

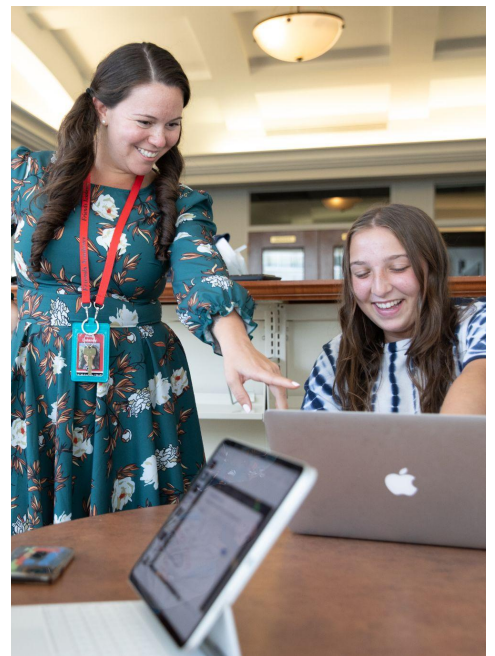


FRIENDS ACADEMY

# Upper School

COURSE OF STUDY

2023-2024



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# Friends Academy Upper School Course of Study 2023-2024

Welcome to the 2023-2024 Friends Academy Course of Study. As a resource for course planning and scheduling, the course book serves as a menu and also a guide for planning your four years of studies at Friends Academy. We encourage you to use it as a way of having good conversations about the learning you will pursue this year and for years to come, and hope that students and parents can follow up with Academic Department Chairs, individual teachers, and our college guidance staff with your questions. Most of all, we hope you will take advantage of all the rich, varied and evolving offerings and opportunities the school provides for students.

As a Friends school, we believe in continuing revelation. Education at Friends Academy is a process of seeking truth and deepening our awareness, which demands ongoing reflection within a community of diverse thought and perspective. We believe in the innate goodness of each member of our community. We value every perspective and experience, and encourage their discovery and exploration by both the individual and the community to achieve greater understanding.

As a student-centered Quaker school, we support students through the process of becoming more active questioners who are increasingly responsible for their learning and for their world. We seek to inspire deep inquiry that fosters discernment, good judgment, and ethical action. As learning happens when students actively construct ideas and test approaches, “meeting” in the classroom promotes a culture that honors “meaning making,” individual and shared. The Quaker adage, “Let your Life Speak,” spurs graduates to lead purposeful lives of integrity and service.

Friends Academy is committed to developing a diverse community whose members are respectful, responsible and reflective, open-minded and creative in the pursuit of excellence. Students are challenged to think analytically and independently and to strive for spiritual awareness, emotional well-being, and physical health. As a community, we are committed to understanding and honoring Quaker testimonies of integrity, simplicity, patience, moderation, peaceful resolution of conflict and service within and beyond the school community.

## OBJECTIVES

In academic terms, the course of study of Friends Academy gives its students the foundations of a liberal arts education and the skills required for further studies. In a larger sense, the whole program of the school has as its objective the physical, spiritual, artistic, and emotional development of each student.

The following list states our objectives within the major academic departments:

**English:** To develop in our students the ability to think critically, read thoughtfully, communicate effectively, listen intelligently, and understand literature not only as a source of information and

enjoyment, but also as a record of human thought and spirit through the ages – as a guide, therefore, to a clear perspective on the complex ideas in today's world.

**History and Social Studies:** To broaden our students' understanding of the historical processes that have produced our world; to encourage students to think critically while interpreting past events and finding potential solutions to contemporary problems; and to prepare students for enlightened, empathetic and active citizenship in a diverse society.

**Mathematics:** To develop the students' competence in handling mathematical concepts and processes; to increase their awareness of mathematical ways of thinking; to promote their appreciation of possible applications of mathematical thought in other areas of study; and to provide a solid foundation for further study in mathematics.

**Science:** To develop students' understanding of basic scientific principles in order to foster growth as knowledgeable citizens; to develop an understanding of a diversity of living organisms with an emphasis on the human and relate this understanding to the problems of preservation and conservation of the world resources; and to develop an awareness of ethical issues regarding the use of science and technology. We help students achieve this through teaching that emphasizes analytical skills based on experimental observation, and, wherever possible, mathematical application of concepts and laws; open-ended questioning; and reflective writing in journals, research notebooks, and lab reports.

**World Languages and Cultures:** To help students build proficiency in the oral and written use of a second language, as well as gain a fundamental knowledge of the literature, culture, and traditions associated with the communities where it is spoken; to learn about a variety of communities; to deepen self-awareness; to promote greater empathy and international understanding; to sharpen analytical ability in order to ascertain deeper truths; and to provide a solid foundation for further study. As a language and culture program within a Quaker school, we educate students beyond their intellects; students' moral, emotional, and social growth takes place when they move beyond the self to try to understand and communicate deeply with those from different languages and cultures.

**Interdisciplinary Studies:** To open up opportunities for students to explore different experiences which cross or interweave traditional academic disciplines; to promote growth and understanding of the different lenses and perspectives different modes of thought as they apply to cross- or interdisciplinary questions or problems; to encourage students to challenge a uni-dimensional approach to an issue by bringing a variety of disciplinary resources, tools and materials to bear on a complex and multi-dimensional question.

**Arts:** To teach self-reflection and empathy through both a personal and global lens. By developing artistic and technical skills in all areas of the arts, students explore and discover their identities and passions, and create an avenue through which their lives can speak.

**Quaker Life:** To nurture spiritual development, teach about Quakerism and provide opportunities to experience Quaker faith and practice in community. Through TASQUE (Teachers and Students for Quaker Education) and specific department courses we seek to create a place of sanctuary where people feel safe being reflective, open, spiritual beings who “let their lives speak.”

**Computer Science:** To help students understand the technology all around them and the programming that makes it work; to help them develop the skills needed to use current computer hardware and software and to learn new technologies; to increase students’ awareness of technological resources and develop a good foundation for using technology in all areas of the curriculum; and, to provide opportunities for students to acquire advanced skills in computer science and related fields.

*The following list states our objectives within the non-academic departments:*

**Community Service and Service-Learning Program:** To foster in our students an awareness of issues and challenges that confront the many communities of which FA is a part, and a commitment to use their talents and skills for the benefit of others by engaging them in concrete service projects in these communities. The ninth graders work with their advisories to do multiple projects throughout the year. In tenth grade, we strongly encourage our students to volunteer for our after school program, serving children, youth, the elderly, people who are physically challenged, and people who are homeless. The W.A.T.C.H. (We Are The Community Helpers) committee has a list of volunteer opportunities. The expectation is that eleventh graders pursue independent service initiatives in order to build a plan for their grade 12 ISP, a three week long independent service project to culminate their service experiences at FA.

**Independent Service Project (ISP):** ISP is a graduation requirement for seniors that provides a two or three week opportunity at the end of May and beginning of June for seniors to volunteer their time in an area of need that is personally meaningful and offers service to others through the Quaker testimonies of integrity, modesty, simplicity and equality. Upon completion of the project, the student gives a presentation and must earn a satisfactory rating to fulfill the graduation requirement.

**Physical Education:** A physical education or interscholastic athletic credit is required for students in grades 9, 10, 11, and 12 each trimester in order to graduate. To receive credit, a student must attend and participate in a minimum of 80% of the classes every term. Assessments and daily grading are based on a rubric that addresses 3 areas:

- Application of fitness concepts
- Application of movement concepts
- Application of personal & social responsibility

Students who do not meet this requirement will not receive credit and will be required to complete their physical education requirement in the summer. The philosophy of the program is to promote

sound principles of physical, social, and mental development through well-organized physical education and dance classes as well as interscholastic athletics. The curriculum stresses the importance of maintaining an active and healthy lifestyle through a variety of leisure time activities as well as an exposure to the more conventional team activities. Wellness concepts are included in the curriculum to help students develop habits and skills that contribute to overall physical and mental well being. *\*Participation in a team sport or in the winter strength & conditioning or cardio-fitness programs after school, satisfies a student's physical education requirement for that season.*

Health and Wellness: Ours is an interactive, student-centered curriculum designed to help students learn about contemporary and critical health issues while asking them to explore their personal health habits and goals. Courses are skills-based and upon completion, students will be able to enhance their personal health and the health of their communities well beyond their time at Friends Academy.

Sustainability and School Community Works Programs: All students are required to contribute their help to the school. Working in the school garden, the housekeeping chores of lunchroom and classroom clean-up, the occasional need for admissions aides and tour guides, and ongoing requests for help across the school - all offer opportunities for service to the school, to foster a sense of belonging, of caring, and of making a positive difference to the physical and social ambiance of Friends Academy.

Finally, within the various academic areas we attempt to strike a balance between the cognitive and affective aspects of education. The cognitive aspects are those which stress the use of reason in mastering concrete facts and abstract concepts, while the affective aspects are those which try to more fully satisfy the emotional and creative needs of the students. Integrating these two realms is the substance of a deep high school educational program.

## Planning a Program of Study

### Graduation Requirements

Upper School students are expected to carry the equivalent of **six academic credits each year** and at least five major courses. A student may take between four and up to seven credits worth of courses with specific approval of the academic and college counseling staff, parents and where appropriate the teacher, department heads and/or in some cases the principal. Ninth, tenth, and eleventh grade students are required to carry a minimum of six total credits of courses, counting minor required and elective courses but not PE.

We expect students to complete all course work successfully. For ninth, tenth, and eleventh grade students, failure to do so may lead to required summer work or dismissal from Friends Academy. For seniors, failure to complete all course work successfully may delay or prevent the awarding of

the diploma. The Independent Service Project may also be canceled or delayed.

**Minimum requirements for a diploma** are the completion of sixteen full-credits plus designated courses in Quaker Life, health, technology, physical education, community service, outdoor education, and the arts.

Students who leave at the end of their junior year to attend an accredited college may receive a diploma from Friends Academy upon presenting evidence of the successful completion of their first year in college, including a full year's course in English.

English (four years): The Self and Society; Global Literature; American Literature in grade 11; and two semesters of English in grade 12. Four years of English are required.

History and Social Studies (three years): Required courses are Foundations of History in grade 9; Global Interactions in grade 10; U.S. History or AP U.S. History in grade 11. Four years of History are recommended.

Mathematics (three years): Algebra 1, Geometry, and Algebra 2 or Algebra 2/Trigonometry are required. For seniors not taking another math course, Precalculus is recommended. Four years of Math are recommended.

Science (three years): Three years of sciences are required. It is expected that students complete Biology, Chemistry, and Physics. Four years of Science are recommended.

World Languages and Cultures (two years): The completion of level three of one world language is required. We suggest students try to take four years of Language.

Arts: For incoming grade 9 students and current grade 9 students (rising to 9 and 10) one and half arts credits are required. One full credit of courses in the Arts is required for current grade 10s and 11s (rising to 11 and 12). Two or more years of Arts are recommended.

Quaker Life: The grade nine course and Senior Reflections in grade 12 are required courses. The following commitments are also required of all students:

- Weekly Quaker Meeting for Worship: "The most important appointment of the week," all students are expected to attend Meeting for Worship weekly.
- Community Service: At all grade levels, students are expected to do volunteer work of their own choosing or design at local agencies and within school.
- ISP: All students must complete the independent service project before graduation.

Technology: All students are required to take either one Computer Science course OR one Digital Arts course.

Physical Education (four years): All students are required to take the Physical Education classes unless they are playing on an interscholastic team. All dance classes count toward Physical Education credit.

Health: Health courses in grades 9 and 11 are required.

### **Preliminary Scholastic Aptitude Test (PSAT)**

The PSAT is a practice test for the SAT and students need not share their scores with colleges. The test is offered at Friends in October and is optional for 10<sup>th</sup> and required for 11<sup>th</sup> grade students. The PSAT can be used to estimate the SAT score by adding 50 points each to the math and verbal and writing PSAT score. The PSAT scores for juniors will be used to select National Merit Semi-Finalists and National Merit Commended Students (who are in the top 1% and 5%, respectively, of juniors across the nation who take the test), and these students can become eligible for merit scholarships at some colleges.

### **Advanced Placement Level Courses**

Advanced Placement (AP) courses enable students who are eligible to take college-level courses while still in upper school. The courses which delve into greater depth than standard courses, teach skills that can prepare students for the rigors of college. They help students to develop solid writing skills, problem solving techniques, and good study habits. These courses push the students intellectually and help students to learn to develop and support their own arguments and perspectives.

Virtually all departments offer AP level courses at Friends. Not all students are ready for the rigors of an AP course; therefore *students who are interested in taking AP level courses must meet the departmentally determined prerequisite requirements as outlined in the course of studies.*

AP course curricula require more homework, especially reading and writing, than normal Friends Academy courses. Thus, *no student is allowed to take more than four AP courses simultaneously, with the exception of AP courses in computer science.*

Students enrolled in an AP course are expected to prepare for and must take the AP exam in May. Scores on the exam are not automatically sent to prospective colleges and universities to which students are applying; however, teachers have the right to take into consideration an AP score that is lower than a 3 as a factor in weighing a final grade. It is expected then that signing on for an AP course is a commitment to do one's best for the entire course, including the examination. Students must give permission to the College Board to release exam grades to the schools they have selected. Many colleges and universities grant student credit, placement, or both for qualifying AP exam grades (not for the course grades).



Students will be informed in late winter about the date and registration procedures for an AP exam. More information about AP exams can be found on the web at [www.collegeboard.com](http://www.collegeboard.com).

Beyond seven courses/credits, requests: If a student seeks to take more than seven full-time major courses or credits simultaneously, the student needs to approach their counselor and any required dept. chairs for additional approval, with required discussion with the student's college or academic counselor and parent/caregiver. Taking on more than 7 major courses, rarely permitted, comes with an exemption from the 2 major assignment rule (ie: students may have more than 2 major assignments in a day and be responsible for these if approved). Students may not take more than seven and a half credits of courses.

### Quantitative and Qualitative Definition of Grades

A+ (97-100%)	Performance demonstrating excellent understanding and application of concepts, and high skill level, thorough assimilation of detail, originality of thought, and keen insight into the subject.
A (93-96%)	
A- (90-92%)	
B+ (87-89%)	Performance demonstrating good understanding and application of concepts, good acquisition of skills, accurate application of details, and some original insight into the subject.
B (83-86%)	
B- (80-82%)	
C+ (77-79%)	Performance demonstrating basic understanding of the fundamental concepts of the subject and a consistent attempt to apply the details and skills taught. In spite of occasional conceptual misunderstanding, or flawed or incomplete knowledge, the performance indicates satisfactory preparation to advance to the next level.
C (73-76%)	
C- (70-72%)	
D (65-69%)	Performance demonstrating minimal understanding of the fundamental concepts and a partial acquisition of the details and skills taught.
F (below 65%)	Performance that fails to demonstrate understanding of the fundamental concepts of the subject and/or performance that indicates pronounced lack of knowledge or skill. Achievement is inadequate to allow the student to advance to the next level. Students with an F must complete a course again in some acceptable form.

**INC** A grade of INC (incomplete) is applied when work that has not been turned in by a student is deemed by the teacher to be an essential component for the grade. Students have two weeks from the end of the grading period to complete the work. In the case of extenuating circumstances (extended illness, family emergency, etc.), the teacher and student in consultation with the principal and department head, will determine the deadline for completing the work. No penalty would be

applied in this case. In all other circumstances, the student is expected to complete work within one week of the end of the grading period. A penalty in grading will be applied. If a student does not complete the work within the expected time, a failing grade will be assigned to the missing work. An incomplete will remain on the transcript until the work is turned in. Once the work is turned in, the teacher will calculate the grade for the course and the incomplete will be changed. If by the end of the school year, the work has still not been turned in after two weeks, the student will receive an incomplete for the course and will not be able to return to Friends for the following school year.

PAS Indicates a “passing” or “having participated” grade.

*We do not rank in class, nor do we compute grade point averages.*

### **Course Drop/Add Policy**

Courses may be changed, dropped, or added in the first three weeks of the course for all courses. A Drop/Add form must be submitted to the scheduler and signed by the teachers involved, advisor, parent, student, Academic Counselor, and by the Director of College Counseling for seniors. Students may not attend a new class until the student is registered in the class in MyBackpack.

To drop/add a course, the student must pick up a Drop/Add Form from the College Counseling Office or the Upper School office. The student must receive approval and signature from the Academic Counselor first, then the teacher of the course being dropped, teacher of the course being added, advisor, parent. If the student is a senior, the same protocol should be followed; in addition, the Director or Associate Director of College Counseling must sign the form. The final decision regarding a drop/add rests with the Upper School Principal and/or Director of College Counseling.

If you are a senior, and if we have already sent your mid-year transcript to colleges, a copy of the transcript reflecting the dropped course (with no credit awarded) and a letter from the Director of College Counseling indicating the reason for the drop, may be sent to the colleges to which the student applied or received acceptance.

### **Grading Policy Regarding Dropped Course**

A student who has remained in a course past the add/drop period and who is struggling, either because the student was new to Friends and was misplaced or because the teacher feels the student will be better served in a less strenuous course, should be encouraged to shift to an appropriate course not later than the midpoint of the first semester. If the student makes this move by this time, the grade in the current class will not be factored into the grade in the new course. Should a student opt to remain in the course and then shift to another course after the midpoint, that grade will be averaged in with the grade in the new course based on the number of weeks in the course.

## Denial of Course Credit

Students may not be awarded course credit in a class if they miss more than twenty percent of class time due to unexcused absences, tardiness, or early departures. Class attendance is taken on a period-by-period basis. The student and parents will receive a written warning notification prior to reaching the twenty percent. Under some extenuating circumstances (illness, leave), a student may pursue an alternative plan to make up for missed class time, subject to principal approval.

## Cum Laude

In order to recognize students who have achieved a distinguished academic record in their Upper School years, Friends Academy, which has had a Cum Laude Chapter since 1939, elects students to that national honor society each year at Fourth Day Honors.

In keeping with the directives of the Cum Laude Society, the Friends Academy Chapter chooses its student members on the basis of academic excellence alone. Distinguished performance in other areas, such as athletics, leadership, the fine and performing arts, is recognized in other ways.

As stated in the Cum Laude Society handbook, a Chapter “may elect not more than 20% of the senior class who have demonstrated academic excellence in the college preparatory curriculum.” The definition of what constitutes an honor record and the determination of how to select members is left to the discretion of the individual Chapter. In the broadest sense, the Regents assume chapters will elect to membership only students who have demonstrated good character, honor, and integrity in all aspects of their school life.”

Students elected to the Friends Academy Chapter of Cum Laude must have been students at the Academy for a period of at least three consecutive semesters.

# Course Descriptions

## English

### Full-Year Courses (required)

The Self and Society(Grade 9; required)

Global Literature in English (Grade 10; required)

American Literature (Grade 11; required)

### Full-Year Courses, Seminars

AP English Literature (with department recommendation and grade of A- or higher in 11th-grade English)

AP Seminar

### Fall Semester Courses (primarily for seniors)

The American City Seminar

Creative Writing

Crime Fiction

In Defense of Comics as Literature

Writing Fellows (required course for selected Writing Fellows only; ¼ credit)

### Spring Semester Courses (primarily for seniors)

Creative Nonfiction

Speech and Debate

Narrative and African-American Identity

Literature and the Apocalypse

Nonviolence and Social Change

Writing Fellows (required course for selected Writing Fellows only; ¼ credit)

*NB: The English Department purchases all editions of books required in English classes, except summer reading. We require students to own and annotate their own copies of texts because, as a department, we believe in the value of annotation as a tool of close textual analysis, and we recognize that this is a skill that students will need in order to succeed in high school and college courses and beyond.*

## FULL-YEAR REQUIRED COURSE DESCRIPTIONS

1010 The Self and Society (*Grade 9; Required*) English 9 focuses on improving students' critical thinking, close-reading, and writing skills. Through the study of a variety of literary genres—novels, poems, a play, personal essays, and a graphic memoir—students will explore key questions about the self and the individual's role in society. Are we born bad and in need of a powerful government to keep us in line, or are we capable of self-government? How do we reconcile our private and public selves? How can an individual marked as "different" in a society thrive without sacrificing parts of his, her, or their self? What even is the self? Lastly, what responsibility does the individual have to serve and preserve society? Students will write in three modes—personal, persuasive, and literary analysis—and will receive regular feedback on their writing. Students should also expect a review of grammar rules. In the second semester, students will write an argumentative research paper that familiarizes them not only with integrating and citing secondary sources but also with essential Quaker tenets. We use literature and language to engender respect, compassion, and empathy for diverse human experiences. The Friends Academy English Department has deliberately chosen course texts that reflect a more contemporary, inclusive understanding of the literary canon, and in doing so we strive to better live our Quaker values of equality and diversity.

1020 Global Literature in English (*Grade 10; Required*) We are, undeniably, global citizens. In the 10th grade English course, we strive to identify and understand the consequences of cultural intersections in order to engage with our own sense of global citizenship. Units are organized

around many of the continents: Africa, Europe, Asia, South and North America, and will cover topics related to enlightenment, romanticism, the industrial revolution, the rise of nationalism, imperialism, decolonization and globalization. We will aim to connect these ideas cross-culturally through the literature of these unique global literary traditions. We achieve this through written, spoken, and project-based assessments that require critical analysis, deep close reading, analytical writing, generous listening, and thoughtful and creative student-driven sharing of ideas. Students also learn to engage with scholarly works by beginning a two-year skills sequence focused on helping them see writing as the act of joining a conversation. We will deepen these fundamental skills while experiencing continuing revelation of our role as compassionate, empathetic members of the global community. As such, the Friends Academy English Department has deliberately chosen 10th grade course texts that reflect a more contemporary, inclusive understanding of the literary canon, and in doing so, we strive to better live our Quaker values of equality and diversity. (1 credit)

1210 American Literature (Grade 11; Required) In this course, we will be asking the epistemologically grounded question, “How do we know what we know about America?” Through a critical interdisciplinary approach, we will explore the ways America as a concept is constructed in the collective imagination as well as in our individual lives. Throughout the year, we will consider how social constructs shape American lives, what it means to be an American, and the role literature plays in grappling with American social justice issues. We will look at many different kinds of texts—written and visual—to help us answer our course’s essential questions. For example, is the American Dream a myth or reality? How does the American landscape shape the American imagination? How do Americans define themselves individually and collectively? You will learn how to write essays that engage with literary criticism, closely read both historical and fictional texts, make connections across texts and historical moments, discuss productively and openly with your peers, and identify injustice and seek to act in ways to make change in the America around you. The Friends Academy English Department has deliberately chosen course texts that reflect a more contemporary, inclusive understanding of the literary canon, and in doing so we strive to better live our Quaker values of equality and diversity. (1 credit)

## FULL-YEAR SEMINAR COURSES

1044 AP Seminar (Grade 11 or 12; application required) AP Seminar is an interdisciplinary course that encourages students to demonstrate critical thinking, collaboration, and academic research skills on topics of the student’s choosing. Students will investigate topics in a variety of subject areas, write research-based essays, and design and give presentations both individually and as part of a team. Students will spend the year reading and analyzing articles, studies, and other texts, gathering and combining information from sources, viewing an issue from multiple perspectives, and crafting arguments based on evidence for individual and group projects. AP Seminar aligns with our Quaker mission of inquiry and reflection and our intention to seek truth and deepen our awareness of diverse ideas and perspectives. Students who take this course will be required to take the AP Seminar exam in the spring. (1 credit)

1042 AP English Literature (Grade 12; prerequisites: with departmental recommendation and a grade of A- in American Literature) AP English Literature and Composition is a year-long course designed to engage students in the careful reading and critical analysis of imaginative literature. The course requires intensive study and active reading, interpretation, and evaluation of a variety of texts by the students. Writing is also an integral part of this course. The goal of the writing assignments is to increase students' ability to explain clearly and cogently what they understand about literary works and why they interpret them as they do. The hope is that students will not only be well prepared for the AP exam in the spring, but that they will also gain an appreciation of the value of literature in their lives. Writers include Austen, Hemingway, Kingston, McCarthy, Hurston, Erdrich, and Shakespeare. Students who take this course are required to take the AP English Literature exam given in the spring. (1 credit)

## SEMESTER SEMINAR COURSE DESCRIPTIONS

1088 Writing Fellows (Grade 11 and 12; required for participants in the Writing Fellows Program) After an intensive two-day training program, junior and senior Writing Fellows (who are selected through a competitive application process conducted in the spring) serve the Upper School by staffing the Writing Center for at least one block per eight-day cycle. (Fall and Spring, 1/4 credit; P/F)

1035 The American City Seminar [New York] (Grade 12) The American City Seminar is a semester-long elective course that investigates the nature of place in the American imagination. Each year, the seminar will focus on a new American city, promoting attention to the local as a way to access the global in our ever-changing world. With a critical interdisciplinary approach, students will conduct research throughout the year on topics that range from literary criticism to food studies to critical geography before traveling as a group to an American city for fieldwork, service, and experiential learning. Guided by a student-centered and inquiry-driven approach, we will work to connect with each other and our larger American community as we investigate the ways we shape our cities – and the ways our cities shape us. For the 2022-2023 school year, we will explore New York City. Possible texts include Rebecca Solnit's *Nonstop Metropolis* and *If Beale Street Could Talk*. (Fall, ½ credit)

1090 Creative Writing (Grade 12) This course will divide its time between two genres of creative writing: fiction and poetry. While studying fiction there will be an emphasis on the many elements of storytelling, including character, plot, point of view, setting and theme. We will spend the latter half of the course covering basic poetic elements, such as prosody, meter, form, and figurative language. Through peer workshops, take home writing assignments, and in-class exercises we will learn the fundamentals of creative writing. Grading will be based on attendance, class participation, and out-of-class writing assignments, including craft exercises, short stories, and poems. Ultimately, a finished body of polished work will be collected in the form of a final portfolio. The ultimate goal of the class is to serve as a foundation for your continued exploration of creative writing. (Fall; ½ credit)

1032 Narrative and African-American Identity (*Grade 12*) This course examines the role narrative has played in shaping the African-American experience from the 19th century to the present. Works by fugitive slaves such as Frederick Douglass, Henry Bibb, and William and Ellen Craft are paired with memoirs and novels by Danzy Senna, W.E.B. Dubois, bell hooks and others. Discussion and writing will focus on analyzing the voices of African-Americans from the perspective of using narration as an expression of self-determination. (*Spring; ½ credit*)

1064 Speech and Debate (*Grades 12*) This course explores a wide variety and range of public speaking skills, including Extemporaneous Speaking, Declamation and Original Oratory. Additionally, students are introduced to basic researching, argumentation, questioning, and rebuttal skills through a variety and range of debate disciplines, including: Congressional Debate, Public Forum Debate, and the basics of philosophy for Lincoln-Douglas Debate. Skill focus includes the development of techniques in diction, articulation, enunciation and projection. Students create and deliver orations, write arguments, and evaluate performances. In addition, the course begins with a unit covering important interviewing skills, including resume and cover letter writing, preparation for the interview, and competent and professional conduct during the interview itself. Students participate in a simulated interview with an independent interviewer, and the 'position' is awarded to the successful 'applicant', complete with a job offer letter. (*Spring; ½ credit*)

1095 Crime Fiction (*Grade 12*) The aim of this semester-long elective is to read and discuss crime literature focusing on the detective him or herself. We will examine the detective as a representation of the social, moral, cultural and ideological imperatives of the time and geographical setting of the particular novel. We will trace through the golden age of British detective fiction to the hard-boiled American post-war novels to the contemporary police procedural novels, and will analyze how the evolving characterization of the detective reflects the society in which he or she operated. We will also look closely at the psychological elements of detecting: methods of solving the classic 'whodunnit' such as ratiocination, method, logic, induction and deduction. We will also turn the mirror onto ourselves and examine what the evolving crime fiction tells about our own society and its preoccupations and concerns. (*Fall; ½ credit*)

1099 Creative Nonfiction (*Grade 12*) This semester-long writing course derives its subject material from what students might at first assume they know very well: their own lives. Students will question, recount, reflect on, and make meaning from their lived experience through the writing of personal essays/memoirs and literary journalism. By examining published models and undertaking regular writing exercises, we will study craft elements like voice, setting, point of view, theme, and structure. Students should expect to share their personal writing in workshops. Readings will include essays from Joan Didion, EB White, Leslie Jamison, Kiese Laymon, and Alexander Chee, among many others. At the end of the semester, students will turn in a portfolio of their revised work that includes two original essays of their choice. (*Spring, ½ credit*)

1037 Literature and the Apocalypse (*Grade 12*) Our contemporary world is full of apocalypses large and small, and these have been popularized through very well known forms of entertainment: The

Day After Tomorrow, Divergent, The Handmaid's Tale, and V for Vendetta have popularized (and glamorized) the post-apocalyptic future, but what would happen if you were placed in the middle of one – at the intersection of free will, fate, and governmental control? How can one find a place to be an agent of change, or at the very least create modes of survival, in these restrictive conditions? This course will look at post-apocalyptic literature with the goal of deciphering how humans react and adapt to sudden changes in social, economic, personal, and political structures. If the word apocalypse comes from the Greek word "apocalypsis" ("to uncover/unveil"), what is uncovered and unveiled about us during these times? We will also aim to catalogue and archive our responses to these questions through robust written textual analyses and creative world-building. This archive will serve as a multimedia time capsule of our course of study and, in turn, be useful to future generations of Friends students. Through the analysis of novels, short stories, and brief academic articles – in addition to art, film, and music – the hope is that you'll be able to enhance and engage with your own understanding of your place in the world. Potential texts include: Kurt Vonnegut's Cat's Cradle; Emily St. John Mandel's Station Eleven; Octavia Butler's Parable of the Sower; Colson Whitehead's Zone One; Ling Ma's Severance. (*Spring, ½ credit*)

In Defense of Comics as Literature (*Grade 12*) Many people attempt to legitimize comics by placing them under the umbrella term: the graphic novel. Why? Well, when you think of comics, you probably think of comic books; when you think of comic books, you probably think of superheroes; and when you think of superheroes you probably think they have no place in the literary canon along with the heavy-hitters: Toni Morrison, William Faulkner, James Baldwin, William Shakespeare, or Lynda Barry. Wait a minute – who's Lynda Barry? Exactly. The goal of this course will be to help you develop a language for a defense of comics as a literary and graphic art form, worthy of deep analysis, by introducing you to literary and visually artistic giants such as Lynda Barry, Chris Ware, Alison Bechdel, Ta-Nehisi Coates, Alan Moore, and Roz Chast as well as many other lesser-known artists and writers working in the medium of comics and graphic novels. We'll begin with an in-depth analysis of the art of comics and how to analyze them, then move onto some canonical works that moved comics into the mainstream because of their deep engagement with issues of race, gender, and politics. Finally, we'll wrap up with some new independent comics and graphic novels and see how they fit into our own contemporary conversations about race, gender, and the larger political concerns of the everyday citizen. After we're all done, you'll have no problem issuing a defense of comics as a literary form worthy of every thinking-person's time. (Oh, and the texts will be fun to read, too.) (*Fall, ½ credit*)

Nonviolence and Social Change (*Grade 12*) Students in this semester-long course will study a variety of key voices and different methods supporting nonviolence and social change in modern history. The course explores the discernment process that often prompts these movements and examines how pacifism can be a tool to challenge injustice. The course will begin with reading texts that have served as inspiration for rejecting violence on moral principles. Students will examine the work of Mohandas Gandhi and the Salt March, Susan B. Anthony and women's suffrage, Ruth Fry and the FWVRC (Friends War Victims Relief Committee), Martin Luther King Jr. and Civil Rights, Cesar Chavez and the United Farm Workers, the Dalai Lama and a democratic constitution in Tibet, Desmond Tutu



and the end of Apartheid as well as more contemporary efforts to prompt social change. Students will read and offer thoughtful commentary on the topic of justice that directly impacts us today. They will have the opportunity to write critically about current nonfiction as well as to produce extended nonfiction prose of their own. Readings will include Michelle Alexander's "The New Jim Crow," Cathy Park Hong's "Minor Feelings," and Aung San Suu Kyi's "Letters From Burma," as well as selections from *The New Yorker*, *The New York Times Sunday Magazine*, and other authors. (*Spring, ½ credit*)

# History and Social Studies

## Full-Year Courses

9th grade: Foundations of History (required)

10th grade: Global Interactions (required)

11th grade: United States History or AP United States History (required)

Honors Art History

AP Government and Politics: United States

AP European History

AP African American Studies

## Fall Semester Courses

Screening History: American History and Film

Philosophy

GS International Relations

AP MacroEconomics

## Spring Semester Courses

The 1960s - The Decade That Changed Everything

Baseball and America

Women and Gender in Modern Global History

AP MicroEconomics

## FULL-YEAR COURSE DESCRIPTIONS

5220 Foundations of History (*Grade 9 – Required*) Students will engage in inquiry based learning, diving into the histories of societies across the globe from the medieval to early modern periods. Common themes unify our investigation and present the opportunity to compare the histories and practices of a range of different cultural groups. Studies are focused around essential questions that relate to core overarching themes of culture, government, economics, technology and studies will be truly global in content, inclusive in scope and culturally responsive in practice. Students will be doing the work of historians, developing an understanding of concepts and key ideas through probing and analyzing primary and secondary sources (including exciting and contemporary research), evaluating arguments, claims and beliefs while framing questions and drawing evidence based conclusions. The course will offer the opportunity for students to articulate thoughts and ideas effectively using oral, written, and nonverbal communication skills in a variety of project based assessments and they will engage daily in a climate of curiosity, where they are the active participants. (1 credit)

5230 Global Interactions (*Grade 10 – Required*) Continuing our investigation of global history, we analyze and extend this global approach to the 'long' nineteenth century through intellectual, social,

cultural, political, and economic lenses. We explore industrialization, the imperialist impulse it bore and the corresponding struggles of the working classes, colonized masses and their strident forms of resistance and calls for equality. The concept of nationalism is explored in depth as the twentieth century erupts into world war, revolution and independence movements, allowing students to tussle with corresponding primary and secondary sources. Semester Two examines the disintegration and the slide toward totalitarianism in Europe and Asia, the global nature of the Cold War and the fall out of colonialism and the end of the old world order. Mao Zedong's Great Leap Forward and China's Cultural Revolution, the Iranian Revolution, and the struggle for racial equality and democracy in South Africa will be explored in depth. Through this curriculum, students will develop a desire to understand the modern global era both as a product of history and as a structure with contemporary relevance. The project based learning imperative continues, with an emphasis on practice argumentative writing, causal analysis, primary source analysis and independent research. (1 credit)

5020 United States History (Grade 11 – Fulfills U.S. History Requirement) This course is a topical, chronological survey of the growth and development of the United States from the European conquest of America to the present. Students study the major political, economic, and social trends in the history of the United States. Special emphasis is given to an understanding of the Constitution, and on the interaction amongst and the experiences of diverse racial/ethnic (African Americans, European Americans, Native Americans, Latino Americans, Asian Americans, and Middle Eastern Americans), gender and socioeconomic groups as the nation has evolved. Students are challenged to analyze primary and secondary sources and to relate the information to our own time. They improve their writing skills through essay writing and short research papers. (1 credit)

5041 AP United States History (Grade 11 – Fulfills U.S. History Requirement. Prerequisites: Minimum course grade of A- in 10th grade history, with department approval) This college-level course surveys American history from the pre-Columbian era through the 1980s. Students engage in a sophisticated analysis of primary and secondary sources that interweave developments in politics, society, culture, economics, and technology. They connect historical content to themes of national identity and the role of the United States in the world. Class discussions and assessments emphasize substantive and constructive historical argumentation.-Students are required to complete a summer assignment prior to the first class of the school year, and they are required to take the AP United States History exam in the spring. (1 credit)

5094 AP Government and Politics: United States (Grades 11, 12. Prerequisites: Minimum course grade of A- in previous year's history course or minimum course grade of B+ in AP U.S. History. Teacher recommendations are helpful, if requested. Application required if this is a 6th course.) This year-long course combines the curriculum of the AP U.S. Government and Politics course with a Project-Based Learning component to help facilitate a deeper understanding of the material. Students will analyze and critically evaluate foundational theories and concepts of American democracy and apply these to contemporary U.S. government institutions and political/ideological trends. College-level discussion skills and close reading of several primary documents are required. Several large projects

interspersed throughout the year will allow students to build their knowledge and skills through sustained investigation of complex, real-world problems. Students must take the AP U.S. Government and Politics exam at the conclusion of the course. *(1 credit)*

5090 AP European History (*Grades 10, 11, 12. Prerequisites: For 11 and 12, Minimum course grade of A - in previous year's history course or minimum course grade of B+ in AP U.S. History. Grade 10, Minimum course grade of A in previous year's history class, and written application for approval*). This college-level course will offer an in-depth exploration of the history of Europe from the Renaissance to the present. It will engage in sophisticated analysis of primary and secondary sources that interweave intellectual, cultural, political, diplomatic, social, and economic history. Students will develop a firm grasp of chronology, geography, and major events. Just as important are the stories they will learn about European history. Each era has its own characters and plot, its own set of interpretations, and its own messages for our times. In addition to providing historical content, this course will give students the opportunity to develop skills as historians. Assignments will emphasize efficient reading and note-taking, analysis of historical evidence and interpretation, and clear and thoughtful writing. Students in this course will be required to take the AP European History exam in the spring. *(1 credit)*

5097 AP African American Studies (*prerequisites: Grades 11 and 12, Minimum course grade of A - in previous year's history course or minimum course grade of B+ in AP U.S. History*) AP African American Studies is an interdisciplinary course that examines the diversity of African American experiences through direct encounters with authentic and varied sources. Students explore key topics that extend from early African kingdoms to the ongoing challenges and achievements of the contemporary moment. Given the interdisciplinary character of African American studies, students in the course will develop skills across multiple fields, with an emphasis on developing historical, literary, visual, and data analysis skills. This course foregrounds a study of the diversity of Black communities in the United States within the broader context of Africa and the African diaspora.

5031 Honors Art History (*Grades 10-12*) In this course, students will examine and critically analyze major forms of artistic expression, throughout history, from a variety of cultures. The course curriculum will focus on art history starting with prehistoric and ancient Mediterranean art, art of the Middle Ages, and then art of Asia, Africa and the Americas, before exploring art of the Renaissance, Romanticism, and experiments in Modern art. Students will learn how to analyze a work of art visually while developing an understanding of how and why works of art function in context, considering such issues as patronage, gender, and the functions and effects of works within major time periods. The aim of the course is to help students develop knowledge and understanding of diverse historical, social, and cultural contexts of architecture, sculpture, painting and other media. Students will consider the meaning implied by the subject and style of art forms, as well as the impact that art has on our lives. Students will be assessed through regular written assignments, unit tests, and short research papers. *(1 credit)*

## FALL SEMESTER ELECTIVE COURSE DESCRIPTIONS

5088 Screening America: American History and Film (Grades 10, 11, 12) This course examines the ways in which American films construct the nation's historical past, the conflicts among historians and the public over Hollywood's version of American history, and the ways that such films can be utilized as historical documents themselves. We will consider films as products of their times; as visions of popularly understood history and national mythology; as evidence for how social conflicts have been depicted; and as evidence of how popular understanding and interpretations of the past have been revised from earlier eras to the present, with film often leading this revision. The ideological frameworks of film are crucial to our inquiry as we examine how American filmmakers have represented (or misrepresented) social problems as industrialization, urbanization, war, empire, depression and poverty, crime, race, labor and class, and gender conflicts to mass audiences as entertainment. The course analyzes films and the presentation of national/collective mythologies, considering such frameworks as narratives of innocence, collective purpose and action, collective trauma and challenge, racial tension and reconciliation, justice and progress, and so on. We will think about these narratives as ideologically-laden tools of both cultural and political orthodoxy and revisionism. (*½ credit for one semester*)

5071 Philosophy (Grades 10, 11 and 12): Our existence is defined by the questions we ask ourselves. What is the nature of the universe? What is the right thing to do? How do we develop or acquire knowledge? How should we interact with one another? What makes something beautiful? What is the meaning or purpose of our existence? Philosophy is humanity attempting to answer these questions, or, if not to answer them, to grow from the work of exploring them. In this course, we will look at these questions and the thinkers that have attempted to make sense of them. Through a variety of thinkers and writers, we will consider the various approaches to the different branches of philosophy that attempt to address these questions: Metaphysics, Morality, Epistemology, Political Philosophy, Aesthetics, and Existentialism. Readings will include contemporary essays and conversations as well as seminal texts from various philosophical traditions. (*½ credit for one semester*)

5819 AP Macroeconomics (Grades 11, 12; seniors given preference; students must be enrolled in *Precalculus with Limits or higher*). AP Macroeconomics is a one-semester course designed to promote the student's understanding of the economic system as a whole. Primary emphasis is placed on the business cycle, international trade, and the impact of both fiscal and monetary policies. Quantitative analysis is an integral part of this course and students will be expected to make narrative as well as graphical analyses of topics throughout the course. Students will also be expected to maintain current knowledge of Macroeconomics topics as we proceed through the course by monitoring current periodicals. At the conclusion of the course, the student will be expected to take the Advanced Placement Macroeconomics Exam. (*½ credit for one semester*)

5073 GS Honors International Relations: (Grades 10, 11, 12, A- Required in previous year's history course). In this college level (Global Studies) elective, students will develop a deep understanding of

the core theories of international relations and apply those theories to present-day issues. Areas of study include the causes of war, nuclear proliferation, terrorism, cybersecurity, international economic policy, humanitarian intervention, and the viability of international organizations such as the United Nations. During the first semester, the class will primarily be driven by interactive lectures with the occasional simulation. During the second semester, the class will slowly shift to a more student-centered approach as students practice arguing different points of view on competing theories while working with sources drawn from the media, policy institutes, and academic journals. *(½ credit for one semester)*

## SPRING SEMESTER ELECTIVE COURSE DESCRIPTIONS

5206 The 1960s - The Decade That Changed Everything. *(Grades 10, 11, 12)* The 1960s were a decade of seismic cultural, social and political change across the globe. From the burgeoning anti-Vietnam war and civil rights movements in the United States to protests and revolutions in Europe and across the world, the world would never be the same again. Using an interdisciplinary and comparative approach that makes use of film, art, music, memoirs, and oral histories, we will examine anticommunism, the Cold War, the conflict in Vietnam, the civil rights movement, the politics of protest, the baby boom, television, consumerism, and the youth counterculture in popular music and film - processes that cascaded with an intensity that was sometimes unbearable, sometimes ecstatic – a decade that pushed history in some unforeseen, astonishing direction. This discussion based class will dive deep into examining the various legacies of the period and how the danger, destruction and division, the passion and possibility all helped shaped and foreshadowed the world we live in today. *(½ credit for one semester)*

5066 Baseball and America *(Grades 10, 11, 12.)*

This course will explore the interrelationship between America's pastime, the game of baseball, and key events and movements in 19th - 21st century American society. We will start with the first official game of baseball (1846) and the first professional team (1869- Cincinnati Red Stockings) and examine them in the light of the social and cultural shifts occurring in antebellum and Reconstruction era America. We will use the themes of immigration and urbanization to investigate the expansion of the sport at the start of the 20th century, with specific case studies looking at the Chicago Black Sox scandal of 1919, and the rise of the celebrity athlete in the career of Babe Ruth. Issues regarding gender and race will come into play as the class explores All-American Professional Girls Baseball League during WWII, and the post war integration of the major leagues as the sport mirrored America's national civil rights struggles. Baseball in the 1960s - 80s will be used as a backdrop for a discussion about the social, cultural and political shifts of the era, as well as debates surrounding big business, media control and more contemporary controversies surrounding the sport in the 21st century. During the semester, the class will be expected to do research for class discussions and debates on topics ranging from Hall of Fame candidacy to "speed" of the game. Students will also learn the "dying art" of scorekeeping. Assessments will come in the form of essays, quizzes, and debate/discussion presentations. *(½ credit for one semester)*

5818 AP MicroEconomics (Grades 11, 12, Students must be enrolled in Advanced Precalculus with Limits or higher) AP Microeconomics is a one-semester course designed to promote the student's understanding of the economic principles involving the individual decision makers within the economic system. Primary emphasis is placed on the interactions of producers and consumers in product and resource markets. Analysis is an integral part of this course and students will be expected to make narrative as well as graphical analyses of topics throughout the course. Students will also be expected to maintain current knowledge of Microeconomics topics as we proceed through the course by monitoring current periodicals. At the conclusion of the course, the student will be expected to take the Advanced Placement Microeconomics Exam. ( $\frac{1}{2}$  credit for one semester)

5096 Women and Gender in Modern Global History: (Grades 10, 11, 12) Gender is an integral part of people's identities, relationships, and the way that power is distributed in societies. Our understanding of the past is transformed when we consider it from the perspective of gender. This course takes a global approach to women's history and the concept of gender, starting with a historical analysis of how defining gender roles (both men and women) has changed across time and space from around 1700 to the present. Students will examine the activism and contributions of diverse groups of women in both American history and World history, and will also explore comparative issues and global forces (migration, colonialism, war, diffusion) that impact women's lives and change the way that gender roles are defined. Instruction will be discussion-based, focusing on analyzing a variety of sources including literature and art to illuminate the role that gender plays in our understanding of past and current issues, including work, culture, empires, violence, revolutions, war, and activism. Students will also conduct research on a topic of choice that focuses on the different forms of gender inequalities that exist globally in the present. ( $\frac{1}{2}$  credit, spring semester)

## Interdisciplinary Studies (also listed separately in Interdisciplinary Studies section of the Course of Study)

### FALL ELECTIVE

5822 Global Entrepreneurship I (Grades 10, 11, 12) This semester course is designed so that all learning is active, collaborative, and team-based. In the course, students learn by doing as they are given real problems from real entrepreneurs. Students develop skills through working in the field, observing and interviewing to discover problems, and learning techniques for validating hypotheses. The class will work with carefully selected New York entrepreneurs, who present real and urgent business problems with hard deliverables and deadlines. Students' curiosity and sense of urgency drives the curriculum, while the course instructors provide the scaffolding, resources, skills, and background necessary to better understand the complexities and interconnectedness of businesses and start-up ventures. Ultimately, the class is a vehicle to develop character, intellect, and resilience in students. (*½ credit for one semester*)

5826 Financial Investments (Grades 11 & 12) This semester course is designed so that all learning is active, collaborative, and team-based. In the course, students will familiarize themselves with the knowledge and expertise necessary to construct personalized financial plans for real clients with actual financial goals. Team taught by a Friends Academy teacher and a financial expert, students will have on-site access to an actual client(s) who will be able to share their current financial landscape, including net worth, assets, liabilities, working capital, level of risk-aversion and short-term and long-term financial goals. Students will explore key topics in financial investing, including but not limited to, savings, budget, insurance, estate and tax planning, stocks, corporate bonds and investment real estate. Students' curiosity and capacity to collaborate on real and relevant problems drives the curriculum, while the course instructors provide the scaffolding, resources, skills, and background necessary to seek information to confidently draw conclusions with confidence. Ultimately, students will present their financial planning recommendations to real world experts and potential clients. (*½ credit for one semester*)

3200 Solutions in Medicine (Grades 11 & 12) This semester course is designed so that all learning is active, collaborative, and team-based. In the course, students will familiarize themselves with the process of obtaining critical medical information in determining the one true diagnosis of a patient through the use of actual case studies in differential diagnosis. Team taught by a medical doctor and a member of the Friends Academy science department, students will have on-site access to a medical professional as well as a master teacher as they work in teams to seek a diagnosis of complex medical cases. Students will explore key topics in medicine, including but not limited to, patient medical history, testing, imaging, laboratory results, special testing and presentation of symptoms. Students will develop skills through working on and learning techniques for validating hypotheses. Students' curiosity and capacity to collaborate on real and relevant problems drives the curriculum, while the course instructors provide the scaffolding, resources, skills, and background necessary to seek information to confidently draw conclusions with confidence. Ultimately, students will present their diagnosis along with their hypothesis and evidence. (*Fall, ½ credit*)



## SPRING ELECTIVES

5823 Entrepreneurship II: Innovation and Invention (*Grade 11-12. Completion of Global Entrepreneurship I a requirement*) This semester course is designed as a continuation and deepening of the skills students cultivate in Global Entrepreneurship. Students will create their own businesses using Lean Launchpad and incorporating the Business Model Canvas, Customer Development and Agile Development. They will apply what they have learned from their past experiences of working with business owners and directors of nonprofit organizations to address a problem they want to solve, but are now required to develop a complete model for a scalable and repeatable business. Students will build on their previous knowledge and skills as they learn the many elements of creating a successful new venture (students must build Minimally Viable Products, create financial models, build high functioning teams). (*½ credit for one semester*) \*Not offered 23-24

5825 Financial Literacy (*Grades 11-12*) This semester course is cooperative and inquiry based with students working collaboratively with each other to develop a knowledge and understanding of the elements of financial literacy. Students will be able to understand and effectively use various financial skills, including personal financial management, budgeting and investing. The class will use an Understanding by Design (UBD) framework to explore topics such as financial independence, savings, credit and consumer debt, investments, basic accounting, business ethics and strategies for setting and achieving long-term financial goals. Students will have the opportunity to work with Bloomberg terminals, connecting them to the world's leading business and financial information network. In a real-world context, students will learn to analyze financial markets, assess economic scenarios and interpret the key news developments that impact the global economy. Ultimately, as students learn key economic principles, they will better understand the critical issues confronting nations and the choices they make as citizens. (*½ credit for one semester*)

# Mathematics

## Full-Year Courses

Algebra 1 (required)

Geometry with Integrated Algebra (required)

Algebra 2

Algebra 2 & Trigonometry (required unless taking Algebra 2 instead)

Precalculus

Advanced Precalculus with Limits

Calculus

Honors Differential Calculus

AP Calculus AB

AP Calculus BC

AP Statistics

## Semester ½ credit courses

Linear Algebra

Multivariable Calculus

Advanced Chess 1, 2, 3

## FULL-YEAR COURSE DESCRIPTIONS

2073 Algebra 1 This is the first of a three-year math sequence which spirals the major topics of the upper school curriculum. The emphasis of the course is on algebra, including operations on numbers, including radicals and rationalizing, and algebraic expressions, solving and graphing linear, exponential, and quadratic equations and inequalities, and factoring. Part of the course is also devoted to the introduction of topics in geometry. Definitions and theorems are introduced and investigated without proof. (1 credit)

2074 Geometry with Integrated Algebra (*Prerequisite: Algebra 1 or equivalent.*) The second year of the three-year sequence continues and extends topics in algebra. The cornerstone of this course is the study of geometry with the introduction of the formal geometric proof. Algebra is reviewed and frequently incorporated in this course. Geometric topics include congruence and similarity of triangles, quadrilaterals, right triangles, trigonometry, coordinate geometry, and three-dimensional figures. (1 credit)

2075 Honors Geometry (*Prerequisite: Algebra 1 with grade of A, teacher recommendation, and department head's approval.*) This course covers the topics in Geometry with Integrated Algebra in greater depth and at a faster pace. A significant amount of time is spent on proofs, including coordinate geometry proofs. Throughout the course, students are encouraged to think creatively and inquisitively work through challenging problems. (1 credit)

2072 Algebra 2 (*Prerequisite: Geometry or equivalent.*) The third course in the three-year sequence

carefully reviews and expands on basic algebra concepts such as exponent properties, rational expressions, equations & inequalities. The unifying concept of the function is introduced emphasizing both algebraic and graphical representations and functional relationships. This concept is developed through the exploration of exponential, logarithmic functions, and some trigonometric functions. There is an introduction to the use of the graphing calculator. (1 credit)

2076 Algebra 2 & Trigonometry (Prerequisite: B- in Geometry or equivalent) The third course in the three-year sequence reviews and expands on basic algebra concepts such as exponent properties, rational expressions, equations & inequalities. The unifying concept of the function is introduced emphasizing both algebraic and graphical representations and functional relationships. This concept is developed through the exploration of exponential, logarithmic functions, and trigonometric functions. There is an introduction to the use of the graphing calculator. (1 credit)

2077 Honors Algebra 2 & Trigonometry (Prerequisite: B in Honors Geometry and department head's approval.) This course covers the topics in Algebra 2 & Trigonometry in greater depth and at a faster pace. Additional topics traditionally found in precalculus are covered including exponential growth and decay models, arithmetic and geometric sequences, parametric equations, graphs of tangent and the reciprocal trig functions, and various trigonometric identities. (1 credit)

2120 Advanced Precalculus with Limits (Prerequisite: B- in Algebra 2 & Trigonometry & pass the final exam or equivalent) This is an intensive calculus preparatory course, taken as an elective, but strongly recommended to students who have done well in Algebra 2 & Trigonometry. For students enrolling in this course, it is recommended that they have passed the final exam and earned at least a B- for the year in Algebra 2 & Trigonometry, if not, they should take *Precalculus* in lieu of *Advanced Precalculus with Limits*. The primary focus of the course is the study of functions in detail, with particular emphasis on polynomial, rational, trigonometric, exponential, and logarithmic functions. The final term includes preparation for calculus with an introduction to the concepts of limit and derivative. In addition to being offered as a year-long course, Advanced Precalculus with Limits is also offered as a summer course for strong Juniors looking to enter calculus in their senior year. (1 credit)

2122 Precalculus (Prerequisite: Algebra 2 & Trigonometry or Algebra 2) This course is designed to develop an understanding of topics that are fundamental to the study of Calculus. Major topics of study include exponential and logarithmic functions, algebraic equations and expressions, polynomials, simplifying and graphing rational functions, linear and quadratic expressions and equations, factoring, binomial theorem, sequences, and series. Emphasis is placed on the analysis of trigonometric functions in various representations, ratios, identities, equations, proofs, and graphing. There is an introduction to the use of the graphing calculator. (The school also offers a summer precalculus course for students who qualify and/or need to advance to Calculus level courses for senior year, subject to department approval) (1 credit)

2130 Calculus (Grade 12; Prerequisite: Advanced Precalculus with Limits, teacher recommendation and department head's approval) This course introduces the basic concepts of differential and integral calculus. It covers the derivative, the integral and applications. The course is intended for students

who wish to learn calculus but not necessarily prepare for the AP Calculus test. There may be a review of basic topics in Pre-Calculus as needed for the development of the course. (1 credit)

2221 AP Statistics (Prerequisite: Geometry and department heads approval; minimum grade of A- in current math course and a grade of B+ in current English is recommended). This course focuses on data analysis and statistical reasoning. Students will gain understanding of the main ideas of statistics and the skills needed to work with data. A large emphasis is placed on making conclusions based on mathematical results, and then communicating those results in clear, concise sentences that can easily be understood by non-statisticians. Simulation techniques are used along with the graphing and computational capability of the TI-83/84. Topics include normal and binomial distribution, linear regression, probability, designing experiments, and inference. Students will be prepared to take the AP Statistics exam. (1 credit).

2172 AP Calculus AB (Prerequisite: Pre-calculus with A or better and departmental recommendation) This college-level course introduces the basic concepts of the differential and integral calculus, including the derivative, the integral, and applications. This course covers the content of a one-semester college calculus course for beginners. A strong mathematics background and a high level of motivation are essential for success in this course. Students in this course are required to take the AP Calculus AB level exam in the spring. (1 credit)

2140 Honors Differential Calculus (Prerequisite: teacher recommendation from Honors Algebra 2 & Trigonometry or A+ in Algebra 2 & Trigonometry with enrichment and department head approval.) This is an intensive introduction to calculus course that completes the pre-calculus course and covers limits and derivatives from the AP Calculus AB course. The semester one focus of the course is a brief review of functions, sequences, series, and conic sections, and an exploration of limits and basic derivatives. The final term includes intensive preparation for AP Calculus BC with a focus on applications of derivatives and an introduction to college level coursework. (1 credit)

2150 AP Calculus BC (Prerequisite: Honors Differential Calculus and teacher recommendation) This is an intensive calculus course that prepares students to take the AP Calculus BC exam at the end of the year. Students are introduced to the basic concepts of derivatives in Honors Differential Calculus, and as such this course begins with integration and its applications. Other content includes topics in differential equations, differential and integral calculus for parametric and polar curves as well as an extensive exploration of Taylor Series. Students are required to take the AP Calculus BC level exam in the spring and to participate in the monthly New York State Math League contests. (1 credit each year)

## SEMESTER COURSE DESCRIPTIONS

2116 Linear Algebra (Prerequisite: departmental approval) This one-semester course builds upon, and seeks to extend, basic algebraic skills. Topics include matrices and their application to solving systems of linear equations, vector spaces, and linear transformations. This course is now a necessary tool, not only for advanced work in mathematics, but also for the physical sciences,

economics, and other social sciences. (*One semester; ½ credit*)

2173 Multivariable Calculus (*Prerequisite: Enrollment or completion of AP Calc BC and completion of Linear Algebra*) This one-semester course is the extension of calculus of a single variable to that of multiple variables in 3-space and beyond. The course is designed to be taken with or after Calculus (BC). Topics include extensions of continuity and differentiability to multivariate functions, partial derivatives, multiple integrals & applications, vector valued functions & vector spaces. (*One Semester; ½ credit*)

2300, 2301 Advanced Chess 1, 2 (*Prerequisite A thorough understanding of the rules of chess*) This one-semester course will work for players from intermediate to advanced. The idea is to enable players to improve from their ability as demonstrated at the point of entry. Even our top-ranked players will begin the course at Advanced Chess 1. Upon completion of one semester, and upon noticeable improvement in chess tactics, strategic thinking, and problem solving, students will move on to Advanced Chess 2. Students will be assessed with homework assignments and in class problems and encouraged to participate in competitive tournaments. (*One Semester; ½ credit*)

**NOTE:** In keeping with the Friends Academy's commitment to meeting the needs of every student, the Mathematics department offers a robust enrichment program for all math students. The purpose of this enrichment is to provide students opportunities to tackle non-routine problems, participate in competitions, and complete independent research in STEM fields. While all students are encouraged to participate in enrichment, it is highly recommended for students looking for an extra challenge or are interested in entering the honors math track.

# Science

## Required

Biology

Two additional years of a lab science (Chemistry and Physics expected)

## Full-Year Courses

Biology

Chemistry

Honors Chemistry

Pre-AP Chemistry

Physics

Honors Physics

AP Biology

AP Chemistry

AP Environmental Science

AP Physics 1: Algebra Based

AP Physics 2: Algebra Based

AP Physics C

AP Psychology

Marine Biology

Forensic Science

Anatomy and Physiology

## Fall Semester Courses

Organic Chemistry

Solutions in Medicine

## Spring Semester Course

Science and Cooking

## Minor Elective Course

Science Research: DNA Barcoding

Independent Advanced Science Research: DNA Barcoding

## FULL-YEAR COURSE DESCRIPTIONS

3030 Biology (*Grade 9*) This course is centered around Enduring Understandings and Essential Questions, with connections to the Quaker foundation of the school. Our overarching Essential Question for the course, reflective of Quaker tenets, is: How can we use an understanding of Biology to be better stewards of our Earth and serve the organisms of Earth? The four major units of the

course are: Molecules and Cells, Heredity, Evolution, and Ecology. Class time is spent working with the practices of science, including questioning, observing natural phenomena, planning and carrying out investigations, analyzing and interpreting data, modeling, constructing explanations, and arguing from evidence. Through these practices, students make meaning of the course content and are assessed by hands-on lab investigations, collaborative group work, presentations, quizzes and tests. The final assessment of the year is a capstone project in which students seek to answer the course essential question. (1 credit)

3040 Chemistry (Grades 9-10; Prerequisite: Biology) The chemical concepts covered in this course are equivalent to what is encountered in a typical first year high school course such as measurements, properties, atomic theory, bonding, reactions, solutions and energy. The goals of the course are to develop an understanding of chemistry, cultivate problem-solving skills, apply chemical knowledge to decision-making, recognize the importance of chemistry to everyday life and understand the benefits as well as limitations of science and technology. (1 credit)

3041 Honors Chemistry (Grades 9-10; Prerequisites: A in Biology and an A+ in Geometry or B in Honors Geometry) This course is a comprehensive introduction to chemistry including atomic structure, stoichiometry, states of matter, molecular structure, thermodynamics, equilibrium, acids and bases, introductory organic chemistry and kinetics. Topics will parallel the Pre-AP Chemistry course but not to the same depth. The course requires a strong mathematical background and ability and is preparation for future work in science. (1 credit)

3039 Pre-AP Chemistry (Grades 9-10; Prerequisites: A in Biology, B in Honors Geometry and continuing enrollment in Honors Math) Topics covered include the atomic nature of matter, reactions and stoichiometry, gas laws, atomic structure and periodicity, bonding, intermolecular forces, thermochemistry, kinetics, equilibrium, redox, electrochemistry, acids and bases. This course requires strong analytical skills and ability to comprehend abstract concepts. The topics will be covered at a more rapid pace and in greater depth than in Honors Chemistry. It is intended as a prerequisite and preparatory course to AP Chemistry. (1 credit)

3049 Physics (Grades 11-12; Prerequisite: Biology and Chemistry) This course covers the traditional areas of mechanics, waves, optics, electricity, electromagnetism, and topics in modern physics. Considerable attention is given to the development of problem solving techniques. Students are expected to complete assigned problems, contribute to class discussions, and demonstrate their learning through tests, quizzes, and laboratory exercises. (1 credit)

3047 Honors Physics (Grades 11-12; Prerequisites: A in Chemistry or B in Honors Chemistry, or enrollment in Pre-AP Chem; A- in Algebra 2 & Trig or B in Honors Algebra 2 & Trig) This course covers the traditional areas of mechanics, waves, optics, electricity, electromagnetism, and topics in modern physics. Students will routinely employ algebra, geometry and trigonometry while developing problem solving techniques. Students are expected to complete assigned problems, contribute to

class discussions, and demonstrate their learning through tests, quizzes, and lab exercises. (1 credit)

3045 AP Physics 1: Algebra-Based (Grades 11-12, Prerequisites: A- in Honors Chemistry or B in Pre-AP Chem; A in Algebra 2 & Trig or B in Honors Algebra 2 & Trig) Students in AP Physics-1 can expect to construct and employ graphical and mathematical models while developing knowledge of physics concepts and solving physics problems. Trigonometry, systems-of-equations and symbolic reasoning are commonly required. APP-1 students often need to explain their reasoning in prose. Designing and describing laboratory investigations can also be expected. (1 credit)

3046 AP Physics 2: Algebra-Based (Grade 12, Prerequisites: A- in AP Physics I or A in Honors Physics; enrollment in Pre-Calculus or higher). This course is the equivalent to a second-semester college course in algebra-based physics. The course covers fluid mechanics; thermodynamics; electricity and magnetism; optics; atomic and nuclear physics. Since it is expected that students in AP Physics 2 have experienced success in AP Physics 1 or Honors Physics it is also expected that they enjoy solving physics problems. As in APP-1, graphical and mathematical models that include trigonometry, systems-of-equations and symbolic reasoning are routinely employed. Writing to describe reasoning and experimental methods is also a common course element. (1 credit)

3050 AP Physics C (Grade 12; Prerequisite: A in AP Physics I, enrollment in an AP Calculus course) AP Physics C is a second-year physics course for highly motivated seniors who have experienced success in AP Physics 1 and Pre-Calculus or Calculus. This course is the equivalent of two semester-courses of Calculus-based, university-level Physics for scientists and engineers. Differential and integral calculus is applied from day one. The course covers Mechanics in one semester and Electricity & Magnetism in the other. It builds upon topics first explored in AP Physics 1 and has the same emphasis on problem-solving and lab work. AP Physics C is rigorous, and students can expect to spend an hour each day working problems. Students are expected to take both AP Physics C exams at the end of the year. (1 credit)

3080 AP Biology (Grade 11-12; Suggested grades for success in the course: A- in Biology, A- in Chemistry or B in Honors Chemistry. Those students electing to take this course must have completed Physics or are expected to take it concurrently.) This course is an exciting and fast-paced equivalent of a two-semester college introductory biology course. It is based on four Biology "big ideas" (evolution, energy & homeostasis, information transfer, interactions of biological systems) while also allowing for a deep dive into a molecular level understanding of living organisms and biological systems. The majority of class time is spent actively working with the practices of science, including questioning, planning and carrying out investigations, analyzing and interpreting data, modeling, constructing explanations, and arguing from evidence. Upon completion of the course, students should have the conceptual framework, factual knowledge, and analytical skills necessary to make sense of the rapidly changing science of Biology and be ready for advanced study of the discipline in college. (1 credit)



3048 AP Chemistry (Grades 10 or 11; Prerequisite: Pre-AP Chemistry enrollment). Students electing to take this course in grade 11 must take a physics course concurrently. This course explores the topics from the first year of chemistry in greater detail and sophistication. A thorough grasp of the first year material is essential to succeed in AP Chemistry. Topics include the atomic nature of matter, reactions and stoichiometry, gas laws, atomic structure and periodicity, bonding, intermolecular forces, thermochemistry, kinetics, equilibrium, redox, electrochemistry, acids and bases. (1 credit)

3110 AP Psychology (Grade 12; Prerequisite: B in Biology and Chemistry and B+ in 11th grade English) The AP Psychology course is designed to introduce students to the systematic and scientific study of the behavior and mental processes of human beings and other organisms. Students will read about and be exposed to psychological principles related to the world around them. Students will critically analyze theories associated with each major subfield of psychology. Writing will be an important part of this course. This year-long course will be divided into nine units: scientific foundations of psychology, biological bases of behavior, sensation/perception, learning, cognitive psychology, developmental psychology, motivation/emotion, clinical psychology, and social psychology. Students will be required to take the AP Psychology test in the spring. (1 credit)

3025 AP Environmental Science (Grade 10-12; Prerequisite: A- in Biology, A in Chemistry or B+ in Honors Chemistry) The AP Environmental Science course is designed to be the equivalent of a one-semester, introductory college course in environmental science, and is taught as a project-based course. The goal of the AP Environmental Science course is to provide students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems both natural and human-made, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving or preventing them. Although Environmental science is interdisciplinary there are several major unifying constructs, or themes studied that cut across the many topics included in the study of environmental science. Students in AP Environmental Science engage in mathematical problem-solving in every course unit and successful students dedicate a significant time commitment to self-study. (1 credit)

3085 Marine Biology (Grade 11-12) This course will examine the abiotic and biotic factors that determine the influence and distribution of marine organisms, particularly in local habitats. Students will be able to make observations, collect samples, and analyze data through extensive field experience from nearby Oyster Bay and other beaches. Through lectures, discussions, laboratories, dissections, projects, and field work students will gain the ability to think logically, analytically, and independently in order to be able to communicate clearly and effectively, both orally and in writing. Topics will introduce students to simple organisms such as marine microbes and will progress through lower and higher order invertebrates, continuing with cartilaginous and bony fish, marine reptiles, birds, and mammals. There will be a heavy emphasis on how humans are impacting different marine ecosystems and what methods can be imposed that will encourage sustainability. (Full year, 1 credit)

3101 Human Anatomy and Physiology (Grade 11-12) Anatomy and physiology is a course that will enable students to develop an understanding of the relationships between the structures and functions of the human body. Students will also learn the mechanisms for maintaining homeostasis within the human body. This course will involve laboratory activities, projects, dissections, textbook material, models, diagrams, journal writings, and clinical studies. (Full year, 1 credit) *\*Offered in alternating years with Forensic Science\**

3121 Forensic Science (Grade 11-12)

The course will focus on techniques and concepts used in forensic science and crime scene investigation. Students will improve critical thinking skills needed for many careers in the forensic field. The course also provides students with the opportunity to review and apply information learned in biology, chemistry, anatomy and physics. Topics include: History & Laws, Crime Scene and Evidence, Hair & Fibers, Fingerprints, Blood Spatter Analysis, Toxicology, Serology, DNA, Drug Analysis, Bullets & Tool Marks, Forensic Anthropology, and Decomposition & Anthropology. Students will engage in lectures, labs, case studies, and project based learning experiences. (Full year, 1 credit) *\*Offered in alternating years with Anatomy & Physiology\**

## SEMESTER COURSE DESCRIPTIONS

3200 Solutions in Medicine (Grades 11 & 12) This semester course is designed so that all learning is active, collaborative, and team-based. In the course, students will familiarize themselves with the process of obtaining critical medical information in determining the one true diagnosis of a patient through the use of actual case studies in differential diagnosis. Team taught by a medical doctor and a member of the Friends Academy science department, students will have on-site access to a medical professional as well as a master teacher as they work in teams to seek a diagnosis of complex medical cases. Students will explore key topics in medicine, including but not limited to, patient medical history, testing, imaging, laboratory results, special testing and presentation of symptoms. Students will develop skills through working on and learning techniques for validating hypotheses. Students' curiosity and capacity to collaborate on real and relevant problems drives the curriculum, while the course instructors provide the scaffolding, resources, skills, and background necessary to seek information to confidently draw conclusions with confidence. Ultimately, students will present their diagnosis along with their hypothesis and evidence. (Fall, ½ credit)

3042 Organic Chemistry (Grade 12; Prerequisite AP Chemistry) This course is designed for students who anticipate pursuing a health related field or a college major that requires organic chemistry. The course will provide an introduction to the basic principles necessary to understand the structure and reactivity of organic molecules with emphasis on substitution and elimination reactions and the chemistry of the carbonyl group. The class will involve extensive use of models and modeling programs and will also expose the students to some basic organic lab techniques. (Fall, ½ credit)

3060 Science and Cooking (Prerequisite Chemistry or concurrent enrollment in Chemistry) This course is designed for students to further their exploration of science through the lens of cooking. In this

semester-long course, students will learn the underlying scientific principles that govern everyday cooking techniques. Students will apply principles of chemistry, biology, physics, and engineering to become experimental scientists in their own kitchen. This course requires students to produce several written reports, presentations, and the creation of a research project of their own. (*Spring, ½ credit*)

## MINOR ELECTIVE COURSES

### 3095 Science Research: DNA Barcoding (*Grades 10, 11, 12*)

A DNA barcode is a unique pattern generated by a DNA sequence that can potentially identify species from diverse populations and habitats. In this yearlong, half-time course, students will learn about the process of scientific discovery and hypothesis testing, and recall their understanding of taxonomy, evolution, ecology, and DNA structure and function. With this foundation, student teams will develop a research project using DNA barcoding technology, including DNA extraction from collected specimens, PCR, gel electrophoresis, and bioinformatics data science. Teams will participate in the Barcode Long Island project, and write-up and present their findings at a research symposium at the end of the school year. Through this course, students will use DNA sequence to analyze Long Island biodiversity and become published authors of these DNA barcodes in GenBank, the National Institute of Health genetic sequence database of publicly available DNA sequences. This course is taught in partnership with the Cold Spring Harbor Laboratory DNA Learning Center. (*Year, ½ credit*)

### 3195 Independent Advanced Science Research: DNA Barcoding (*Grades 11, 12*)

Students who have completed Science Research: DNA Barcoding can elect to extend their skills and research from that course to an independent research course. Students will work individually or in pairs to develop a new research proposal to be approved by the Barcode Long Island project. Research is not limited to the specific organism campaigns used in the first course, thus students will have a wide range of options for the questions and species to investigate. Students will have access to all the tools, resources, and mentorship by the DNA Learning Center staff used in the first course, and will present their findings at the research symposium in June. This course is taught in partnership with the Cold Spring Harbor Laboratory DNA Learning Center. (*Year, ½ credit*)

# Computer Science

## Full-Year Courses

AP Computer Science A

Post-AP Computer Science: Theory of Computation

Post-AP Computer Science: Algorithms

## Semester Courses

Introduction to Computer Science

AP Computer Science Principles

Post AP Computer Science: Electronic Design

Post AP Computer Science: Advanced Independent Study

Robotics

Computer Game Design

## FULL-YEAR COURSE DESCRIPTIONS

6010 AP Computer Science A (*Grades 10-12; Prerequisite: A in Introduction to Computer Science or Department Approval*) This course is a university-level introductory course in computer science, covering a curriculum similar to what might be encountered in the “101” course for most undergraduate CS programs. A large part of the course is built around the development of computer programs that correctly solve a given problem. The design and implementation of computer programs is used as a context for introducing other important aspects of computer science, including the development and analysis of algorithms, the development and use of fundamental data structures, the study of standard algorithms and typical applications, and the use of logic and formal methods. The course is facilitated in the Java programming language and culminates in the AP Computer Science A exam in May. (*Full Year, 1 credit*)

6012 Post-AP Computer Science: Theory of Computation (*Prerequisite: AP Computer Science A and Department Approval*) The course covers several concepts related to computability and complexity: finite automata, regular expressions, push-down automata, grammar, Turing machines, decidability, space complexity, and time complexity. The similarities and differences between determinism and nondeterminism are covered in depth. By the end of the course, students will understand the theoretical underpinnings of the capabilities of computers and leverage this knowledge to solve practical problems in computer science. (*Full Year, 1 credit; Offered only in alternating years - offered in 2022-2023*)

6014 Post-AP Computer Science: Algorithms (*Prerequisite: AP Computer Science A and Department Approval*) The course surveys the most important algorithms and data structures in use today. Each algorithm is studied through its implementation in Java. We examine the benefits and drawbacks of each algorithm and data structure as well as their applications in science, engineering, and industry. The course teaches fundamental techniques and is equivalent to a second- or third-semester

college computer science course. (*Full Year, 1 credit; Offered only in alternating years, will be offered next in 2023-2024*)

## SEMESTER COURSE DESCRIPTIONS

6000 Introduction to Computer Science (*Grades 9-12*) Designed for students preparing to take the AP Computer Science course, this introductory course provides a strong foundation in practical computer programming. The basics of procedural and functional programming are covered through rigorous practice and creative projects so that students are better prepared to tackle the advanced concepts and theories involved in Object Oriented Programming and Software Engineering that are present in the AP course. The course culminates in a large final project making use of skills learned throughout the semester. (*Offered Fall and Spring Semesters; ½ credit*)

6017 AP Computer Science Principles (*Grades 10-12; Prerequisite: Introduction to Computer Science*) AP Computer Science Principles is an introductory college-level computing course that introduces students to the breadth of the field of computer science. Students learn to design and evaluate solutions and to apply computer science to solve problems through the development of algorithms and programs. They incorporate abstraction into programs and use data to discover new knowledge. Students also explain how computing innovations and computing systems—including the internet – work, explore their potential impacts, and contribute to a computing culture that is collaborative and ethical. This course prepares students to take the AP Computer Science Principles exam in May. (*Spring Semester; ½ credit*)

6018 Post AP Computer Science: Electronic Design (*Grades 10-12. Prerequisite: AP Computer Science A*) A hands-on advanced course in electronic building and programming. Students learn about circuits, wiring and the practical application of programming skills through the building of Arduino and Raspberry Pi computers and peripherals to execute real-world tasks. Students will work in collaborative teams to design and develop advanced solutions to problems they identify. (*Fall Semester; ½ credit*)

6017 Post AP Computer Science: Advanced Independent Study (*Grade 12*) Independent study in Computer Science is available to students who have completed our highest level courses and wish to continue their work with the guidance of the Computer Science Department. Application for Independent Study required.

6708 Robotics (*Grades 9-12*) This class covers topics in the fundamentals of building and programming robots (including applications of applied science, technology, engineering and applied mathematics) through hands-on group activities and independent projects. Students will learn about the parts that make up a robotic system and how these parts communicate with one another, enabling robots to perform tasks. Students follow instructions to familiarize themselves with the parts and tools and then create their own designs to fulfill challenges. Students learn how to

program robots to complete set tasks autonomously. As a result of this course students will have developed skills in forecasting and planning, project management, building, engineering & robotics knowledge, documentation, and teamwork. (*¼ credit*)

6008 Computer Game Design (*Grades 9-12*) Designed to give the students an elementary understanding of computer science relevant to their interests, this course teaches basic programming concepts in the context of creating video games. Additionally, students will formally study game design principles across different genres and the steps of game design from ideas to marketing. Students experience the iterative code/test/debug cycle of programming and the design/playtest/refine cycle of game design. (*¼ credit*)

## World Languages and Cultures

### Required

Three consecutive levels of Chinese, French, Latin, or Spanish.

### Full-Year Courses

Chinese II, III, IVH, AP Chinese Language & Culture (AP with WE Service), Post-AP Chinese Literature & Culture

French II, IIH, III, IIIH, IV, IVH, Global Studies: French Language & Culture Level 5 (AP with WE Service), AP French Language & Culture, Post-AP French and Francophone Literature and Culture

Spanish I, II, II Advanced, IIH, III, IIIH, IV, IVH, Global Studies: Honors Spanish Language & Culture Level 5, Spanish Senior Seminar, AP Spanish Language & Culture (AP with WE Service), AP Spanish Literature & Culture

Latin I, II, III, IVH, AP Latin, Post-AP Latin Literature & Culture

### Full-Year ½ Credit Courses

Introductory Latin

Advanced Introductory Latin I

Advanced Introductory Latin II

### Semester ¼ Credit Course

Latin In Science and The Law (Fall)

Classical Mythology in The Arts and Humanities (Spring)

## CHINESE

4276 Chinese II (*Grades 9-12; Prerequisite: Chinese I or equivalent*) Chinese II will help students continue to develop the four skills of listening, speaking, reading and writing in Chinese by increasing complex sentence structures and enriching their vocabulary. At the end of this course, students will be able to talk about weather, their daily life, clothing, shopping, as well as order food in Chinese restaurants. In addition, they will learn how to read and write sentence groups under these topics. Cultural topics will include principal cuisines and food culture in China, gift giving customs, Chinese zodiac signs, and fundamental Chinese festivals. Students will learn through the study of authentic materials coupled with daily interactive classroom activities. (1 credit)

4280 Chinese III (*Grades 9-12; Prerequisite: Chinese II or equivalent*) Students in this course will gain more proficiency in their listening, speaking, reading and writing skills in Chinese. The course will enable students to participate in practical day-to-day situations in Chinese. The topics in this course will include how to ask for directions and describe location/ space, make an appointment with people, what to say when seeing a doctor to describe symptoms, and how to plan a trip using a variety of different transportations. Students in Chinese III will have the opportunity to read short stories and to write paragraphs in Chinese under those topics. The update of modern China will be

the focus of cultural topics this year. (1 credit)

4282 Honors Chinese IV: (Grades 9-12; Prerequisite: B+ in Chinese III and/or departmental recommendation) Honors Chinese IV students will start to develop more complex conversational skills with greater exposure to authentic Chinese spoken and written materials, as well as significantly lengthier listening and reading materials. The topics in this course will include: in-depth school life, choosing a field of study in college, Chinese geography, computer and Internet, education, and other related themes for discussion on societal issues. Students are expected to do paragraph-level input and output of Chinese by the end of the course. Students will explore and discuss culture topics by looking into modern Chinese society, and making comparisons/ connection to equivalent aspects in the US. (1 credit)

4284 AP Chinese Language & Culture (AP with WE Service) (Grades 10-12; Prerequisite: B+ in Honors Chinese IV and/or departmental recommendation) AP Chinese Language and Culture course is designed to provide qualified students with varied opportunities to further perfect their Chinese skills. Students enrolled in this class will also have maximal exposure to Chinese cultural elements that are integrated in the process of learning the language. Through student-centered activities, students develop skills in using Chinese to comprehend, compare and contrast issues and ideas that are pertinent to their life and community. In AP Chinese the class will learn about Chinese modern infrastructures, Chinese classic art and aesthetic values, traditional festivals and rituals in China, history and historical figures, and current challenges China faces, etc. The class will be conducted almost exclusively in Chinese. Students are required to speak Chinese as much as possible in all situations. All students enrolled in the class will be expected to take the AP language exam in May. (1 credit)

Post-AP Chinese Literature & Culture (Grade 11-12; Prerequisite: AP Chinese and strong recommendation of current teacher) This course is a Chinese classic literature course designed for students to read and appreciate the original works of ancient Chinese novels and poems. The work students read, study and analyze include *Journey To The West*《西游记, one of the Four Great Classical Novels of Chinese literature, by Wu Cheng'en 吴承恩 from Ming Dynasty (16th century), a series of the most representative Chinese ancient poems by Li Bai 李白, Du Fu 杜甫, Bai Juyi 白居易 from Tang Dynasty (618 to 907 AD), as well as Song Ci 宋词 from Song Dynasty (960–1279). Through reading these masterpieces, students will have the opportunity to further expand their knowledge of a wide variety of Chinese cultures, to better understand the foundations of Chinese society and values, and to significantly elevate the authenticity of their Chinese, including using 4-character idioms 成语, ancient saying 俗语, and quotes in their language use. To be successful in this course, students must be near-native or native in Chinese. This course will be taught in Mandarin only. (1 credit)

## FRENCH

4020 French II (Grades 9-12; Prerequisite: French I or equivalent) Conducted primarily in French, this



course develops students' speaking and writing skills. Students master increasingly complex sentence structures and expand their active vocabulary. They study the culture, geography, and history of the French-speaking world through reading, films, web-based assignments, and at least one local field trip. Students will practice their speaking and listening comprehension skills in our state-of-the-art language lab. Evaluation will be based on progress in all four skills: reading, writing, listening, and speaking. In addition to periodic assessments during the school year, there is a comprehensive final exam. (1 credit)

4021 Honors French II (Grades 9-12; Prerequisite: French I with a grade of A- or higher and Honorable Mention on the National French Exam; if the student does not meet this requirement but is motivated to continue with advanced language study, s/he may be eligible for Honors French II upon receipt of a strong departmental recommendation). Conducted in French, this course offers students who have a solid level I foundation in all four language skills a curriculum that strengthens that foundation with enriched vocabulary and grammar study while exploring new grammar and thematic material through texts, literature, art, film and current events of interest. French 2 Honors is the second course of a five part French series designed to empower students to learn to speak, read, write and comprehend French in a culturally authentic manner. Built on the National Foreign Language Standards, this is a comprehensive course integrating content, varied methodology and interactive activities. Students have the opportunity to communicate in French through traditional exercises including essay writing, listening activities and oral reports. They can also pursue topics of personal interest and share their work on a classroom blog and online newspaper. Pronunciation is emphasized. In addition to frequent written and oral assessments, there is a comprehensive final exam. The course offering is dependent upon sufficient student numbers. (1 credit)

4040 French III (Grades 9-12; Prerequisite: French II or equivalent) Conducted primarily in French, this course features the continued exploration of France and the Francophone world through journalism, literature, art, and film. Cultural awareness and listening comprehension are developed with video and audio materials. Grammar is introduced and reinforced through regular writing assignments and oral activities. Web-based assignments are offered to reinforce and enrich classroom activities. Students are encouraged to communicate in French during class. Laboratory exercises help to refine pronunciation and reinforce speaking and listening skills. Evaluation is based on consistent effort as well as progress in reading, writing, speaking, and listening. Written tests, oral evaluations, and a comprehensive final exam are used to assess student progress. (1 credit)

4050 Honors French III (Grades 9-12; French II Honors prerequisite: a grade of B+ and Honorable Mention or higher on National French Exam; if the student does not meet this requirement but is motivated to continue with advanced language study, s/he may be eligible for Honors French III upon receipt of a strong departmental recommendation). Conducted in French, this course offers the more advanced French student the opportunity to explore French and Francophone culture through journalism, literature, art, and film. Increasingly complex grammar is introduced and practiced in regular short essays and oral reports. Web-based assignments allow students to explore themes of personal interest, building vocabulary essential to the topic. Students are expected to communicate

in French at all times during class. Laboratory exercises help to refine pronunciation and reinforce speaking and listening skills. Evaluation is based on progress in all four skills: reading, writing, speaking, and listening. Students will read two short novels. In addition to regular written and oral assessments, there is a comprehensive final exam. (1 credit)

4060 French IV: Language and Cultures (Grades 10-12; Prerequisite: French III or equivalent)

Conducted primarily in French, this course emphasizes continued development of conversation and writing skills, largely through the study of Francophone films, short stories, comic books, and visual art. This varied approach sharpens oral proficiency and broadens cultural awareness. Students complete independent multi-media research projects, which they share orally with the class. Evaluation is based on progress in all four skills: reading, writing, listening, and speaking. (1 credit)

4070 Honors French IV (Grades 9-12; French III Honors prerequisite: a grade of *B+* and Honorable Mention or higher on National French Exam; if the student does not meet this requirement but is motivated to continue with advanced language study, s/he may be eligible for Honors French IV upon receipt of a strong departmental recommendation.) This course is designed to offer students the opportunity to improve their fluency in French and to expand their understanding and appreciation of the culture, ideas, traditions and challenges facing the modern francophone world. Intensive [and enjoyable!] Practice in listening, speaking, reading, writing and grammar will center around the following themes: *Les Défis mondiaux, science et technologie, vie contemporaine, la quête de soi, famille et communauté, l'esthétique*. Literary texts, film, contemporary and classical music, newspapers and web resources are used to explore each thematic unit. Tests, oral evaluations, partner work and quizzes provide benchmarks to evaluate student progress and mastery of the material. Students will have the opportunity to participate in a class blog and explore specific topics of interest in greater detail. The goal for each student is predicated on steady personal progress and improvement, based on his/her level of proficiency in September. Conducted entirely in French, IVH gives students the opportunity to “immerse” in the language throughout the class period. Coming to class prepared and with an enthusiastic mindset is, in itself, worth its weight in gold! Students’ motivation, consistency, curiosity and interest are the cornerstones for this course. There is a cumulative final in June. (1 credit)

4083 Global Studies: French Language and Culture Level 5: What does it mean to be French or Francophone in today's world? (Grades 11,12; Prerequisite: French IV or equivalent) Students in this intensive, full-year global studies French language elective will explore the essential question, building on their emerging levels of proficiency in the French language as they engage in interdisciplinary topics that will include current events, technology, the environment, sustainability, social and political issues, bilingualism, the arts and the world of entertainment. Students will focus on collaboration, presentational communication, vigorous research and writing for cultural literacy and creative problem solving, steadily gaining the knowledge and understanding they need to participate effectively and competently in today's global community. Students will develop a relationship with citizens of various francophone communities in order to answer the essential question. Ultimately, students will engage in topics that help to answer the essential question by

presenting research on disciplines of greatest interest to them. This course is open to students by application. (1 credit)

4090 AP French Language and Culture (AP with WE Service) (Grades 9-12; French IV Honors prerequisite: a grade of B+ and Honorable Mention or higher on National French Exam) Following closely upon the French IV Honors course, this AP French V course continues to refine students' reading, writing, speaking, and listening skills in preparation for the AP French language exam in May. Conducted entirely in French, the course is divided thematically between six units: 1) Family and Community, 2) Science and Technology, 3) Contemporary Life, 4) Personal Quests, 5) Beauty and Aesthetics, and 6) Our Threatened Planet. Within each thematic unit, students read current newspaper and magazine articles, listen to radio shows, watch short newscasts, read short literary texts and watch short film clips of thematic relevance. In addition, students practice the multiple choice listening and reading comprehension questions, and the presentational and interpersonal writing and speaking exercises that constitute the bulk of the new AP exam. All students enrolled in the class will be expected to take the AP language exam in May. (1 credit)

4095 Post-AP French and Francophone Literature and Culture (Grade 11 or 12. Prerequisite: Score 4 or Higher in AP French Language and Culture or Confirmed advanced-mid proficiency in French evaluated by the Language Department AND a gold or silver medal in the National French Exam). This advanced French Language and Francophone Literature and Culture course uses a thematic approach to introduce students to representative texts (short stories, novels, poetry, plays, and essays) and multimedia material and art, from various time periods and regions of the French-speaking world. Students develop proficiencies across the three modes of communication (interpretive, interpersonal, and presentational) in the range of *Advanced High* to *Superior* of the American Council on the Teaching of Foreign Languages' (ACTFL) Proficiency Guidelines. Through careful examination of the required readings and other materials, students acquire the necessary tools and are exposed to resources allowing them to master their critical reading and analytical writing skills. Literature and art in general as well as documentaries, non-fictional essays are explored within the contexts of their time and place of production, and students gain insights on the multiplicity and the diversity of voices, cultures and challenges represented through times in the required material. The course raises global awareness and empathy by also including a strong focus on cultural, artistic, and linguistic connections and comparisons, which is supported by the exploration of various media (art, music, film, articles, and literary criticism). (1 credit)

## SPANISH

4100 Spanish I (Grades 9-12) Conducted mostly in Spanish, this course focuses on building basic communication skills in diverse situations and topics while introducing students to the Hispanic world. Students learn to socialize, provide and obtain information, express personal feelings and get others to adopt a course of action in Spanish. Evaluation emphasizes comprehension and building listening and speaking skills, laying a foundation for mastery of reading and writing at higher levels. In addition to periodic assessments during the year, there is a comprehensive final exam. (1 credit)

4110 Spanish II (*Grades 9-12; Prerequisite: 1-2 years of Spanish and/or departmental recommendation*) Conducted primarily in Spanish, this course develops the student's active vocabulary and improves his or her ability to speak confidently, write creatively, think deeply, and listen respectfully in Spanish. Students will demonstrate increased proficiency in interpersonal, interpretive, and presentational language skills. Focus will be on expression in the present tense, the regular preterite tense, basic irregular preterite forms, and on some communication using the imperfect and future forms (ir + a + infinitive and the formal future tense), commands, reflexive verbs, and some object pronouns. Students will learn about various cultural elements including literature, art, film, and history in Spanish. In addition to tests, quizzes, projects, and in-class interviews, there is a comprehensive final exam. Students who successfully complete this course will continue to Spanish 3. (1 credit)

4112 Advanced Spanish II (*Grades 9-12; Prerequisite: 3+ years of Spanish 1 preparation at the Lower and Middle School levels and/or departmental recommendation*) Conducted primarily in Spanish, this course develops the student's active vocabulary and improves his or her ability to speak confidently, write creatively, think deeply, and listen respectfully in Spanish. Students will demonstrate increased proficiency in interpersonal, interpretive, and presentational language skills. Focus will be on expression using a variety of grammatical forms including but not limited to: the present, all forms of the preterite (including all irregular forms), imperfect, future, conditional, past and present progressive, present perfect, commands, reflexive verbs, and object pronouns. Students will learn about various cultural elements including literature, art, film, and history in Spanish. In the spring, students will be guided in their preparation for the National Spanish Examination given by the American Association of Teachers of Spanish and Portuguese. In addition to tests, quizzes, projects, and in-class interviews, there is a comprehensive final exam. Students who successfully complete this course may be recommended for Spanish 3 or Spanish 3 Honors. (1 credit)

4111 Honors Spanish II (*Grades 9-12; Prerequisite: a grade of A in Spanish 1, 75th percentile on the National Spanish Exam and departmental recommendation; if the student does not meet the NSE score, s/he will need to reach the required grade, the departmental recommendation, and pass the National Spanish Assessment with a 75th percentile before the end of the school year*) This is an accelerated Spanish II course designed for the more advanced language student who has demonstrated exceptional ability and achievement in the first level. Intensive study of listening, reading, speaking, and writing skills is supplemented by outside reading to provide an introduction to Spanish literature. Focus will be on achieving a facility in interpersonal, interpretive, and presentational Spanish language using a variety of grammatical forms including: the present, all forms of preterite (including all irregular forms), imperfect, future, conditional, past and present progressive, present perfect, commands, reflexive verbs, the present subjunctive, and object pronouns. The course demands the student's constant participation in the target language to strengthen language proficiency. Video/audio materials are also an integral part of the course. In addition to regular in-class assessments, students take the National Spanish Exam given in the spring by the American Association of Teachers of Spanish and Portuguese, as well as a cumulative final. The student who successfully completes this course may be recommended for Spanish III Honors. (1 credit)

4120 Spanish III (*Grades 9-12; Prerequisite: Spanish II or equivalent*) Conducted mainly in Spanish, this course continues to build students' language skills in the four areas of listening, speaking, reading, and writing. Students continue to study grammar, focusing on advanced idioms and all verb tenses. The course also introduces some aspects of Peninsular and Spanish-American history and contemporary culture, primarily through readings from a variety of sources and some projects. Video and audio materials are used to improve listening comprehension skills. In addition to quizzes, tests, oral evaluations and some short essays, there is a comprehensive final exam. (1 credit)

4129 Honors Spanish III (*Grades 9-12; Honors Spanish II prerequisite: a grade of A-, 75th percentile on the National Spanish Exam and departmental recommendation; Advanced Spanish II prerequisite: a grade of A or higher, 75th percentile on the National Spanish Exam, and a departmental recommendation; if the student does not meet the NSE score, s/he will need to reach the required grade, the departmental recommendation, and pass the National Spanish Assessment with a 75th percentile before the end of the school year*). This is an accelerated Spanish III course designed for the more advanced language student. Conducted in Spanish, the course's primary focus is the mastery of the most integral grammar points and the development of more complex language skills in all areas of language learning. The course demands the student's constant participation in all activities designed to strengthen language proficiency. The course also includes a cultural component, which integrates literary and non-literary selections and popular films, to provide exposure to important aspects of Peninsular and Spanish-American history and culture. Evaluation is based on progress shown in all four language skills: reading, writing, listening and speaking. In addition to regular in-class assessments, students will take the National Spanish Exam given in March by the AATSP (American Association of Teacher of Spanish and Portuguese). There is also a comprehensive final exam in June. (1 credit)

4130 Spanish IV: Language and Cultures (*Grades 10-12; Prerequisite: Spanish III or equivalent*) Conducted in Spanish, this course focuses on developing key communicative skills in the language, with a particular focus on listening and speaking. Audio and video materials and readings from current periodicals are used to teach culture and to improve listening and reading comprehension skills. Students are required to speak Spanish in class at all times. Grammar is reviewed contextually on a regular basis. In addition to quizzes and tests, there is a final exam. (1 credit)

4135 Honors Spanish IV (*Grades 9-12; Honors Spanish III prerequisite: a grade of A-, 75th percentile on the National Spanish Exam and departmental recommendation; if the student does not meet the NSE score, s/he will need to reach the required grade, the departmental recommendation, and pass the National Spanish Assessment with a 75th percentile before the end of the school year*). Conducted in Spanish, this course is designed as a preparation for the Advanced Placement Spanish Language course. In addition to continuing to develop language proficiency in all four skill areas (reading, writing, listening, and speaking), students also develop an awareness of Peninsular and Spanish-American culture through the study of literature, visual arts, music, film, and current periodicals. Video and audio materials are used to improve listening comprehension. Grammar is

reviewed contextually on a regular basis. Evaluation is based on progress in all four skills. In addition to regular in-class assessments, there is a final exam. (1 credit)

4143 Global Studies: Honors Spanish Language and Culture Level 5: What does it mean to be a Spanish-speaking member of the global community? (Grades 11,12; Prerequisite: Spanish IV or equivalent. This is a full year course open to students by application ONLY) In this college level Global Studies course, Spanish language elective students will explore the essential question, building on their emerging levels of proficiency in the Spanish language as they engage in interdisciplinary topics that will include current events, technology, the environment, sustainability, social and political issues, bilingualism, the arts and the world of entertainment. Students will focus on collaboration, presentational communication, vigorous research and writing for cultural literacy and creative problem solving, steadily gaining the knowledge and understanding they need to participate effectively and competently in today's global community. Students will have the opportunity to develop relationships with citizens from across the Spanish-speaking world. They will engage in meaningful dialogue with people from a variety of Spanish-speaking communities, near and afar, in order to answer the essential question and deepen their understanding of what it means to be a Spanish-speaking member of the global community today. Ultimately, students will engage in topics that help to answer the essential question by presenting research on disciplines of greatest personal interest to them. This is a full year course open to students by application ONLY. (1 credit)

4141 Spanish Senior Seminar (Grades 11-12; Prerequisite IV or equivalent) This Spanish Language and Culture seminar is based on the four fundamental language skills to help students expand their listening, reading, writing and speaking in practical, real world contexts. The essential proficiency goal is the ability to produce Spanish in a natural, creative and authentically communicative way. Students will analyze a broad range of cultural texts, including short stories, poetry, film, paintings, music and newspaper and magazine articles from Spain and Latin America with the goal of providing a rich, diverse learning experience and multicultural perspective. The wide variety of resources are used to help students gain a broader global perspective and understanding of political, historical, social and cultural events that have shaped Spain and Latin America. Some of the topics to be examined in this class are: immigration, revolution, repression, Hispanic presence and identity in the United States, discrimination, and human rights. The course is updated constantly to reflect current events that connect to the themes and topics being discussed. Students' daily contributions and interactions are paramount to their personal development and proficiency while maintaining the integrity and aims of the course. (1 credit)

4142 AP Spanish Language & Culture (AP with WE Service) (Grades 10-12; Honors Spanish IV prerequisite: a grade of A-, 75th percentile on the National Spanish Exam and departmental recommendation; if the student does not meet the NSE score, s/he will need to reach the required grade, the departmental recommendation, and pass the National Spanish Assessment with a 75th percentile before the end of the school year) Conducted in Spanish, this course continues developing the four skills (reading, writing, listening and speaking) and an awareness of Peninsular and Spanish-American culture through the study of literature, current periodicals and news media, and

at times, music and visual arts. Oral presentations are also frequent. Video and audio materials are used to improve listening comprehension. Grammar is reviewed contextually on a regular basis. Evaluation is based on progress in reading, writing, listening, and speaking. In addition to tests and quizzes, students are expected to take the AP Spanish Language exam in the spring. (1 credit)

AP Spanish Literature & Culture (Grades 11-12; Prerequisite: AP Spanish Language and Culture and strong recommendation of WLC Department) The AP Spanish Literature and Culture course uses a thematic approach to introduce students to representative texts (short stories, novels, poetry, plays, and essays) from Peninsular Spanish, Latin American, and U. S. Hispanic literature. Students develop proficiencies across the three modes of communication (interpretive, interpersonal, and presentational) in the range of Intermediate High to Advanced Mid of the ACTFL's Proficiency Guidelines. Through careful examination of the required readings and other texts, students work to hone their critical reading and analytical writing skills. Literature is explored within the contexts of its time and place, and students gain insights on the many voices, historical periods, and cultures represented in the required readings and other texts. The course also includes a strong focus on cultural, artistic, and linguistic connections and comparisons, which is supported by the exploration of various media (art, music, film, articles, and literary criticism). In addition to tests and quizzes, students are expected to take the AP Spanish Language exam in the spring. (1 credit)

## LATIN

4150 Latin I (Grades 9-12) Latin I assumes the student has no prior experience studying the Latin language. Students who successfully complete the course will be able to enroll in Latin II the following year. The student in Latin I will be introduced to some of the basic grammatical and syntactical features of Latin (Latin word order, nominative and accusative cases, imperfect and perfect tenses, etc.) and will learn many Latin vocabulary words, as more and more complex Latin sentences and stories are read and dramatized. Since approximately one-half of the words in English are derived directly or indirectly from Latin, and since Latin is the basis of the Romance languages, Latin is significantly useful for most students. It is especially useful for understanding the grammar and vocabulary of English, and it provides an excellent foundation for the study of Italian, Spanish, French, etc., as well as for non-Romance languages. Some attention will be given to etymologies and derivations. Consideration will also be given to the culture of ancient Rome and the stories and character traits of the Olympian gods and goddesses. (1 credit)

4160 Latin II (Grades 9-12; Prerequisite: Latin I or Advanced/Introductory Latin or equivalent) This course continues where Advanced Introductory Latin left off. Increasingly complex grammatical forms and constructions (such as the subjunctive) are introduced, and the emphasis on vocabulary, derivatives, and Roman culture continues. Students read a considerable amount in Latin, as well as some ancient mythology. There are frequent quizzes and periodic tests as well as a comprehensive final exam. Students who wish to enroll in full-credit Latin II while continuing with another world language (for a total of six full-credit courses) must receive approval. For more information, please speak with Dr. Davison or Dr. Duke. (1 credit)

4170 Latin III (*Grades 9-12; Prerequisite: Latin II or Advanced Introductory Latin II*) After the students have completed the study of virtually all the grammar and syntax they will need (such as indirect discourse), the course focuses on reading excerpts of Latin authors (eg., Ovid) and on some preparation for the Advanced Placement Latin examination. Much attention is given to the close reading of poetry, with particular emphasis on scanning, the use of rhetorical figures, and close textual analysis. There are frequent quizzes and periodic tests, and there is a comprehensive final exam. (1 credit)

4180 Honors Latin IV (*Grades 10-12; Prerequisite: Latin III and strong recommendation of current teacher*) Honors Latin IV is the first half of a two year course designed to prepare students for the AP Latin exam. Students who successfully complete the course will be able to enroll in AP Latin V the following year. During the first semester of Latin IV, students will review all of the grammar that they learned in Latin I-III and will build up their Latin vocabularies through frequent quizzes. We will cover about three Wheelock chapters a week during the first semester as we review material. In the second semester of Latin IV, students begin the AP Latin syllabus by reading selections from Julius Caesar's *De Bello Gallico*. Much attention will also be paid to the grammatical and stylistic features of Latin prose. (1 credit)

4192 AP Latin (*Grades 10-12; Prerequisite: Honors Latin IV and strong recommendation of current teacher*) AP Latin is the second half of a two year course designed to prepare students for the AP Latin Exam. The overall goal of the course is to help students prepare to take the AP Latin Exam in May. We will complete the AP Syllabus by reading select Latin passages from Books 2, 4, and 6 of the Aeneid. We will also read select books of the Aeneid in English translation. As part of the preparation for the AP Latin exam, we will devote a great deal of class time to analyzing Vergil's Latin text (there will be numerous short essay writing assignments with questions from previous AP Latin exams). We will also practice sight-reading Latin prose and poetry passages, devote class time to discussing the historical background of the Aeneid, and look for ways in which we can draw connections between Vergil's poem and Julius Caesar's *De Bello Gallico*. (1 credit)

Post-AP Latin (*Grades 11-12; Prerequisite: AP Latin and strong recommendation of current teacher*) The goal of this year-long course is to prepare students to be able to continue their study of Latin at the college level after their successful completion of AP Latin. Students entering Post-AP Latin have already completed the AP Latin Course and Exam and have thus gained valuable experience reading authentic Latin prose and poetry. The Latin readings in the course can be tailored to suit the interests of the students taking the course but typically Latin students in Post-AP Latin read from a variety of different authentic Latin literary texts related to the world of Ancient Rome. Important Roman authors whose Latin texts we have examined in previous Post-AP Latin classes include Pliny the Younger, Tacitus, and Ovid, since these are Roman authors that Latin students typically read and analyze in upper-level Latin college courses. (1 credit)



## FULL-YEAR ½ CREDIT COURSES

4147 Introductory Latin (*Grades 9-12; Prerequisite: Recommendation of the department*) Introductory Latin offers students an opportunity to study the basic grammatical concepts of the Latin language. The student in Introductory Latin will learn some of the fundamental grammatical and syntactical features of Latin (case, gender, voice, mood, etc.) and will learn many English and Latin vocabulary words, as more and more complex stories are read and dramatized. Students who successfully complete the Introductory Latin course can continue their study of Latin with Advanced Introductory Latin or Latin II. (*½ credit*)

4148 Advanced Introductory Latin 1 (*Grades 9-12; Prerequisite: Introductory Latin*)

Advanced Introductory Latin 1 offers students a further introduction into the basic grammatical concepts of the Latin language and assumes that students have some prior knowledge of Latin (the completion of Introductory Latin). Students who successfully finish the course have the option of continuing their study of Latin by taking Advanced Introductory Latin 2 as a language elective the following year or full-credit Latin II if they wish to do Latin as a full-credit language. Students interested in doing Latin III should consult with the Latin teacher about recommendations for summer work in order to begin at that language level the following year. The student in Advanced Introductory Latin will learn some more of the fundamental grammatical and syntactical features of Latin (case, gender, tense, etc.) and will learn many English and Latin vocabulary words, as more and more complex stories are read and dramatized. In addition to translating from Latin to English, students will also work on translating from English to Latin as a way of strengthening and solidifying their understanding of grammatical concepts and principles. (*½ credit*)

4149 Advanced Introductory Latin 2 (*Grades 9-12; Prerequisite: 2 years of Middle School Latin or the equivalent of Latin I*)

Advanced Introductory Latin 2 offers students a further introduction into the basic grammatical concepts of the Latin language and assumes that students have some prior knowledge of Latin (two years of Latin in Middle School or the completion of Latin I). Students who successfully finish the course have the option of continuing their study of Latin by taking full-credit Latin III the following year. The student in Advanced Introductory Latin will learn some more of the fundamental grammatical and syntactical features of Latin (case, gender, tense, etc.) and will learn many English and Latin vocabulary words, as more and more complex stories are read and dramatized. In addition to translating from Latin to English, students will also work on translating from English to Latin as a way of strengthening and solidifying their understanding of grammatical concepts and principles. (*½ credit*)

## FALL SEMESTER ¼ CREDIT COURSES

Latin In Science and The Law (*Grades 10-12*) *Prerequisite: Prior study of Latin is helpful but not a prerequisite to take the course.* For this spring-semester WLC elective course (.25 credit), students will learn about the important role that Latin has played in the different fields of science and medicine as well as in the language and terminology of American Law. Latin continues to be one of the most popular college majors for students who plan on attending medical school or law school after

completing their undergraduate degrees. Within this particular course, we will examine special topics like the prominence of Latin in the periodic chart in Chemistry as well as the use of Latin in Biology and Medicine. We will also devote some significant course time to learning Latin legal phrases and legal terms that contain Latin roots. This course is recommended for students who are thinking about majoring in a science in college or possibly attending medical school or law school sometime in the future. (.25 credits)

#### SPRING SEMESTER ¼ CREDIT COURSES – OPEN TO NON-LATIN STUDENTS

4194 Classical Mythology in The Arts and Humanities (*Grades 10-12*) *Prerequisite: Prior study of Latin is helpful but not a prerequisite to take the course.* For this fall-semester WLC elective course (.25 credit), students will learn about and examine some of the most significant characters, stories, and motifs of Greek and Roman Mythology. Throughout Western History, mythology has exerted a profound influence on painters, sculptors, writers, and filmmakers. Characters and stories related to the Greek Underworld, for example, have aided in the creation of artistic works as varied as Hades on Broadway to Dante's Divine Comedy. Whether it be famous artists like Michelangelo or Titian, notable writers such as Shakespeare and George Bernard Shaw, or award-winning filmmakers like The Coen Brothers and Wolfgang Peterson, the mythological stories of The Greeks and The Romans have deeply inspired artists in a variety of different artistic endeavors. Within this WLC elective, students will learn about and discuss famous mythological characters and stories as well as explore their deep and lasting influence on specific works of art and literature. (.25 credits)

## Interdisciplinary Studies

Our interdisciplinary courses are rooted in real and urgent complex problem solving and require deep collaboration with others, as well as the development and synthesis of a variety of skills, including but not limited to, critical thinking, research, and professional presentations. All courses require partnership with outside professionals – whether it be a business owner in entrepreneurship, a medical doctor in solutions in medicine, or a financial analyst in Financial Literacy, our students bring together knowledge and skills introduced in a variety of disciplines and engage in application, evaluation and creation.

### Semester Courses (Fall)

Global Entrepreneurship I  
Solutions in Medicine  
Financial Investments

### Semester Courses (Spring)

Entrepreneurship II: Innovation and Invention  
Financial Literacy

5822 Global Entrepreneurship I (*Grades 10, 11, 12.* ) This semester course is designed so that all learning is active, collaborative, and team-based. In the course, students learn by doing as they are given real problems from real entrepreneurs. Students develop skills through working in the field, observing and interviewing to discover problems, and learning techniques for validating hypotheses. The class will work with carefully selected New York entrepreneurs, who present real and urgent business problems with hard deliverables and deadlines. Students' curiosity and sense of urgency drives the curriculum, while the course instructors provide the scaffolding, resources, skills, and background necessary to better understand the complexities and interconnectedness of businesses and start-up ventures. Ultimately, the class is a vehicle to develop character, intellect, and resilience in students. (*½ credit for one semester*)

5823 Entrepreneurship II: Innovation and Invention (*Grade 11-12. Completion of Global Entrepreneurship I is a requirement.*) This semester course is designed as a continuation and deepening of the skills students cultivate in Global Entrepreneurship. Students will create their own businesses using Lean Launchpad and incorporating the Business Model Canvas, Customer Development and Agile Development. They will apply what they have learned from their past experiences of working with business owners and directors of nonprofit organizations to address a problem they want to solve, but are now required to develop a complete model for a scalable and repeatable business. Students will build on their previous knowledge and skills as they learn the many elements of creating a successful new venture (students must build Minimally Viable Products, create financial models, build high functioning teams). (*½ credit for one semester*)

3200 Solutions in Medicine (Grades 11 & 12.) This semester course is designed so that all learning is active, collaborative, and team-based. In the course, students will familiarize themselves with the process of obtaining critical medical information in determining the one true diagnosis of a patient through the use of actual case studies in differential diagnosis. Team taught by a medical doctor and a member of the Friends Academy science department, students will have on-site access to a medical professional as well as a master teacher as they work in teams to seek a diagnosis of complex medical cases. Students will explore key topics in medicine, including but not limited to, patient medical history, testing, imaging, laboratory results, special testing and presentation of symptoms. Students will develop skills through working on and learning techniques for validating hypotheses. Students' curiosity and capacity to collaborate on real and relevant problems drives the curriculum, while the course instructors provide the scaffolding, resources, skills, and background necessary to seek information to confidently draw conclusions with confidence. Ultimately, students will present their diagnosis along with their hypothesis and evidence. (*½ credit for one semester*)

5825 Financial Literacy (Grades 11-12) This semester course is cooperative and inquiry based with students working collaboratively with each other to develop a knowledge and understanding of the elements of financial literacy. Students will be able to understand and effectively use various financial skills, including personal financial management, budgeting and investing. The class will use an Understanding by Design (UBD) framework to explore topics such as financial independence, savings, credit and consumer debt, investments, basic accounting, business ethics and strategies for setting and achieving long-term financial goals. Students will have the opportunity to work with Bloomberg terminals, connecting them to the world's leading business and financial information network. In a real-world context, students will learn to analyze financial markets, assess economic scenarios and interpret the key news developments that impact the global economy. Ultimately, as students learn key economic principles, they will better understand the critical issues confronting nations and the choices they make as citizens. (*½ credit for one semester*)

5826 Financial Investments (Grades 11 & 12) This semester course is designed so that all learning is active, collaborative, and team-based. In the course, students will familiarize themselves with the knowledge and expertise necessary to construct personalized financial plans for real clients with actual financial goals. Team taught by a Friends Academy teacher and a financial expert, students will have on-site access to an actual client(s) who will be able to share their current financial landscape, including net worth, assets, liabilities, working capital, level of risk-aversion and short-term and long-term financial goals. Students will explore key topics in financial investing, including but not limited to, savings, budget, insurance, estate and tax planning, stocks, corporate bonds and investment real estate. Students' curiosity and capacity to collaborate on real and relevant problems drives the curriculum, while the course instructors provide the scaffolding, resources, skills, and background necessary to seek information to confidently draw conclusions with confidence. Ultimately, students will present their financial planning recommendations to real world experts and potential clients. (*½ credit for one semester*)

5827 Board Game Design: Learning Through Play (Spring; *Grades 10, 11 and 12*) Both students and teachers want classes in school to be fun and engaging, and yet this is not always the reality. When we are engaged by a game, we learn and teach ourselves complex patterns and strategies. How can we design games and experiences that bring fun and engagement into the classroom? In this project-based design course, students will begin by learning (through play) some fundamental elements and principles of board game design as well as some basic educational concepts around engagement and motivation. Students will interview teachers and students from throughout the school to identify meaningful learning targets that would benefit from a higher level of fun or engagement. Then, they will work in small groups to develop a game that addresses those learning targets. Students will revise their designs through playtesting and interviewing in order to develop a complete game design for future classroom use. (*½ credit for one semester*)

## Global Studies

Global competence at Friends Academy is rooted in the understanding that 'the peoples of the world are one people, enriched by individual differences and united by a common bond of humanity. Diversity in this world community is its greatest strength; understanding and respect are its greatest gifts.' In an effort to nurture this understanding and to offer FA students important opportunities to develop the sensitivity and the skills needed to become true citizens of the world, strong leaders, and generous humanitarians, the Global Studies courses exist to further student competencies in core areas. These are project-based, interdisciplinary opportunities that allow students to delve thoroughly into research and experiential learning, developing their work around an essential question. Each GS elective pays mind to the UN Sustainable Development Goals [SDG] and is informed by social action, social responsibility, and social justice.

Curricular expectations include:

- An essential question that directs all components of project
- Collaboration
- Sustained relationships with organizations, research centers, schools, institutions, etc. connected to the course topic
- Creative problem solving
- Empathic research and writing for cultural literacy
- Sustainable practices
- Culmination materials, including digital portfolios and oral and written articulation of projects
- Workshop and class components include:
  1. Preparation for Social Action
  2. Presentational speaking and persuasive argument
  3. Seminars specific to the course project/content
  4. Ethnographic writing
  5. Research

### Full-Year Courses

GS French Language and Culture

GS Spanish Language and Culture

GS Honors International Relations

### FULL-YEAR COURSE DESCRIPTIONS

4083 GS French Language and Culture: *What does it mean to be French or Francophone in today's world? (Grades 11,12; Prerequisite: French IV or equivalent.)* Students in this intensive, full-year GS French language elective will explore the essential question, building on their emerging levels of proficiency in the French language as they engage in interdisciplinary topics that will include current events, technology, the environment, sustainability, social and political issues, bilingualism, the arts

and the world of entertainment. Students will focus on collaboration, presentational communication, vigorous research and writing for cultural literacy and creative problem solving, steadily gaining the knowledge and understanding they need to participate effectively and competently in today's global community. Students will develop a relationship with citizens of Quebec, Martinique, France and other francophone communities in order to answer the essential question. As they gain a deeper understanding of the Francophone world today, students will have the opportunity to engage in meaningful dialogue and project work with peers in these communities. Ultimately, students will engage in topics that help to answer the essential question by presenting research on disciplines of greatest interest to them. This course is open to students by application. (1 credit)

4143 GS Spanish Language and Culture: *What does it mean to be a Spanish-speaking member of the global community?* (Grades 11,12; Prerequisite: Spanish IV or equivalent.) Students in this intensive, full-year GS Spanish language elective will explore the essential question, building on their emerging levels of proficiency in the Spanish language as they engage in interdisciplinary topics that will include current events, technology, the environment, sustainability, social and political issues, bilingualism, the arts and the world of entertainment. Students will focus on collaboration, presentational communication, vigorous research and writing for cultural literacy and creative problem solving, steadily gaining the knowledge and understanding they need to participate effectively and competently in today's global community. Students will have the opportunity to develop relationships with citizens from across the Spanish-speaking world. They will engage in meaningful dialogue with people from a variety of Spanish-speaking communities, near and afar, in order to answer the essential question and deepen their understanding of what it means to be a Spanish-speaking member of the global community today. Ultimately, students will engage in topics that help to answer the essential question by presenting research on disciplines of greatest personal interest to them. This course is open to students by application. (1 credit)

5073 GS Honors International Relations: (Grades 10, 11, 12, A- Required in previous year's history course). In this college level (Global Studies) elective, students will develop a deep understanding of the core theories of international relations and apply those theories to present-day issues. Areas of study include the causes of war, nuclear proliferation, terrorism, cybersecurity, international economic policy, humanitarian intervention, and the viability of international organizations such as the United Nations. During the first semester, the class will primarily be driven by interactive lectures with the occasional simulation. During the second semester, the class will slowly shift to a more student-centered approach as students practice arguing different points of view on competing theories while working with sources drawn from the media, policy institutes, and academic journals. (½ credit for one semester)

## Visual and Performing Arts

Required: One and a half credits (beginning with the class of 2026; One credit and a quarter credit for the Class of 2025; One credit for the Class of 2024).

Courses Offered:  
Honors Arts Program

### Performing Arts:

Music Courses  
Dance Courses  
Theater Courses

### Visual Arts:

Digital Art Courses  
Photography Courses  
Studio Art Courses

## Honors Arts Program

The Honors Arts program provides a forum for students with particular interest in the arts to engage more deeply in artistic and aesthetic inquiry through experience, reading, research, and dialogue. This academically challenging program is designed to enhance cognitive thinking skills by connecting the individual arts experience to a larger concept of the role that the arts play in our world

The program, which is to be taken *in addition to* regular Visual and Performing Arts Classes, is open to students in the ninth, tenth, eleventh and twelfth grades who have taken the required prerequisites in their artistic disciplines. Students must apply for and be accepted to the program and must maintain a 'B+' average overall in order to be eligible. Students must also be enrolled in at least one arts class per semester while in the program.

The program includes the following components:

- Each student will be assigned a mentor with whom they will meet on a regular basis.
- Each student will be required to document their creative process and growth as an artist.
- Students will attend a weekly meeting designed to generate dialogue about their arts experiences and create a sense of community.
- Each student will be required to connect with at least three arts events each semester.
- Each student will be required to propose, complete, and present one major project, or several smaller projects, each semester.



Applications for the Honors Arts Program are available online in the spring.

## PERFORMING ARTS – OVERVIEW

The Upper School Performing Arts Program offers a four-year curriculum in Dance, Music and Theater. The dance curriculum focuses on increasingly advanced levels of movement, mind-body connection, choreography and exploration of major dance influences. The music curriculum offers both instrumental and vocal music. It is the goal of the music department to increase the musical ability of each player, to give each student the opportunity to work as part of an ensemble and to make music publicly in concerts and other forums in a way that demonstrates a high standard of excellence for each individual player as well as the ensemble. The theater curriculum lays a foundation of the basic elements of theater and is sequenced through advanced study in the Junior and Senior years. Four years of study are offered in acting and elements of performance including costume, stagecraft and technical theater.

## PERFORMING ARTS – MUSIC

### Full-Year Courses

Wind Ensemble  
Orchestra  
Jazz Band  
Concert Choir  
Chamber Choir

### Semester Courses

Music Studio  
Music Theory

## COURSE DESCRIPTIONS

6306 Wind Ensemble (*Grades 9-12 Prerequisite: Students should be able to play their chosen instrument at a NYSSMA level 4 or above*) This course functions as a large performing group, with a portion of many classes taking the form of a rehearsal. Students also work in smaller groups both in sectionals and to complete projects, as well as combining with the Orchestra for symphony work. Students build upon previous instrumental training through study of music theory and a repertoire of appropriately challenging music. Curriculum is directed not only toward the technical advancement of the students, but also toward their understanding of musical content, structure, and style. The Ensemble will participate in performances twice a year. (*Full Year; ½ credit*)

6304 Orchestra (*Grades 9-12 Prerequisite: Students should be able to play their chosen instrument at a NYSSMA level 4 or above.*) This course functions as a large performing group, with a portion of many classes taking the form of a rehearsal. Students also work in smaller groups both in sectionals and to complete projects, as well as combining with the Wind Ensemble for symphony work. Students build upon previous instrumental training through study of Music Theory and a repertoire of appropriately challenging music. Curriculum is directed not only toward the technical advancement of the students, but also toward their understanding of musical content, structure, and style. The Ensemble will participate in concerts twice a year. (*Full Year; ½ credit*)

6308 Jazz Band (*Grades 9-12 Prerequisite: Students should be able to play their chosen instrument at a NYSSMA level 4 or above. 9th graders must also be enrolled in Wind Ensemble. Audition required.*) This performance-based course emphasizes the various styles of jazz and blues. The course will introduce improvisation and appropriate stylistic concepts. Participation in this ensemble provides an outlet for individual creativity and expression while relating the importance of the individual performer to the success of the group. This group performs several times throughout the year. (*Full Year; ½ credit*)

6331 Concert Choir (*Grades 9-12.*) This course functions as a large performing group, with many of the classes taking the form of a rehearsal. Students also work in smaller groups both in sectionals and to complete projects. The course studies and performs intermediate to advanced choral repertoire for mixed voices. Students focus on rehearsal techniques, reading music, vocal production and group dynamics. This choir performs several times a year. (*Full Year; ½ credit*)

6303 Chamber Choir (*Grades 10-12 Audition required.*) The focus of the group is to have an opportunity to learn challenging material created specifically for small ensembles. This group performs throughout the year both at formal concerts and in more informal settings. Students in this group must also be enrolled in Concert Choir. (*Full Year; ½ Credit*)

6288, 6289 Music Studio I & II (*Grades 9-12*): Finding your musical voice and learning to express your ideas through music are at the heart of this semester-long course. Musical structure and analysis are examined and the fundamentals of computer-based music making, recording, and production are taught to give students the tools to capture their musical ideas. Proficiency with an instrument is not required for success in this course. In Music Studio II all work is project based. (*Semester Course; ¼ credit, tech or art credit*)

### 6353 Music Appreciation I

This semester-long course will work through music in western culture and its interconnection with art, literature, politics, religion, socio-economic changes, and world influences. Students will develop a working knowledge of musical vocabulary, listening skills, and gain the ability to identify a wide variety of music styles as well as familiarity with monumental musical pieces and major composers. (*Semester Course; ¼ credit*)

### 6359 Music Appreciation II

This semester-long course will expand upon Music Appreciation with a deeper dive into the American and European culture and landscape in the Postmodern period. Students will continue to connect music to other art forms, politics, religion, socio-economic changes, with a deeper dive into world influences, specifically the cultures that have influenced American Jazz and American and English Rock. Students will spend a significant period of the class exploring the music and political culture in Europe and America during the 1930's and 1970's. (*Semester Course; ¼ credit*)

6350 Music Theory (*Grades 9-12*) This course will provide a foundation of music theory for the intermediate level musician that will prepare them for advanced study. It is designed for performing musicians (piano, instrumental, vocal) to deepen their knowledge of the musical idiom. The coursework includes written concepts, terminology and notation, exercises in music reading and sight singing, practice in ear training, and work in analysis and composition. This class fulfills the prerequisite for the AP Music Theory Course. Regular quizzes, exams, and compositional projects are given throughout the term. Students must be able to pass a basic entrance exam in order to be part of this course. (*Semester Course; ¼ credit*)

6352 AP Music Theory (*Grades 11-12; Prerequisite Music Theory or independent study Music Theory and passing the entrance exam with a B or better*) This online course is for serious music students who plan to pursue music as part of their college course of study. Students must be proficient on their instrument or voice. The coursework includes advanced work in written concepts, terminology and notation, exercises in music reading and sight singing, practice in ear training, and work in analysis and composition. This course meets every day. Students will be assigned a mentor from the music faculty. The coursework will prepare the students for the Music Theory Advanced Placement examination. (*Full year; 1 Credit*)

## PERFORMING ARTS – DANCE

### Full-Year Courses

Dance I /II

Advanced Expressions in Dance I/II

6721 Dance I

6722 Dance II

*(By audition or instructor approval only)* Dance is a strong choice for students who enjoy movement and are interested in expanding their movement vocabulary. Students with a love of dance are welcome, whatever their background in technique. (Ballet Jazz, Modern, Tap, Lyrical, Hip Hop, Street, etc.) Students will come together to learn more about the body in motion and the creative process. These classes may be applied to either PE or Art requirements. *(Full Year; ½ credit)*

6720 Advanced Expressions in Dance I

6723 Advanced Expressions in Dance II

*(By audition or instructor approval only)* Advanced Expressions in Dance may be taken for two years. The class is an intense study in technical and choreographic skills. Students develop a personal creative process, choreograph, and learn repertoire. This course may be applied to either PE or Art requirements. *(Full Year; ½ credit)*

## PERFORMING ARTS – THEATER

### Full-Year Courses

Theater Studies

Performing Arts

Advanced Performance Studies: Acting and Directing

Advanced Performance Studies: History and Literature

### Semester Course

Stagecraft

Stagecraft Apprenticeship Program

## FULL-YEAR COURSE DESCRIPTIONS

6362 Theater Studies *(Grades 9-10)* This course is a solid jumping off point for both the serious theater student and the student who is interested in increasing their skill level and perhaps participating in school plays. The curriculum emphasizes the exploration of literary structure, dramatic context, character development, and improvisation. The playwriting unit in the class focuses on writing monologues. *(Full Year, ½ credit)*

6364 Performing Arts *(Grades 10-11; Prerequisite: Theater Studies or departmental approval)* In this

course the students take the skills learned in Theater Studies and begin to focus on script analysis, intermediate character development, understanding of subtext, and the Stanislavskian principles of acting. The playwriting unit focuses on writing dialogue. The course develops aesthetic awareness and an understanding of the concepts, elements, principles, and theories of performance. Throughout the year students learn to give and receive honest feedback in preparation for the directing work to follow. *(Full Year; ½ credit)*

6357 Advanced Performance Studies I *(Full Year; 1 credit)*

6358 Advanced Performance Studies II *(Full Year; 1 credit)*

*(Grades 11-12; Prerequisite: Performing Arts or department approval)*

Advanced Performance Studies I & II are designed to work together as a comprehensive two year curriculum that will meet the expectations of both the students who want to further their own knowledge and enjoyment of the theater and the students preparing themselves for rigorous college arts and literature programs. Drawing upon history, literature and styles of acting and directing, students work to develop an understanding and approach to their work as a creative artist. Playwriting is structured as a writer's workshop and student's work is shared in Originalworks. Students may take one class and not the other, but are encouraged to take the full two years in order to experience the cumulative curriculum. *(Full Year, 1 credit; Seniors may apply to take this course as an English credit, but must receive department approval. Students taking the course for English credit will receive additional written assignments with each project.)*

## SEMESTER COURSE DESCRIPTIONS

6366 Stagecraft I *(Grades 9-11)*

This course is designed for the student who has an interest in how things work, how things go together, and what makes things run. Starting from the beginning by exploring the theater space and how it works, students then move on to learning to choose and use hand and power tools and simple carpentry skills. The class is rounded out by learning about the rudiments of sound, electrics and rigging. The course is entirely hands-on. *(Semester course, ¼ credit)*

6369 Stagecraft II *(Grades 9-11; Prerequisite: Stagecraft I)*

Building off of the work in Stagecraft I, this course dives into the design process. Students will learn how to analyze a script for production and concept clues, developing their own original lighting and scenic designs for a theoretical production. Students will create their own lighting plot and floor plan, learning how to craft perspective drawings to scale. The course culminates in each student building a 3D model of their design. *(Semester course, ¼ credit)*

6378 Stagecraft Apprenticeship Program

Once a student has completed stagecraft they may apply for the Stagecraft Apprenticeship Program. This program is designed for the serious student who wishes to do in depth work in all areas of stagecraft including set building, lighting, sound, costumes, special effects, stage management and

production and design. Students will work closely with a mentor to design an individualized program of study. Students will be responsible for documenting their progress and creating a portfolio of their work. The student's portfolio must be presented in order to complete each level of the Apprenticeship. Each level of the apprenticeship requires completion of a minimum of 80 hours. Honors designations can be earned through additional design or leadership components. Admittance to the Stagecraft Apprenticeship Program is by application only. *(Semester Course, ¼ credit)*

#### 6212 Introduction to Costuming:

This course welcomes students into a more specific area of Technical Theater; Costuming. In this class we will take an in-depth look at the process that transforms clothes into costumes and an actor into their character. What begins as a study of costume history and script analysis, grows into inspired design work and creative construction techniques. At the end of the semester's coursework students will have a basic knowledge of key points in costume history and knowledge of backstage/dressing procedures, as well as be able to demonstrate basic sewing and costume design skills through hands-on project work. *(Semester Course, ¼ credit)*

## VISUAL ARTS

The Upper School Visual Arts program offers students the opportunity to immerse themselves in experiences that include traditional photography, studio art (drawing, painting, printmaking) and digital media. All Visual Arts courses enable students to develop an individual artistic voice with an emphasis on self expression, creative problem solving, visual literacy and critical thinking. A variety of classes are offered beginning with foundational level courses and building to Advanced Placement Portfolio. In all Visual arts classes, students are evaluated on investment in artistic process, engagement in class activities and discussions, and a demonstrated understanding of concepts and techniques. Throughout the year, the Dolan Center Art Gallery showcases a selection of student artwork completed in all Visual Arts courses.

### VISUAL ARTS: Digital Art

#### Full-Year Courses

AP Art Portfolio (1 credit)

#### Semester Courses (all ¼ credit)

Digital Design and Illustration 1

Digital Design and Illustration 2

Motion Arts 1

Motion Arts 2

Advanced Media Arts 1

Advanced Media Arts 2

### DIGITAL ART COURSE DESCRIPTIONS

6291 Digital Design and Illustration 1 (Grades 9-12) In Digital Design and Illustration 1, students are introduced to a variety of new media concepts through project-based learning. Each guided project introduces several new concepts and processes so that by the end of the semester, students will have filled their digital toolbox with a variety of skills. Projects build upon each other so early concepts are reinforced throughout the course, ultimately leading to an independent experience. Students will learn basic illustration techniques, how to work with text, photo compositing, lighting and texture. Students will work primarily with iPads and Apple Pencils to develop a work ethic that supports them in utilizing the Elements and Principles of Art and Design from sketch to final product. (Semester course; ¼ credit)

6292 Digital Design and Illustration 2 (Grades 9-12, Prerequisite: Digital Design and Illustration 1) In this course, students build upon the knowledge they gained in *Digital Design and Illustration 1* to create semi-guided projects with more choice and independent development. Projects review technical concepts from DDI I and begin to build upon more advanced artistic techniques such as how process and choice of digital materials impact the concept and message. Students will spend

time critiquing work with one another and will begin reflecting with the group on how to manage challenges and how to improve their own methods. Students continue to work with iPads and Apple pencils to further develop and refine their work. *(Semester course; ¼ credit)*

6293 Motion Arts 1 *(Grades 9-12)* In Motion Arts 1, students will learn the building blocks of film and animation through a combination of hands-on projects and through dissecting films in class. Because film requires group work, students will have opportunities to both take the lead on projects and to support others in their creative journeys. Students will learn basic camera techniques, simple scriptwriting, storyboarding and editing as well as how to animate brief shorts films. Learn what goes into making your favorite on screen entertainment so that you can begin to tell your own stories! *(Semester course; ¼ credit)*

6294 Motion Arts 2 *(Prerequisite: Motion Arts 1)* In this continuation from Motion Arts 1, students will build upon the basics to learn more advanced filmmaking and animation techniques. With an emphasis on individual storytelling, students will learn higher end camera operation as well as greenscreen, lighting, and foley sound. Students will be expected to develop their artistic voice as well as their filmmaking style in this project-based course through discussion and critique of both group and individual work. *(Semester course, ¼ credit)*

6295 Advanced Media Arts 1 *(Prerequisite: Digital Design and Illustration 2, Motion Arts 2 or Digital Photography 2)* In this unique course, students who have previously completed levels 1 and 2 of any Digital course are invited to expand their artistic voices with an emphasis on idea generation, development and execution. Students from multiple disciplines come together to explore prompt based projects. Each student is challenged to respond to prompts in their own unique way within their specific medium(s) of study. The group then gets together to discuss how each individual came up with their answer to the prompt and to discuss how different each response can be. This course is designed to act as a bridge between guided, assignment based projects of prerequisite courses and the completely independent curriculum of AP Studio Art for students who wish to continue with their studies. *(Semester course, ¼ credit)*

6296 Advanced Media Arts 2 *(Prerequisite: Advanced Media Arts 1)* In this continuation of Advanced Media Arts I, students further develop their abilities in idea generation, development and execution in preparation for AP Studio Art. Please note, this is the highest level of study available for Motion Arts as film and animation are not acceptable mediums for AP Studio Art as per the college board. *(Semester course, ¼ credit)*

6024 AP Art Portfolio *(Grade 12; Prerequisites: 3 consecutive levels of Studio, Photography or Digital Art courses in Grades 9-11; portfolio interview and teacher approval)*

This course provides an enriching and challenging studio situation for the highly motivated and advanced art student. The emphasis is on continued preparation and development of a portfolio under the guidelines set forth by the College Board. Students are required to develop a sustained investigation in an area of study and are expected to demonstrate their creative process through



practice, experimentation and revision of a body of artwork that is independently designed and executed. Students must demonstrate sufficient skill in an artistic discipline, as determined by teacher review in the preceding spring. Students are expected to submit five original works of high quality (by mail) for adjudication and all work will be accompanied by a written statement describing their process and artistic objectives. Time outside of class may be required. Each student will be expected to work with the instructor in maintaining a digital portfolio of their artwork for submission to the College Board in May, and will prepare and mount a spring exhibit in the gallery. The digital portfolio may also be used by the student as supplemental material for college applications. *(Full Year; 1 credit)*

## **VISUAL ARTS: PHOTOGRAPHY**

### Full-Year Courses

AP Art Portfolio *(1 credit)*

### Semester Courses (all ¼ credit)

Digital Photography 1

Film Photography 1

Digital Photography 2

Film Photography 2

## **COURSE DESCRIPTIONS**

6274 Digital Photography 1 *(Grades 9-12)* In this introductory level class, students will learn the basics of Digital Photography with an emphasis on composition, storytelling and editing. Students will study professional photographers as well as the work of their peers to learn compositional rules unique to photography, value, and editing. Students will learn how to manipulate their original photographic material to tell a story and represent their own unique perspective of the world through a visual lens. *(Semester course, ¼ credit)*

6260 Film Photography 1 *(Prerequisite: Studio Art 1, Grades 10-12)* In Film Photography, students will be immersed in the traditional and unique process of darkroom photography. Students will explore the fundamentals of the photographic process while being introduced to the manual camera and its functions, such as shutter speed, ISO, and f-stops. Through the process of learning how to take a quality photo, developing rolls of film, and enlarging and printing their original images in the darkroom, students will discover how light and time are the basic elements of this time-honored art form. *(Semester course, ¼ credit)*

6275 Digital Photography 2 *(Prerequisite: Digital Photography 1)*

As a continuation of Digital Photography 1, this course enables students to develop their strengths in Digital photography as they expand their technique and application of ideas. Emphasis is placed on learning how to edit original photographs using digital software. Each unit is designed to target a

specific topic both of technical and aesthetic importance. Students will explore different ways in which to approach their individual ideas. Students will also continue to develop their analytical skills as they participate in class critiques and study the work of historical and contemporary photographers. *(Semester course, ¼ credit)*

6261 Film Photography 2 *(Prerequisite: Film Photography 1)* A continuation of Film Photography 1, this course enables students to further develop their visual strengths as a photographer as they sharpen their technical skills. Students will explore creative processes and techniques, both in and out of the darkroom, such as cyanotype, double exposure, and alteration of film negatives. Students will also continue to develop their analytical skills as they participate in class critiques and study the work of master photographers. *(Semester course, ¼ credit)*

6024 AP Art Portfolio *(Grade 12; Prerequisites: 3 consecutive levels of Studio, Photography or Digital Art courses in Grades 9-11; portfolio interview and teacher approval)* This course provides an enriching and challenging studio situation for the highly motivated and advanced art student. The emphasis is on continued preparation and development of a portfolio under the guidelines set forth by the College Board. Students are required to develop a sustained investigation in an area of study and are expected to demonstrate their creative process through practice, experimentation and revision of a body of artwork that is independently designed and executed. Students must demonstrate sufficient skill in an artistic discipline, as determined by teacher review in the preceding spring. Students are expected to submit five original works of high quality (by mail) for adjudication and all work will be accompanied by a written statement describing their process and artistic objectives. Time outside of class may be required. Each student will be expected to work with the instructor in maintaining a digital portfolio of their artwork for submission to the College Board in May, and will prepare and mount a spring exhibit in the gallery. The digital portfolio may also be used by the student as supplemental material for college applications. *(Full Year; 1 credit)*

## **VISUAL ARTS: STUDIO ART**

### Full-Year Course

AP Art Portfolio *(1 credit)*

### Semester Courses (all ¼ credit)

Studio Art 1

Studio Art 2

Studio Art 3

Advanced Studio Art

Ceramics 1

Ceramics 2

Advanced Ceramics

Art & Community

## COURSE DESCRIPTIONS

6100 Studio Art 1 is designed to help students become visual problem solvers while gaining experience for future studio art courses. Students will be introduced to the elements and principles of design and discover how they support the creation of a successful work of art. Through experiences in drawing, painting, and printmaking, students will explore new materials and techniques, and will develop their ability to visually problem solve by responding to a given prompt/concept offered by the instructor. As they strengthen their artistic confidence and develop their ability to take creative initiative based on personal interests, students have time to experiment in their sketchbooks with various techniques and materials, and are given leeway for self-expression in each of the projects. Studio Art I is a prerequisite for all other studio art courses. *(Semester course, ¼ credit)*

6102 Studio Art 2 *(Prerequisite: Studio Art 1)* This course continues to aid students in becoming visual problem solvers while gaining experience necessary for advanced level studio art courses. They will have the opportunity to work with new drawing, painting, printmaking and design materials/processes in order to develop their artistic voice, and there is much leeway for self-expression in each of the projects as they respond to a given prompt/concept offered by the instructor. There will also be a final project based on personal interests. Students discuss their idea with their teacher/mentor, but make their own decisions about which mediums they would like to explore for this project, and how they envision expressing their ideas. It is a required course for any student interested in enrolling in Studio 3, Studio 4, all Advanced Studio courses and AP Art Portfolio. *(Semester course, ¼ credit)*

6104 Studio Art 3 (pre-AP) *(Prerequisite: Studio Art 2)* Expanding materials/processes in drawing, painting, printmaking and design, this is a class for advanced students, who will engage in challenging work and explore visual problems of greater complexity. Works developed in this class can be used as a visual art supplement to a college application. It is highly recommended for any student seriously interested in studio arts. *(Semester course, ¼ credit)*

6101 Advanced Studio Art *(Prerequisite: Studio Art 1, 2 and 3)* In this studio course, students make self-driven artistic choices that utilize any of the material/processes learned in Studio Art 1, 2 and 3. Using their prior knowledge and guidance from the instructor, students initiate projects reflective of personal interest. Emphasis will be placed on documentation of the artistic process and self-discovery. It is expected that students are motivated to develop and refine their creative ideas and, in the process, strengthen their artistic voice and visual problem solving skills. *(Semester course, ¼ credit).*

6201 Art & Community *(Grades 10-12; Prerequisite: Studio Art 1)* This semester-long fall course explores what it means to engage in art making alongside students of varied ages and abilities within our school community. Students will research the history of public and community art and explore

the role that the Visual Arts has played in community activism through a Quaker lens. Emphasis in this course will be placed on developing and co-teaching collaborative art experiences with our lower school students with the intention of fostering a community of belonging. (*Semester course; ¼ credit*)

6220 Ceramics 1 (*Grades 10-12; Prerequisite: Studio Art 1*) A studio course introducing students to the properties of clay. Students will make self-driven choices about the projects they wish to explore as they gain confidence and experience in this medium. Students discuss their ideas with their teacher/mentor, but make their own decisions about which technique they would like to explore for this project, and how they envision expressing their ideas. Materials, processes and techniques include coil, slab, use of drape molds, sculpture, throwing on the wheel, hand building, glazing and firing, and will include demonstrations by instructors. (*Semester course, ¼ credit*)

6221 Ceramics 2 (*Prerequisite: Ceramics 1*) In Ceramics 2, students will explore more fully the potential of clay through a variety of sculptural, decorative and utilitarian approaches. Students discuss their ideas with their teacher/mentor, but make their own decisions about which technique they would like to explore for this project, and how they envision expressing their ideas. Student choice will facilitate their understanding of clay aesthetics and self-expression. (*Semester course, ¼ credit*)

Advanced Ceramics (*Prerequisite: Ceramics 1 and 2*) In this studio course, students make self-driven artistic choices that utilize any of the processes learned in Ceramics 1 and 2. Using their prior knowledge and guidance from the instructor, students initiate projects reflective of personal interest. Emphasis will be placed on the artistic process and self-discovery. It is expected that students are motivated to develop and refine their creative ideas and, in the process, strengthen their artistic voice and visual problem solving skills. (*Semester course, ¼ credit*)

6024 AP Art Portfolio (*Grade 12; Prerequisites: 3 consecutive levels of Studio, Photography or Digital Art courses in Grades 9-11; portfolio interview and teacher approval*) This course provides an enriching and challenging studio situation for the highly motivated and advanced art student. The emphasis is on continued preparation and development of a portfolio under the guidelines set forth by the College Board. Students are required to develop a sustained investigation in an area of study and are expected to demonstrate their creative process through practice, experimentation and revision of a body of artwork that is independently designed and executed. Students must demonstrate sufficient skill in an artistic discipline, as determined by teacher review in the preceding spring. Students are expected to submit five original works of high quality (by mail) for adjudication and all work will be accompanied by a written statement describing their process and artistic objectives. Time outside of class may be required. Each student will be expected to work with the instructor in maintaining a digital portfolio of their artwork for submission to the College Board in May, and will prepare and mount a spring exhibit in the gallery. The digital portfolio may also be used by the student as supplemental material for college applications. (*Full Year; 1 credit*)



## Quaker Life: Principles and Practices

Religious study and practice is an ongoing experience at Friends Academy. The influence of Quakerism in the life of the school demands that teachers and students strive for an informed sense of community, harmony, equality, and simplicity in classroom settings, Meetings for Worship, the work program, and service to the wider community.

### Required

9th grade: Transitions/Quakerism

12th grade: Senior Reflections: On Identity, Leadership, and Legacy

9th-12th grades: Quaker Meeting for Worship

### COURSE DESCRIPTIONS

6120 Transitions/Quakerism (*Grade 9, required*) This course is an introduction to the faith, practice and history of the Religious Society of Friends (Quakers), a chance for them to reflect on how this faith tradition shapes our school community and an opportunity for students to explore their own beliefs and practices. Over the course of the semester students study early Quakers, explore the Quaker testimonies as they relate to our lives today, and learn about ways that Quakers have and continue to live those testimonies in their work for social justice. Students also learn about and engage in Quaker practices such as meeting for worship, worship sharing and Quaker decision-making. (*required course, meets all year, ¼ credit each semester*)

6141 Senior Reflections (*Grade 12, required*)

This seminar style course asks students to draw from life experiences, engage in intentional reflection, and participate in experiential activities with their peers. The course sets out to explore a collection of themes in a content arc that reflects the interests and needs of our student collective. Our themes include relevant topics in Quakerism, philosophy and religion, as well as relevant experiences and literature about identity, history, relationships, gratitude, leadership, self evolution, and legacy. When this course is taught by a team of faculty, students can expect each section to be unique in its journey. Classes also practice guided mindfulness and students reinforce their learning of Quaker practices for meeting and clerking. Students also keep a journal over the course of the semester. Our areas of skill learning also include: active listening, effective speaking, leadership studies/development, personal development (e.g. emotional intelligence), professional development (time-management), and wellness. (*required course, meets one semester, ¼ credit*)

Quaker Meeting for Worship (*Grades 9-12*) All students and teachers in the Upper School are expected to attend the Meeting for Worship once each week. This, “the most important appointment of the week,” interrupts our busy lives and gives time for reflection.

## Physical Education And Interscholastic Athletics

A physical education or interscholastic athletic credit is *required* for students in grades 9, 10, 11, and 12 each trimester in order to graduate. To receive credit, a student must attend and participate in a minimum of 80% of the classes every term. Assessments and daily grading are based on a rubric that addresses three areas:

- Application of fitness concepts
- Application of movement concepts
- Application of personal & social responsibility

Students who fail to meet this requirement will not receive credit and will be required to complete their physical education requirement in the summer.

The philosophy of the program is to promote sound principles of physical, social, and psychological development through well-organized physical education and dance classes as well as interscholastic athletics. The curriculum stresses the importance of maintaining an active and healthy lifestyle through a variety of leisure time activities as well as an exposure to the more conventional team activities. Wellness concepts are included in the curriculum to help students develop habits and skills that contribute to overall physical and mental well being.

*\*Participation in a team sport or in the winter strength & conditioning or cardio-fitness programs after school, satisfies a student's physical education requirement for that season.*

### Physical Education Curriculum

#### 9<sup>th</sup> – Personal Fitness

- Strength & Conditioning
- Cardio-fitness training
- Yoga/Pilates

#### 10<sup>th</sup> – Sport Education

#### 11<sup>th</sup>/12<sup>th</sup> – Electives

- Sport Education
- Cardio-fitness
- Weight training
- Dance
- Yoga/Pilates

### Boys Team Sports (JV = Junior Varsity, V = Varsity)

- JV and V Baseball
- JV and V Basketball
- JV and V Crew
- V Cross Country

JV and V Football  
V Golf  
V Ice Hockey  
JV and V Lacrosse  
JV and V Soccer  
Squash  
JV and V Tennis  
V Indoor and V Outdoor Track

Girls Team Sports (JV = Junior Varsity, V = Varsity)

JV and V Basketball  
V Cheerleading  
JV and V Crew  
V Cross Country  
JV and V Field Hockey  
V Golf  
JV and V Lacrosse  
JV and V Soccer  
Squash  
JV and V Softball  
JV and V Tennis  
V Indoor and Outdoor Track

6721 Dance I

6722 Dance II

*(By audition or instructor approval only)* Dance is a strong choice for students who enjoy movement and are interested in learning more. Students with a love of dance are welcome, whatever their background in technique. (Ballet Jazz, Tap, Lyrical, Hip Hop, Street, etc.) Students will come together to learn more about the body in motion and the creative process. These classes may be applied to either PE or Art requirements. *(Full Year; ½ credit)*

6720 Advanced Expressions in Dance I

6723 Advanced Expressions in Dance II

*(By audition or instructor approval only)* Advanced Expressions in Dance may be taken for two years. The class is an intense study in technical and choreographic skills. Students develop a personal creative process, choreograph, and learn repertoire. This course may be applied to either PE or Art requirements. *(Full Year; ½ credit)*



## Health and Wellness

### 6508 Health Concepts (Required Grade 9)

This semester course is designed to give factual information related to current health concerns. Topics such as alcohol/drugs, their use and abuse, reproduction, birth control, nutrition, and mental health are covered. The focus of class discussion is the psychology of young adulthood and dealing with healthy decision-making.

### 6509 Critical Health Issues (Required Grade 11)

This class is an interactive, student-centered course focused on critical health issues confronting today's young adults. Through the use of class discussions, films and group work, the goal is to develop positive decision making skills that students can practice long after they leave Friends Academy.

## Overnight Experiences

Outdoor Education Trip In the past, this required ninth grade trip provides a social experience in an outdoor education environment. Students participate in backpacking, canoeing, climbing and overnight camping on a three-day trip with Friends Academy teachers. This trip also provides an opportunity for the many new entering students to meet new friends and begin to transition socially to their class.

Washington, D.C. Trip This required eleventh grade American History and Literature trip provides the students an opportunity to connect what they are learning in their courses (American Literature and History) with a visit to the nation's capital. The trip is also focused on core elements of our Quaker testimonies. The QPCE, History and English departments develop a unique and exciting itinerary for the junior class. They have an opportunity to see a play, visit historic museums and sites in D.C., including the Holocaust museum and the African-American History museum, and begin to do some on-site research for a required assignment when they return. This trip also provides the opportunity for students to bond as a class.

Senior Retreat Seniors spend one overnight and most of a day at a retreat outside of campus. The senior class advisors plan activities and discussions to help seniors focus on their upcoming year. The students spend time reflecting on goals for their senior year and begin planning senior fundraising events. The retreat site has a beach, pool and fields to allow for recreation time as well. This trip serves as a bonding experience for the class and advisors.

## OTHER PROGRAMS

Driver Education Students age 16 and over may elect to take Driver Education at Friends Academy. The course is offered twice during the academic year, contingent on sufficient interest. Announcements are made concerning sign-up for Driver Education. Anyone wishing to take this

course must have a NY State permit at the start of the program. Since enrollment is limited, students with earliest birth dates are given preference. There is a fee for this course. See Upper School Assistant to Principal for registration information and cost.

Independent Study for Grades 11 and 12 Students wishing to conduct an independent study must complete an Independent Study Application and submit it to the Principal at least one month before the start of the term in which the independent study will be conducted. The description of the project should be thorough and detailed, including a timeline, a list of work to be completed, and means of assessing the student's performance and learning. A faculty sponsor who has agreed to support the project must sign the application. The student will be asked to present his or her independent study proposal to the Upper School department heads committee, which will make a recommendation regarding approval to the Principal.

# Notes