela, El Salvador, and Colombia. Course research includes watching documentaries from news sources such as *BBC Mundo*, and reading recent newspaper articles and websites from published journals such as *El Tiempo*. Towards the end of each unit, students are responsible for oral presentations in which they take a deeper dive into a more specific issue that affects the particular country being studied. For example, in the most recent Puerto Rico unit, students presented to their classmates on topics such as the continuing effects of hurricane Maria (2017) on Puerto Rico, the effects of COVID-19 on the island, and the debate within Puerto Rico about whether to become the 51st state of the United States, or whether to seek independence from its current status as a US territory. Every few weeks, the cultural curriculum is interrupted in order to review grammatical structures. Students also participate in a “video pen pal” program with our partner school in Sevilla, Spain, *La Academia Preuniversitaria*: every FCS Contemporary Latino Experience student is paired with an English student in Spain. The pairs record two conversations each month – one in English, which the Spanish student submits to their English teacher in Spain, and one in Spanish, which the FCS student submits to their Spanish teacher. *This course is open to grade 12 students who have completed Spanish III and above.*



SPANISH: HISTORY & CULTURE OF LATIN AMERICA & SPAIN ADVANCED

This college-level Spanish course has as its focus Latin American identity with respect to its complicated relationship with Spain. One of the main units in the course is *La Reconquista*, the unique history of the Iberian Peninsula from 711-1492, during which Moors, Jews, and Christians coexisted in what is now Spain and Portugal. The Reconquista unit includes an architectural study of the [Cathedral Mezquita de Córdoba](#) and a research project about the city of Toledo, where Moors, Jews and Christians lived together and thrived for centuries. (An example is the Sinagoga de Santa María La Blanca, a synagogue commissioned in the 12th century by Jews of Toledo, built by Moslem craftsmen, and later converted to a Catholic church). Many of the readings come from Carlos Fuentes' *El Espejo Enterrado (The Buried Mirror)*, which he wrote in commemoration of Columbus' 1492 "discovery" of the Americas. We read from several primary texts, including *Historia de las Indias*, by Bartolomé de las Casas (1474-1566), the missionary who chronicled and fought against the Spaniards' oppression of indigenous people in Latin America. Other texts include short stories ("La Noche Boca Arriba" by Julio Cortázar) and movies (*Carmen*, directed by Carlos Saura). Additional major units in the course include a study of the Aztec and Inca cultures and what occurred in the 16th century when they confronted the Spaniards. We consider current events in Latin America in light of this complicated history. Grammatical structures are reviewed and incorporated into the literary analyses students write on the class readings. Furthermore, each student is paired with an English student in Spain. The pairs record two conversations each month – one in English, which the Spanish student submits to their English teacher in Spain, and one in Spanish, which the FCS student submits to their Spanish teacher. Students who take this course are encouraged to participate in the Spanish Exchange trip, a trip to Spain focused on the units of this course (see [trip description below](#)). [Enrollment in this course is by teacher recommendation.](#)

SPANISH LITERATURE ADVANCED: GABRIEL GARCIA MARQUEZ, ISABEL ALLENDE & MIGUEL DE UNAMUNO (Offered in 2022-2023)

This yearlong course is the equivalent of an intermediate college literature course covering selected works by two of the best-known Latin American authors, Gabriel Garcia

Márquez (Colombia) and Isabel Allende (Chile) and by the Spanish poet, playwright, and philosopher Miguel de Unamuno. Gabriel García Márquez is considered by many to be the father of the genre known as magical realism, and as we delve into his short stories, students understand the genre and the humorous way Márquez uses it to portray his fictional Colombian town of Macondo and its characters with dignity and complexity. Isabel Allende, who describes herself as a "raging feminist," passionately rejects the idea that "women should be more like men to achieve equality and success," and the Allende stories we read contain vivid representations of her feminism in her characters and in their conflicts. Unamuno, one of the most important European writers and philosophers of the 20th century, described his life as a perpetual struggle to create meaning in the face of our mortality. His plays, short stories, poems and novellas are often searing and poignant representations of this inner struggle. All works are read in their original form and analyzed in depth. The emphasis of this course is on the advanced development of critical analytical skills and oral discussion. Special attention will be given to written expression and vocabulary building. Grammatical structures are reviewed and applied to the written analyses. *Enrollment in this course is by teacher recommendation.*

SPANISH LITERATURE ADVANCED: JORGE LUIS BORGES, JULIO CORTÁZAR, AND ANA MARÍA MATUTE (2023-2024)

This yearlong course is the equivalent of an early intermediate college literature course covering selected works by the Argentinian authors Jorge Luis Borges and Julio Cortázar, and by the Spanish author, Ana María Matute. Borges, a polymath, is known for his brilliant stories that are like puzzles. In them, there are riddles and labyrinths, mysteries and red herrings - but all of his games are meaningful. They all connect to the philosophical questions he is inviting his readers to explore. Cortázar, a writer who was greatly influenced by Borges, also plays games with his readers, asking us how we really know what is real and what is not, is our consciousness as reliable as we think? Ana María Matute is a great contrast; born in Barcelona in 1925, she is a realist who writes about much of the suffering and upheaval Spaniards suffered during WWII and Franco's regime, but her main characters are children - and in Matute's writing, children are not sweet, innocent, sympathetic characters, but rather they





are often cruel, cunning, and always complex, as is the adult world they navigate. We will read all works in their original form, and we will take the time to analyze the texts in depth. The emphasis of this course is on the advanced development of critical analytical skills and oral discussion. Special attention will be given to writing expression and vocabulary acquisition. Grammatical structures are reviewed and applied to the written analyses. *Enrollment in this course is by teacher recommendation.*

SPANISH TRAVEL ABROAD OPPORTUNITY: SPANISH EXCHANGE IN SEVILLA

Every two years since 1997, we participate in the Spanish exchange with our partner school in Sevilla, La Academia Pre-universitaria (La Preu). In the fall, approximately 20 students from La Preu come to Philadelphia and live with partner FCS Spanish students for three weeks. During the day, the Spaniards attend school, go to different landmarks in Philadelphia, and visit NYC and Washington, D.C. In the spring, the Friends' Central Spanish exchange students go to Spain. We spend the first four days sightseeing in Madrid and then take the high-speed train to Sevilla, where the Spanish families of the kids we hosted pick up our students and host them for

the remainder of our stay. Though the Spanish History & Culture course is not a prerequisite, the trip to Spain is closely aligned with the curriculum of that course. Our sightseeing while in Spain focuses on its unique history between 711-1492, the eight centuries during which the Iberian peninsula was occupied by the Moors.

SPANISH TRAVEL ABROAD OPPORTUNITY: PERU TRIP TO CUZCO

Every two years in the summer, FCS Spanish students have the opportunity to travel to Cuzco, Perú. For two weeks, students stay in pairs with Peruvian host families in the evenings and at night. They work as volunteers at a children's clinic/orphanage in the morning ([Hogar Clínica San Juan de Dios](#)) and attend Spanish classes and visit historical landmarks in Cuzco in the afternoons. Though the Spanish History & Culture course is not a prerequisite, the trip to Cuzco is closely aligned with the curriculum of that course. Our sightseeing focuses on Inca culture and architecture and on what happened in Perú after Pizarro's arrival in 1532. After two weeks in Cuzco, students hike through the Andes for four days on the Inca Trail to Machu Picchu (pictured above at right).

GERMAN

GERMAN TUTORIAL

A beginning and intermediate German tutorial will be offered. Sessions will be scheduled at the beginning of September after the tutorial group has been formed and will meet two to three blocks per week. Students will take advantage of some of the online language learning tools now available and will also be working with traditional printed materials, including short stories and grammatical exercises. *The tutorial will not be graded and will not appear on the transcript. Students will receive mid- and end-of-year special reports, and their participation will be noted in the school recommendations that accompany their college applications. Spaces will be limited.*



NON-DEPARTMENTAL ELECTIVES

Though dissimilar in content, the following courses are grouped together in order to clarify their place in a student's overall curricular plan. **These classes do not fulfill any department's graduation requirements.** Additionally, not all of these courses are offered every year.

SEXUALITY AND SOCIETY ADVANCED

(fall or spring semester)

Building on past studies at Friends' Central, this one-semester advanced level course takes an interdisciplinary approach to examining important topics in human sexuality. Using the lenses of biology, history, sociology, and psychology, students explore the impact of human sexuality on the individual, community, and global society. Grounded in the belief that our sexuality is a force for good, the course explores how healthy sexuality can be used to make the world more just, free, loving, and whole. Practical skills emphasized in this class include: keeping one's body healthy, establishing and maintaining healthy relationships, and making deliberate, informed choices about engaging in sexual activity. Students are guided through the process of creating their own research studies around a question or topic of their choice. This is a one-semester course open to students in grades 11 and 12.

INTRODUCTION TO COMPUTER SCIENCE - PYTHON, PART I (fall semester)

This course is designed to offer an introduction to computer science. Students will learn the basics of computer programming along with the basics of computer science. The material emphasizes computational thinking, helps develop the ability to solve complex problems, and covers the basic building blocks of programming along with other central elements of computer science. It gives a foundation in the tools used in computer science and prepares students for further study in computer science. Topics include: 1) number calculations and data, 2) making decisions, 3) repetition and loops, and 4) graphics.

INTRODUCTION TO COMPUTER SCIENCE - PYTHON, PART II (spring semester)

This course is designed to offer an introduction to computer science. Students will learn the basics of computer programming along with the basics of computer science. The material emphasizes computational thinking, helps

develop the ability to solve complex problems, and covers the basic building blocks of programming along with other central elements of computer science. It gives a foundation in the tools used in computer science and prepares students for further study in computer science. Topics include: 1) for loops, 2) text and string Processing, 3) functions, 4) arrays and 2D arrays, and 5) Internet. *Prerequisite: Introduction to Computer Science, Part I*

ADVANCED PYTHON AND OBJECT-ORIENTED PROGRAMMING (fall semester)

This course furthers the ideas learned in Introduction to Computer Programming. After reviewing the ideas basics of variables and data structures, the students will learn about the fundamental ideas of Object Oriented Programming: Encapsulation, Inheritance, Polymorphism, and Data Abstraction. The course culminates with a project using the Model-View-Controller (MVC) programming paradigm. Students will demonstrate their understanding with short exercises and larger programming projects. Projects will include encrypting and decrypting secret messages, playing tic-tac-toe, and coding an implementation of mathematician James Conway's Game of Life. *Prerequisite: Introduction to Computer Science, Parts 1 and 2, or permission of the instructor.*

INTRODUCTION TO COMPUTER HARDWARE (spring semester)

Using the Arduino platform students in this class will learn the basics of building and programming computer hardware. Students will learn how both analog and digital circuits work and will learn how to code using the Arduino programming language. Students will experiment with outputs such as LED lights, motors, and speakers and inputs such as buttons, switches, and various types of sensors. The course will be hands-on with students completing projects that blink messages in morse code, sense movement, and more. The class will culminate with a creative project of the student's choosing. *Prerequisite: Introduction to Computer Science, Parts 1 and 2, or permission of the instructor.*



WELLNESS COURSES AND ADDITIONAL REQUIRED COURSES

All students in grades 9 and 10 will be assigned to the following semester-long courses. In grade 9, Quaker School Life and Human Sexuality are separate, but thematically related, courses taught in the same block

GRADE 9

QUAKER SCHOOL LIFE (required) (fall or spring semester)

Part of Quaker School Life, Quakerism focuses on the basics of Quaker theology (including the principles behind Meeting for Worship) and the testimonies of truth, peace, simplicity, and equality. These concepts are tied to discussions of what it means to be a Friends school community.

Part of Quaker School Life, Human Sexuality explores the basic concepts in human sexuality essential to healthy adolescent development. Sexuality education in the Upper School is taught through the lens of social justice education. As such, the values of equity, integrity, stewardship, and respect guide decisions about course procedures and content. Major topics studied include: defining and developing healthy sexuality throughout the lifespan; sexual anatomy and physiology, body image, and care of the sexual systems; gender and sexual orientation as biological and sociological constructs; developing and maintaining healthy relationships; and the key role of deliberate, values-based decision making in healthy sexuality.

HUMAN SEXUALITY (required) (fall or spring semester)

This required class explores the basic concepts in human sexuality essential to healthy adolescent development. Sexuality education in the Upper School is taught through the lens of social justice. As such, the values of equity, integrity, stewardship, and respect guide decisions about course procedures and content. Major topics studied include: defining and developing healthy sexuality throughout the lifespan; sexual anatomy and physiology, body image, and care of the sexual systems; gender and sexual orientation as biological and sociological constructs; developing and maintaining healthy relationships; and the key role of deliberate, values-based decision making in developing healthy sexuality.

GRADE 10

HEALTH (required) (fall or spring semester)

This required semester-long course focuses on many of the social issues facing students today. Designed to provide factual information on topics which include mental health, human sexuality, drug awareness, nutrition, and physical fitness, this course also helps students explore how each of these issues affects his or her own personal development and decision-making. Additionally, students will be trained in CPR/AED in either the Professional Rescuer or First Aid Course with the objective of earning their certification through the American Red Cross.



ATHLETICS AND WELLNESS

All students are required to participate on an athletic team or in the performing arts during six (out of a total of 12 possible) seasons while in the Upper School. During seasons when students are not participating in athletics or the performing arts, they will be enrolled in a wellness program, which will require a student to attend Monday through Friday at set times, either during the school day or after school for a minimum of two hours per week. All students will sign up every season for athletics or the performing arts and, if not on a team, then students will sign up for either an Independent Athletic Credit or Wellness Education Credit.

INDEPENDENT ATHLETIC CREDIT

The Independent Athletic Credit (IAC-1) is an option for students who participate in a sport that Friends' Central School does not offer (i.e., rowing, ice-skating, fencing, horseback riding, ice-hockey, skiing, rock-climbing, etc.) and who participate at a level that is commensurate with a Varsity schedule (8-10 practice hours per week), including travel to competition.

The Independent Athletic Credit (IAC-2) is an option for those who play a sport that Friends' Central School does offer (i.e., basketball, golf, squash, soccer, swimming, tennis, dance, etc.) but who participate in the off-season at a level that is commensurate with a Varsity schedule (8-10 practice hours per week), including travel to competition. It is understood (with little exception) that students who choose this IAC will participate for Friends' Central during the season the sport is played.

WELLNESS EDUCATION CREDIT

All students will have opportunities to develop lifelong habits that will enhance their quality of life and will introduce students to a holistic approach to wellness. The following Wellness Education Credits are offered that will require students to participate in some activity, either on or off campus, for a minimum of two hours per week. In some instances, students can do their wellness program on the weekend. Students can choose one or several of the below on-campus options* OR choose off-campus:

- Pilates
- Yoga
- Judo
- Lower School Farming
- Strength and Conditioning
- Walking
- Off-campus wellness options could be for students who take a class, lesson, clinic, or go to a gym that might be more convenient for your schedule or in closer proximity to your home. Students who choose this option must provide contact information for their wellness program.

**Please note that on-campus options may vary from season to season.*

As an alternative to the Upper School athletics and wellness education curriculum, students may take Lifeguarding. Lifeguarding will be considered an athletic credit. This is a yearlong offering that meets three times in our A-F Day scheduling cycle during the school day. This lifeguard certification course is pass/fail. A student must be 15 years of age by the end of the academic year in order to participate and must pass a swim test to qualify for the course. If the student meets the standards set by the American Red Cross, the student will earn certification in CPR/AED for the Professional Rescuer and Lifeguard Training & First Aid.



FALL	WINTER	SPRING
Interscholastic Athletics Boys' & Girls' Cross Country Field Hockey Boys' Soccer Girls' Soccer Girls' Tennis Boys' & Girls' Water Polo	Interscholastic Athletics Boys' Basketball Girls' Basketball Cheerleading Boys' & Girls' Indoor Track Boys' & Girls' Squash Boys' & Girls' Swimming Wrestling	Interscholastic Athletics Baseball Golf Girls' Lacrosse Boys' Tennis Boys' & Girls' Track Softball
Independent Athletic Credit Lower School Farming Judo Pilates Strength & Conditioning Co-ed Tennis (<i>intramural</i>) Ultimate Frisbee (<i>intramural</i>) Walking Yoga	Independent Athletic Credit Pilates Strength & Conditioning Yoga Walking Yoga	Independent Athletic Credit Lower School Farming Judo Pilates Strength & Conditioning Co-ed Tennis (<i>intramural</i>) Co-ed Volleyball (<i>intramural</i>) Walking Yoga
Performing Arts Drama: Fall Play Drama: Stage Art & Design		Performing Arts Drama: Winter Play or Musical Drama: Stage Art & Design Dance
Co-Curriculars Lifeguarding Team Manager Sports Info./Photo Journalism	Co-Curriculars Lifeguarding Team Manager Sports Info./Photo Journalism	Co-Curriculars Lifeguarding Team Manager Sports Info./Photo Journalism

