

# Upper School

2010-2011

FRIENDS SELECT

Rose Hagan, Head of School  
Jesse Dougherty, Director of Upper School  
Kendall Cameron, Assistant Director of Upper School and Dean of Students

COURSE OFFERINGS



## TABLE OF CONTENTS

Introduction and Graduation Requirements	2
Student Support Systems and Personnel	4
The English Department	5
The History Department	8
The Mathematics Department	10
The Science Department	13
The World Languages Department	16
The Fine Arts Department	19
Visual Arts	19
Performing Arts	22
The Religious Thought Department	23
The Physical Education Department	24
Information Services	26

## INTRODUCTION

The upper school's college preparatory curriculum is designed to prepare our students for success in college and beyond. In the program, students find curricular incentives and supports that include advanced courses, interdisciplinary humanities sequences in the ninth and tenth grades, developmentally appropriate course sequencing, and electives in each academic department. The school's commitment to community service, experiential outreach, and globalism, all grounded in Quaker principles, is embodied in the ninth- and tenth-grade service projects, the senior internship, the class commitment to follow a cause through high school around community service, and exchange opportunities.

## GRADUATION REQUIREMENTS

Each student in upper school must earn at least 24 credits. Freshmen and sophomores must take a minimum of 6 credits each year (including 5 Majors). Juniors and Seniors must take a minimum of 5.5 credits each year. A student must obtain the approval of the Director of Upper School, in order to take more than five major courses. The Director of Upper School will approve requests to take fewer than five major courses and no more than 6.5 credits only in special circumstances. Departmental graduation requirements are as follows:

**4 credits of English**, including IDS-9, IDS-10, English 11, and senior electives

**3 credits of History**, including IDS-9, IDS-10, and United States History

**3 credits of Mathematics**, including one year of math beyond Geometry and Algebra II (Algebra I is a prerequisite for the program)

**3 credits of Science**, including laboratory chemistry and biology courses

**2 credits of the same World Language**, taken consecutively during grades 9 through 12, up through and including level 3

**1 credit in Religious Thought**, consisting of 2 half-credit courses taken in grades 9 and 10

**2 credits of Physical Education**, including swimming proficiency or course completion

**1 credit of Fine Art**, including .5 credit in visual arts and .5 credits in performing arts

**or**

**1.5 credits of Fine Art**, in either visual arts or performing arts

**4 additional elective credits**

**Activity Requirement in all grades**

**Senior Internship/Independent Project**

Graduation requirements for students entering upper school in grade 10 or later are established by the Director of Upper School. Waivers from graduation requirements may be made by the Director only for appropriate and clearly documented reasons.

## Activities Requirement

Extracurricular activities provide opportunities for students to develop leadership, new skills and talents; and, to learn the value of teamwork and cooperation. Freshmen and Sophomores are required to participate in at least one season of after-school athletics or one drama production (performance or stage & tech); they are also encouraged to participate in student organizations, which meet during the school day. Juniors and Seniors are required to participate in at least one season of after-school athletics, one drama production (performance or stage & tech), or to serve in one of the following capacities: Student Government President, Yearbook Editor, *Falcon* Editor, *Cauldron* Editor, Mock Trial team member, Peer Tutor, or (at the discretion of the club advisor) Club Leader. A sample of the student organizations available during 2008-2010 includes: Worship and Ministry, Thespian Troupe, Black Student Union, Composers' forum, and Sexuality and Gender Alliance.

## **Summer Reading Requirement**

Because Friends Select encourages students to develop reading as a lifelong habit, a program of summer reading is required for students in Grades 5-12. In grades 7-12 students are asked to read a common reading book and a reading pair over the summer. Each student chooses one reading pair chosen by various faculty and staff members. All students and faculty in grades 7-12 also read a common book. In the fall, reflection on each pair and the common book is provided through un-graded discussion seminars scheduled during the school day and or a special assembly. These readings are then integrated into the curriculum in various ways.

## **Junior Internship Option**

The Junior Internship is an optional opportunity for students to pursue placements during Spring Break of Junior year, the subsequent summer break, or after school during Senior year. Students spend time in Philadelphia workplaces supervised by on-site adults (mentors) and an internship advisor from Friends Select School. The internship experience provides a useful complement to the often more abstract learning that takes place in an upper school classroom. One goal of the program is to familiarize students with the management of a business, the application of a service, or the manufacture of a product. Another is to explore potential career interests. During the internship, students begin to demonstrate an understanding of appropriate workplace behaviors and acquire a greater appreciation for the useful and meaningful work available in the city. A student's completion of this optional internship appears as part of her or his school record.

## **Senior Internship/Independent Project**

The Senior Internship/Independent Project is a graduation requirement for seniors. At the conclusion of their regular courses and final exams in mid-May, seniors spend three weeks in Philadelphia workplaces supervised by on-site adults (mentors) and an internship advisor from Friends Select School. The senior internship program provides many of the same benefits as the Junior Internship option. Students are required to give an oral presentation of their experience. Internships are evaluated on a pass/fail basis. If a Senior has already completed a school-sponsored internship, the student may undertake another internship or may complete a pre-approved, independent three-week project either on or off campus. The project may be academic or service-oriented. The goal of the internship or project is to facilitate the transition from the expectations of high school course work to those of college and adult life. Although they may be working on an internship or project at an off-campus location, Seniors are expected to attend regularly scheduled end-of-year events such as the athletic awards and yearbook ceremonies, baccalaureate, graduation rehearsal and graduation. For academic or other reasons, as determined by the director of upper school, a student may be directed to fulfill this requirement by an alternative assignment.

## **Independent Study**

Independent study with an instructor may be possible for a junior or senior with special interest and talent in a particular subject area. Courses or study projects can take place either on- or off-campus, under the auspices of an academic department. The student must demonstrate a strong commitment to the subject matter, either through past record, recognized potential, or a developing interest, and must demonstrate reliability in meeting personal responsibilities. To begin the independent study process, the student must discuss the proposal with the upper school director and the appropriate department chair. Students must propose yearlong and first semester independent studies by the preceding April. Students must propose second semester independent studies by the preceding November.

## **STUDENT SUPPORT SYSTEMS AND PERSONNEL**

### **The Director of Upper School**

The upper school director, with the help of the department chairs, oversees personnel and the academic program. The director guides individual teachers and departments in the creation and review of the upper school curriculum. The director also approves students' academic schedules.

### **The Assistant Director of Upper School and Dean of Student**

The assistant director of upper school and dean of students supervises the advisory system and arranges, conducts, and follows up on conferences with students, families, and teachers. The assistant director is available to support students and families as they work to define and resolve any difficulties that may arise. She also oversees extracurricular activities, special programs, discipline, and other aspects of student life.

### **The Grade Dean**

Each upper school grade is assigned a faculty member to act as grade dean. The grade dean reads all grade reports, gets to know each student, and makes recommendations concerning students' academic programs and disciplinary procedures. In addition, the grade dean coordinates extracurricular activities within the grade and works closely with the student class officers and parent volunteers.

### **The Advisor**

Each student in the upper school chooses or is assigned an advisor. The student meets with his or her advisor during an advisory period each week, and during the year each student has the opportunity to have individual conferences with the advisor to discuss academic and social concerns. The relationship is considered a private one and, except in serious situations, faculty members do not normally divulge personal information unless authorized by the student. Advisors are generally included in parent/teacher conferences.

### **School Counselor**

At the request of the dean, guidance and counseling issues are reviewed by the school counselor, who is available to meet with families and school personnel.

### **Learning Specialist**

The learning specialist provides support to students and faculty in the area of learning differences and disabilities. The learning specialist performs classroom observations, consults with teachers, helps students develop compensatory strategies, and assists in implementing necessary accommodations for students with documented learning disabilities.

### **English as a Second Language**

In the middle and upper schools, students who are not native speakers of English are placed in an appropriate level of instruction in the English as a Second Language program. Students are assessed at the beginning of the school year and assigned to an appropriate learning group. These small, individualized classes meet regularly to work on vocabulary development, grammar, conversation, literature and written expression; the coursework draws on the content of students' other classes.

## THE ENGLISH DEPARTMENT

The English department's mission is to promote facility with the English language and students' appreciation of the rich traditions of English literature. The goal is to provide each student with a strong literary background by teaching first-rate literature, to encourage proficiency in communication through a rigorous, sequenced program of writing and presentation, and to foster critical thinking. The syllabi reflect the attempt to integrate time, value, history and theme. Core courses and electives are skills-oriented and directed toward stimulating independent learning responsive to collective needs and intellectual goals.

The English department curricula are richly diverse and firmly grounded in basic skills. Skill development in reading, writing, listening, speaking, discussing, and vocabulary-building is stressed at every instructional level along with close reading and study of representative British, American, and world literature.

A range of electives is offered to seniors in each semester of the senior year, and with proper approval to juniors whose schedules permit their taking a second English course in the junior year. Departmental electives may be designed around a genre, a theme, an historical period, or around a distinct author. Seniors and juniors have the option of taking two English electives concurrently for a double English major. Independent study with an instructor can sometimes be arranged for a student with special interest and talent in English.

<b>E091</b>	<b>Interdisciplinary Sequence-9</b>	<b>one credit</b>	<b>ninth grade</b>
-------------	-------------------------------------	-------------------	--------------------

The ninth-grade component of the three-year interdisciplinary sequence brings the Middle School humanities curriculum into the Upper School. The course consists of an introduction to literature by means of an examination of genres: students study literature through an introduction to the formal features of fiction, drama, poetry, and memoir. Lead texts in the first semester are selected to provide clear examples of fiction and autobiography. Readings include such works as *The Catcher in the Rye* and *I Know Why the Caged Bird Sings*. Most lead texts in the second semester complement the history component of IDS-9. Texts include *Beowulf*, *Romeo and Juliet*, and excerpts from *The Canterbury Tales*. The ninth-grade skills sequence extends the eighth-grade emphasis on grammar, mechanics, and paragraphing to include more ambitious compositions such as analytical, narrative, and comparison/contrast essays as well as various creative writings. Students will work to develop original thesis statements, which they learn to support with textual evidence and critical analysis. A series of museum visits and a "museum night" at the Philadelphia Museum of Art, when each student gives a public presentation, complement the curriculum.

<b>E101</b>	<b>Interdisciplinary Sequence-10</b>	<b>one credit</b>	<b>tenth grade</b>
-------------	--------------------------------------	-------------------	--------------------

IDS-10, the culmination of the three-year interdisciplinary sequence, begins with a look back at the Renaissance studied in ninth grade and then a look forward to intellectual movements that challenged that traditional world. The study of *Macbeth*, a warrior who challenged the order of his world, serves as a starting point for exploration of movements that include Romanticism and Modernism. Readings cover a wide range of literature, and may include such additional texts as *Frankenstein*, *Great Expectations*, *Waiting for Godot*, *Master Harold and the Boys*, *Mrs. Dalloway*, short fiction by authors such as Conrad, and Romantic and Modernist poetry. Yearlong reading goals consist of honing students' close reading skills and their ability to perform literary analysis through examination of plot elements, character development, and theme. Writing goals focus on mastery of the fundamental elements of the basic essay in its expository forms, with special emphasis on introductions, conclusions, and use of textual evidence for support.

**E111**

**English 11**

**one credit**

**eleventh grade**

English 11 is a year-long course in which students approach American literature thematically through a study of various genres, time periods, and perspectives. To gain a greater understanding of American identity, students will explore such works as *The Great Gatsby*, *Their Eyes Were Watching God*, *Slaughterhouse 5*, *The Narrative of the Life of Frederick Douglass*, and *A Streetcar Named Desire*. Supplementary reading will include a range of short stories, poems, and essays by such writers as Edgar Allan Poe, Langston Hughes, Raymond Carver, and Charlotte Perkins Gilman. Students will be expected to make in-depth connections between the different works, characters, modes and themes of American literature. In addition, students will continue to refine their grammar and compositional skills; to that end, they will write and revise personal, comparative, creative, and analytical essays of varying lengths. Students will learn to augment their critical reading and writing skills by utilizing literary criticism as support in their essays and discussions

**English as a Second Language (ESL)**

**one credit**

**ninth-twelfth grade**

ESL is a mandatory full-credit course for all non-native English-speaking students who have not yet achieved communicative competence in reading, writing, listening and speaking in English. This three-year, sheltered program includes ESL I, II, and III, and these courses fulfill the students' English requirements. Placement into ESL sections is based on a student's proficiency with English and the discretion of the ESL and English department faculty. ESL classes are small, usually between three and five students, so students get the individual attention they need in order to build solid foundations in English. ESL classes are structured with two important aims in mind: to give explicit instruction in ESL content and to teach academic reading and writing intensively in order to support ESL students in their core classes. Teaching materials will include representative literature, short stories, poetry and essays, some of which will come from the English curriculum, as well as other appropriate materials selected by the ESL and English faculties. In addition, students will use materials specifically targeted to English as a second language learners. The ESL course uses a content-based language instruction approach.

**English 12**

**one credit**

**twelfth grade**

Twelfth-grade English consists of two semesters of required elective courses that students select in the spring of the junior year. Depending on enrollment and scheduling, these electives may also be open to interested juniors.

**Eleventh and Twelfth Grade English Electives (one-half credit each):**

**\*\*\*\*PLEASE NOTE- SIGN UP FOR ENGLISH ELECTIVES WILL BE LATER IN THE SPRING\*\*\*\***

**First Semester**

**EE19**

**Shakespeare I**

This course will serve as an introduction to the major works of the greatest writer in the English tradition. We will read five plays (a history, two tragedies, a comedy, and a romance) as well as examine some of the sonnets. Special attention will be paid to Shakespeare's dramatic sense, his use of figurative language, and to the poetry of his blank verse. Students will be introduced to some of the vast body of Shakespearean criticism written over the past 500 years.

**EE52**

**Media Studies**

Media studies focuses on three overlapping areas in an attempt to make students savvy producers and consumers of media. The first area of study is journalism: students will learn to recognize and follow sound journalistic practices, and they will write news and feature stories. As we move into the second area of the course, technology, students will publish their writing in the multiple formats of today's media, including but not limited to web pages, audio/video podcasts, and blogs. In the third area of the course, students will continue to

produce writing while learning media literacy, which involves examining the history and methods of today's mass media culture in order to comprehend their nearly incessant exposure to media. Throughout the course, students will explore issues in the school and citywide communities to produce original, interesting work for the school's multimedia publication, *The Falcon*. A student may take the course only once

**EE12            The Power of Memory: The Art of Memoir Reading and Writing**

How do memories shape our lives? Memoir is the literary representation of the interior life; it is a form at times reflective and at times self-indulgent. We will read several twentieth century memoirs, such as Angela's Ashes, A Heartbreaking Work of Staggering Genius, and The Basketball Diaries, as well as selected essays and poetry. Students will write short memoirs connected to the texts and focusing on the development of a personal voice and on the ways in which reality is siphoned through memory.

**Second Semester**

**EE31            Irish Literature**

Ireland has produced remarkable storytellers since ancient times. This class will survey Irish literature (tales, poetry, fiction, drama) from Celtic times up into the twentieth century. We will read ancient myths; Celtic, monastic, and medieval poetry; and major modern writers including Yeats, Joyce, Synge, O'Casey, and Heaney. Students will spend some time investigating the complex, dramatic course of Irish history in order to provide a context for the reading.

**EE48            American Road Trip**

The country is big, lots of people have cars, and until recently, gas was cheap. There is a literary (as well as an actual) tradition of hitting the road (especially in an East to West direction), absorbing the landscape, having adventures and in the process coming to a more developed understanding of oneself. In this elective, we will read several Road Trip novels, starting with Mark Twain and including writers such as Jack Kerouac, John Steinbeck, Mona Simpson, some creative nonfiction (Woody Guthrie), and view selected Road Trip movies such as *Thelma and Louise* and *Bonnie and Clyde*. All these works will help us define the lure of the road trip as a metaphor for life and its yearnings. Students will write analytic papers, reviews, and be responsible for presentations.

**EE52            Media Studies**

Media studies focuses on three overlapping areas in an attempt to make students savvy producers and consumers of media. The first area of study is journalism: students will learn to recognize and follow sound journalistic practices, and they will write news and feature stories. As we move into the second area of the course, technology, students will publish their writing in the multiple formats of today's media, including but not limited to web pages, audio/video podcasts, and blogs. In the third area of the course, students will continue to produce writing while learning media literacy, which involves examining the history and methods of today's mass media culture in order to comprehend their nearly incessant exposure to media. Throughout the course, students will explore issues in the school and citywide communities to produce original, interesting work for the school's multimedia publication, *The Falcon*. A student may take the course only once.

## THE HISTORY DEPARTMENT

The main focus of the history department is to guide students towards a better understanding of our world, its past, and the different peoples within it. The department emphasizes the skills of careful reading and analysis, thoughtful writing and speaking, and respectful listening. History courses are required in ninth, tenth, and eleventh grades. The department offers semester electives in the senior year.

The core courses provide a foundation for understanding Western civilization as well as its relation to traditional cultures. Periods of history in China, Japan, and India, for instance, are selected for exploration in the ninth and tenth grade years. The department also hopes that each course of study will engender sensitivity to differing ways of living and awareness of creative possibilities for a better world. Electives offer area studies and topics in the social sciences. All courses are designed for students' wide range of interests.

A major feature of the history program is sequential research. Each of the required courses focuses on skills which are developed throughout the first year of the history sequence. The ninth-grade IDS curriculum includes several research projects, including a Japan research project, a research essay, and a presentation of a work of art at the Philadelphia Museum of Art. Appropriate citation techniques are taught at this level. Subsequent research includes the tenth-grade research essay in the fall, a research essay in eleventh grade, and the eleventh-grade Washington Research Project. These projects incorporate skills such as discovering and assessing resources and analyzing historical information. The curriculum emphasizes the use of computer databases and the development of oral presentation skills.

<b>H091</b>	<b>Interdisciplinary Sequence-9</b>	<b>one credit</b>	<b>ninth grade</b>
-------------	-------------------------------------	-------------------	--------------------

The ninth-grade component of the three-year interdisciplinary sequence (or IDS) brings the middle school humanities curriculum into the upper school. IDS-9 begins by looking at the Tang, Sung, and Yuan dynasties in China for the first quarter of the year and traditional Japan in the second quarter. This investigation into East Asia provides a strong contrast to the examination of the West in Islam and Europe in the second semester. IDS-9 employs a selection of thematic lenses (religion, government, art and architecture, family and gender, cultural interchange) to accomplish its mission. Lead history texts include short fiction from China and Japan, poetry of Li Bai and Basho, selections from the *Qur'an*, "The Life of St. Catherine of Genoa," and selections from *Eric and Enide*. Five class visits to the Philadelphia Museum of Art culminate in an evening when each student gives his or her own public presentation of a work. The ninth-grade skills sequence extends the eighth-grade emphases on usage, mechanics, and paragraphing to include more ambitious compositional strategies (the multi-paragraph essay) and a research essay.

<b>H101</b>	<b>Interdisciplinary Sequence-10</b>	<b>one credit</b>	<b>tenth grade</b>
-------------	--------------------------------------	-------------------	--------------------

IDS-10, the continuation of the three-year interdisciplinary sequence, commences with the Reformation in Europe and traces the various revolutions—political, social, economic, and intellectual—that unseated the traditional world explored in ninth grade. The third quarter of IDS-10 features a study of nineteenth-century Africa and India, including George Orwell's *Burmese Days*, and the European penetration into these regions. Using short philosophical and political essays and examples of art and music, this course examines the foundations of Western society. Classroom work is augmented by trips to study art and architecture and one trip to an opera. A research essay is required in the first semester, and a research project, combining research and debates investigating certain aspects of Philadelphia, occurs in the spring semester.

<b>H111</b>	<b>United States History</b>	<b>one credit</b>	<b>eleventh grade</b>
-------------	------------------------------	-------------------	-----------------------

This course surveys key events in U.S. history from English colonization to 1989, including the Founding, the Civil War, industrialization, civil rights movements, the Great Depression, and the Cold War. A wide variety of primary sources and historical commentaries are used to encourage students to explore a number of approaches to these issues and to refine their own analytical skills. In addition, students will read *The Narrative life of Frederick Douglass*. In the spring semester, students write a major research essay and present their findings to the school community. In May there is a Washington Research Project, which combines research, interviews with public officials in Washington, D.C., and culminates in debates at school.

## **Twelfth Grade History Electives (one-half credit each)**

**\*\*\*\*PLEASE NOTE- SIGN UP FOR HISTORY ELECTIVES WILL BE LATER IN THE SPRING\*\*\*\***

### **First Semester**

#### **HE51                      The Civil Rights Era**

The Civil Rights Era is a semester long elective course that takes a multi-faceted look at the years 1948-1978 in the United States. We will focus on the social changes that happened during that time period, the ways those changes happened, how the changes were tied to earlier events and ideas in United States history, and the legacies and implications of those changes for the United States today. The course will be organized around several key questions. In pursuing these questions, students will be using many of the skills necessary to do historical thinking and learning. These included reading and taking notes from a variety of sources, including textbooks, websites, newspapers, books, lectures, and documents. They will use the vocabulary of history, write analytical and persuasive essays on historical topics, compare and contrast points of view, analyze maps and charts, conduct interviews, and prepare arguments. Students will also learn to compare, contrast and analyze texts, to interpret a museum visit, to conduct historical research, and to examine issues both chronologically and thematically.

#### **HE50                      Comparative Government**

This course will introduce students to the concepts and methods used in comparing the world's political systems. Students will primarily study three countries—Great Britain, Iran, and China—learning about topics including their political cultures, economic and belief systems, political institutions, social cleavages, economic and political changes, and historical and modern policy issues. There will be opportunities, however, to study other governments around the world. Throughout the course, students will be continuously comparing the countries across these content areas, as well as considering the impact of broader factors such as globalization. Typical class activities will include world news updates, seminar-style class discussions, short oral and visual presentations, and writing. In addition to textbook readings and daily news from around the world, we will also regularly examine primary sources, policy briefs, charts, graphs, photo slideshows, College Board "briefing" papers, journal articles, CIA World Fact book data, and more.

### **Second Semester:**

#### **HE53                      Liberty and the Law**

This course will provide an introduction to the American legal system, covering constitutional law and the appeals process, as well as criminal and civil law. Students will explore the foundational concepts, procedures and principles in our common law system, as well as the history of our legal institutions and civil liberties. In doing so, we will also consider broad questions about our constitutional rights and the role of law in society, as well as the interaction between the different branches and levels of government. Students will examine many sources, including the Constitution, case law at the state and federal levels, journal articles, films, editorials, and more. Participation in seminar-style discussions, debates, presentations (oral and visual), and writing will be major components of the course, and students will also participate in courtroom simulations like mock trial and Supreme Court simulation.

#### **HE52                      History of US Cities Spring**

The History of US Cities will focus on the development of early American cities, then examine the factors that influenced cities as they grew both in size and importance throughout the 19<sup>th</sup> and 20<sup>th</sup> centuries. We will pay special attention to post-World War II suburbanization and the decay of the modern city, finishing with a look at the renewal of inner city life in the last twenty years. Required Readings include *The Death and Life of Great American Cities* by Jane Jacobs and excerpts from *Evolution of Urban Society* by Chudacoof. The grading for the course will be based on completed homework assignments, essays, class work, the class notebook, and tests. Some work will be available via the Online Learning Center.

## THE MATHEMATICS DEPARTMENT

The mathematics program is designed to help students master basic algebraic and geometric skills needed for work at the college level. Basic courses stress the development of problem-solving skills and the use of logical patterns needed to write a valid proof. Along with skills, the mathematics department stresses the historical development of ideas and their aesthetic aspects through class discussions and projects. The Math/Science Symposium, which is held in April, offers students an opportunity to share with the community their research into mathematical topics or problems. The department strives to meet the needs of each student, so that everyone can realize his/her mathematical potential. (AP) denotes that a particular course provides students with the background needed to take the College Board Advanced Placement exams.

Students may elect to move ahead in the mathematics sequence by taking advantage of the Summer Academic Program. The following courses may be offered:

Geometry      Pre-Calculus/Trigonometry      Calculus

One year of math beyond geometry and Algebra II is required for graduation. To satisfy this requirement, students follow one of the sequences below:

**Ninth Grade:**      Geometry

**Tenth Grade:**      Algebra II

**Eleventh Grade:**      Pre-Calculus; Functions and Trigonometry; Elective

**Twelfth Grade:**      Calculus; Elective

or

**Ninth Grade:**      Algebra I

**Tenth Grade:**      Geometry

**Eleventh Grade:**      Algebra II

**Twelfth Grade:**      Pre-Calculus; Functions and Trigonometry; Elective

Qualified students who have completed or are completing their chosen sequence may elect, with the permission of the department, an advanced course such as Probability and Statistics, Linear Algebra, or Advanced Calculus.

**M091                  Algebra I    one credit**

This course focuses on strengthening students' computational skills in solving equations, and graphing linear equations. Since the course is a prerequisite to the three-year required math sequence, it does not count as one of the three math credits required for graduation.

**M101/M102                  Geometry/ Accelerated Geometry    one credit**

Topics covered in Geometry include triangles, quadrilaterals, polygons, circles, two-dimensional similarity and congruence, the Pythagorean theorem, trigonometric ratios, and areas and volume. Students work with compass and straightedge constructions, congruence and similarity proofs, and use Geometer's Sketchpad as an investigation tool. Accelerated Geometry emphasizes proof and draws on algebra extensively. It stresses depth of coverage of applications, problems, and proofs, and may cover such additional topics as the laws of sines and cosines, topics in non-Euclidean geometry, vectors, and graph theory. Daily homework may require students to apply concepts addressed in class to new problems in creative ways. Therefore strong Algebra I,

graphing, and notetaking skills are required, as well as the ability to work independently, creatively, and with genuine interest on difficult problems.

**M921/M922                      Algebra II / Accelerated Algebra II                      one credit**

Algebra II develops algebraic and geometric skills as a preparation for Precalculus/Trigonometry. Students study the major functions: linear, quadratic, polynomial, rational, radical, exponential and logarithmic. Topics include function operations, inverse functions and domain and range. Simplifying, solving and graphing techniques are developed throughout the year. Students become familiar with using the TI-83 graphing calculator to supplement their understanding. Accelerated Algebra II will move at a brisk pace and will assume a strong foundation of algebraic skills. Students should only take Accelerated Algebra II if they have achieved a high level of success in previous mathematics courses, earning a B+ or higher in Geometry, and if they are seeking ways of being challenged in mathematics. There will be an emphasis on abstraction, derivation, proof and problem solving and additional topics will be examined if time permits.

**M111                      Pre-calculus and Trigonometry                      one credit**

This course is a preparation and prerequisite for calculus. Students will study analytic geometry, conic sections, trigonometry, polar coordinates and complex numbers, sequences and series, and an introduction to limits and derivatives. Vectors and matrices will be discussed if time permits. Graphing calculators will be used throughout the course. Prerequisite: B or better in Algebra II.

**M121                      Calculus                      one credit**

This course builds upon concepts mastered in the algebra and pre-calculus courses. It covers limits of functions and differentiation and integration of real-valued functions in one variable. Emphasis will be placed on applications and the use of graphing calculators and computers. A graphing calculator will be required. Prerequisite: B or better in pre-calculus. (AP)

**M130                      Advanced Calculus                      one credit**

This course, equivalent to the second or third course of college calculus, develops the ideas acquired in calculus and extends to further integration techniques. Topics include: l'Hopital's rule, improper integrals, infinite series, vectors, vector-valued functions, functions of several variables, and multiple integration. Prerequisite: Calculus. (AP)

**M122                      Liner Algebra                      one credit**

Linear algebra provides a foundation for students to continue their studies in mathematics, computer science, or other sciences. The curriculum includes: linear systems of equations, vectors, determinants, vector spaces, subspaces, spans, linear dependence and independence, basis and dimension, eigenvalues and eigenvectors, linear transformations, change of basis.

**M132                      Probability and Statistics                      one credit**

This course lays the foundation for advanced work in probability and data analysis. The following are a few of the topics covered in this course: basic probability theory, conditional probability and independence of events, discrete and continuous random variables, binomial and normal distributions, descriptive statistics, statistical estimation theory, and hypothesis testing. Prerequisite: successful completion of Algebra II

**M133**

**Advanced Topics in Probability and Statistics**

**one credit**

Advanced Topics in Probability and Statistics is an extension of the Probability and Statistics course. The following are a few of the topics covered in the course: a review of basic probability, covariance, correlation, Poisson and multinomial distributions, Markov processes, method of least squares, curve fitting, and inference (revisited). If you have not taken the Probability and Statistics course, you may take this one if you are currently taking Pre-calculus, Calculus, or Advanced Calculus.

**M112 Functions and Trigonometry**

**one credit**

Taken after the completion of Algebra II, this course is an alternative to Precalculus and can serve as a preparatory course for either Precalculus or Probability and Statistics. The curriculum will build on skills learned in Algebra II as well as examine new topics in various areas of mathematics. Topics studied can include: exponential and logarithmic functions, sequences and series, trigonometry and trigonometric applications, statistics and probability, matrices and analytic geometry. The TI-83 calculator will be utilized throughout the course and there will be a focus on modeling. This course does not serve as a prerequisite for Calculus.

## THE SCIENCE DEPARTMENT

In science, both theory and practice are essential. The department prides itself on applying intellectual concepts to the physical world, which creates an atmosphere of academic rigor, self-discovery and life-long learning. Some students find learning through laboratory work easier than learning through the traditional teacher-textbook combination, while other students are more comfortable with the theory-based approach. The science department gives much focus to merging these two worlds. The department feels that every student is capable of initiating scientific thought and that learning is often based on intellectual curiosity. The department therefore tries to instill in the student, through the laboratory experience, an appreciation of the creative aspects of discovery.

The science course sequence in the upper school is as follows: ninth grade--chemistry, tenth grade--biology, and an additional credit of science by the end of twelfth grade. The additional credit of science may be fulfilled by taking one (1) full-year course in science, or two (2) half-credit courses in science during the same academic year. Note: Three years of upper school science, including chemistry and biology, are required for graduation. (AP) denotes that a particular course provides students with the background needed to take the College Board Advanced Placement exams.

### **SC91                      Chemistry    one credit    ninth grade**

This year-long course provides a basic foundation in chemistry. The chemical and physical properties of elements and compounds as they are related to atomic structure, bonding, and the modern periodic table are examined. The properties of solutions, gases, stoichiometry, rates of reaction, acids and bases, redox reactions, and basic organic compounds are also covered. Whenever possible, students are given the opportunity to experience new concepts directly by performing experiments.

### **S101                      Biology    one credit    tenth grade**

This yearlong course explores the big picture and nuances of introductory biology. Through daily class discussions, interpretation of scientific text and laboratory investigation, this class challenges students to sharpen their critical thinking and analytical abilities. During laboratory activities, students apply their scientific method skills to the study of life. Topics covered include: evolution, cellular and molecular biology, plant and animal biology, genetics, populations, and ecology.

### **S120                      Physics    one credit**

Assuming that students are inherently curious about the world around them, this course seeks to provide an opportunity to ask questions about the physical world and find answers to many of the questions. The rigorous mathematical treatment of the subject is balanced against the playful and experiential exploration of the subject. Concepts, which are carefully and methodically developed in the classroom, are demonstrated concretely in the lab. Topics covered are mostly those of classical physics, including mechanics, light, heat, sound, electricity and magnetism; special relativity and quantum theory are briefly explored.

### **S123                      Advanced Chemistry    one credit**

The Advanced Chemistry course is designed to apply greater mathematical rigor to the principles that were introduced in the standard chemistry course. The basics of thermodynamics are applied to enthalpy problems, equilibrium studies, oxidation reduction reactions, and kinetics. There is laboratory work in each of these areas. The material covered is approximately that of an introductory college course, and participating students may take the College Board Advanced Placement exam. Each student undertakes a research project that has a large practical component. Prerequisite: B or better in Chemistry. **(AP)**

**C101                    Computer Science                    one credit**

Students with a strong interest in computers are given the opportunity to study programming methodology, data structures, and algorithms. The main language used is Java. There is also a section of the course that uses a graphical interface. The program used for this section is Alice.

**C201                    Advanced Computer Science                    one credit**

Students with a strong interest in computers who have completed C101 will continue their study of programming methodology, data structures, and algorithms using the language Java. This course will prepare students for the Advanced Placement test in computer science. (AP)

**S124                    Advanced Biology                    one credit**

Advanced biology is a yearlong course that is designed for students who have a deep interest in science and have a solid understanding of biology from a previous high school level course. In addition to learning about basic biological themes in greater depth, students are exposed to more advanced subject matters such as biotechnology, animal behavior and bioethics. Emphasis is placed on experimentation, as students work on advanced lab activities and complete an independent research project. Pre-requisite: Chemistry (may be a co-requisite), and B or higher in Biology.

**S121                    Green Physics                    one credit**

This course will explore physics through the lens of alternate energy sources. Standard physics topics including mechanics, waves, thermodynamics, electricity and magnetism, and optics will be related to their use in alternative energy sources such as wind, solar, hydroelectric, geothermal, tidal energy etc. The math requirement for this course is successful completion of Algebra II.

**Semester Electives (one-half credit each)**

**First Semester**

**SE01                    Introduction to Electronics and Robotics**

In this course, basic elements of modern electronics are explored. After learning how to use operational amplifiers and digital circuits, students program autonomous robots.

**S125                    Human Biology**

In this first-semester course, students apply their knowledge of biology and chemistry to the study of human anatomy and physiology. Associated diseases and pathology are also explored. All students in this course should have satisfactorily completed Biology and Chemistry or be currently enrolled in Chemistry. Through laboratory activities and possible field trips and guest speakers, students achieve a deeper understanding of the human body, diseases, and scientific research. Prerequisites: Biology and Chemistry.

**S128                    Great Debates in Science**

This course investigates some of the major issues in science that have challenged established scientific theories and assumptions. Topics may include: conflict between Galileo's theories and church doctrine, the impact of Darwin's work in evolution, Einstein's theories of relativity, atomic energy, and cloning. The growing acceptance and eventual leadership of women in scientific research and discovery are also considered. Students use original documents and Internet research to supplement standard texts.

## **Second Semester**

### **S126 Environmental Science**

How does nature sustain life, how do we interact with our natural environment, and how can we live in a sustainable fashion. These are the broad questions students explore in the semester-long environmental science course. Students utilize their knowledge of general biology and chemistry to study the dynamics of ecosystems. In an effort to understand the benefits and challenges of sustainability, they will analyze the causes and consequences of major environmental problems, as well as discuss possible solutions. Students will conduct laboratory experiments, work collaboratively on problem solving activities, go on field trips, and complete an independent research project.

### **S127 Astronomy/Cosmology**

This course begins with a short description of what we can observe in the universe. It then moves on to examine how we can interpret what we observe to construct models of the objects found in the universe and how they evolve over time. We will also look at the universe itself and the latest models that try to explain how the universe came to be in the state it is and what the future state of the universe may be.

## THE WORLD LANGUAGES DEPARTMENT

The world language program is designed to equip each student with a basic level of proficiency in the oral and written use of a world language, as well as some knowledge of the literature, culture, and traditions associated with the countries where it is spoken. In Spanish, French, and Italian courses, all classes are conducted primarily in the world language. A wide variety of teaching methods are used to stimulate interest and to respond to diverse learning styles. These include but are not limited to the use of gestures, drama, images, field trips, and films. In addition, the French, Spanish, and Mandarin curricula feature interactive learning that incorporates CD-ROM and DVD-ROM activities, website links, and student tutorials. Two years' study of one world language in the upper school, up through and including level three, is the basic requirement for graduation. Returning upper-school students must complete two consecutive years of the same World Language, per the previous requirement. In Chinese, French, Spanish, and Italian classes, in addition to a written final exam, students' aural/oral ability is assessed through an individual oral exam.

### **LL10 Latin I one credit**

The first course in Latin develops the vocabulary, grammar, and syntax needed for successful translation. Although Latin is not a spoken language, students learn the classical pronunciation in order to appreciate the metrical and qualitative beauty of Latin poetry. Exposure to authentic texts occurs with selections from Horace, Pliny, Seneca, Terence, and Suetonius. (Offered only with sufficient enrollment.)

### **LL20 Latin II one credit**

This course continues to develop the vocabulary, grammar, and syntax needed for successful translation. Readings may include minor authors such as Aulus Gellius, Seneca, Juvenal, Quintilian, Augustine, and Lucan; along with major authors such as Ovid, Pliny, and Petronius.

### **LL30 Latin III one credit**

This course emphasizes translations and elementary composition. Readings may include selections from minor authors such as Eutropius, Augustus, and Asconius; and major authors such as Cicero, Pliny, Caesar, and Catullus.

### **LL40 Latin IV one credit**

This course is a more advanced reading course. Based on instructor and student interest, we will choose works from a range of classical Roman poets, essayists, and historians. The works of Ovid and Vergil's *Aeneid* will be the main focus. Prerequisite: average of B in Latin III and the permission of instructor

### **LL50 Latin V one credit**

This course continues the curriculum of Latin IV. Based on instructor and student interest, we will choose works from a range of classical Roman poets, essayists, playwrights, and historians. Prerequisite: average of B in Latin IV and the permission of instructor

### **LL60 Latin VI one credit**

This course, an advanced study of Latin literature, may be offered as an independent study.

**LM10                    Mandarin Chinese I                    one credit**

This course introduces students to pinyin (a system of Romanization for Standard Mandarin), and the sounds, tones, and characters of the Chinese language. Units of study are arranged around different themes that reflect China's history, culture and daily life. The basic elements and structures of the language (i.e. common verbs, adjectives, nouns, phrases, statement and question formation, negation, interrogative words, telling time, ordering food) are presented via these thematic units. Study is enhanced by use of calligraphy, music, and folktales.

**LM20                    Mandarin Chinese II                    one credit**

This course reinforces and builds upon the foundations of vocabulary, structure, character recognition, and oral communication skills gained in Mandarin I. Students will study some of the more complex sentence patterns of Mandarin, while accumulating vocabulary and increasing their speaking, reading, and writing abilities. They will also delve deeper into the lifestyle, culture, and history of the Chinese people through presentations of music, art, film, and the study of some basic Chinese idiomatic language.

**LM30                    Mandarin Chinese III**

The third level of Mandarin moves students further beyond rudimentary language and into more complex conversational structures and vocabulary. Students will engage topics from Chinese society and culture and will utilize more advanced language patterns in real-life scenarios. They will also continue to improve their reading and writing abilities. Videos, sound clips, articles, music, and art will facilitate the students' interaction with the target culture and aid their language acquisition. Group discussion and projects allow students to refine their communication skills.

**LM40                    Mandarin Chinese IV**

This advanced level of Mandarin continues to build upon the grammatical and lexical base students have built in their previous study. Group discussion continues to be an important component of advancing their language skills. Reading and discussion themes center on folktale literature, news articles, and current events. Culture is examined through a variety of media (i.e. music, art, film, and short stories). To enroll in Level IV, students should have earned a B average in Level III and receive the permission of the instructor.

**LS10                    Spanish I                    one credit**

This course emphasizes oral and aural work, especially listening and producing the world language in **natural** social contexts. Use of images and props enhances the notion of "being in the culture" and helps avoid the need for translation. Grammar covered includes but is not limited to the present tense of regular and some irregular verbs, adjective agreement, the use of definite and indefinite articles, question formation, and the use of possessives and some object pronouns. Skits and oral presentations as well as some elementary writing help students reinforce and retain the various skills they have learned.

**LS20                    Spanish II                    one credit**

This course reinforces and expands upon the learning process started in Level I. The student's ability to function in the language is increased through skits, games, and oral presentations. Past tense, object pronouns, future tense, commands, and demonstratives are covered. Students are expected to be able to perform with greater fluency in situations similar to those introduced in Level I, along with more complex situations that require changing of tense.

**LS30 Spanish III one credit**

This course further reinforces meaningful, accurate communication in the target language. The major tenses are reviewed and drilled, and students are expected to use them in various realistic contexts. More sophisticated grammar is also included, such as the use of relative and disjunctive pronouns and the use of indirect discourse. Reading and writing are at a more advanced level, and students begin the rudiments of analyzing literature.

**LS40 Spanish IV one credit**

In this course, literary analysis begins in earnest. Students read, discuss, and write critically on the short stories, plays, and novels that they read. Literature and film are presented within their historical and cultural context, and a grammar review supplements classroom activities and readings and accompanies written assignments. A greater degree of sophistication and command of the grammar is expected in the regular written essays and classroom discussions. Students are exposed to literature from various cultures that use the target language and have an opportunity to do creative writing as well. To enroll in Level IV, students should have earned a B average in Level III and receive the permission of the instructor.

**LS 50/ LS50 French V/Spanish V one credit**

Literary analysis continues in which more complex works are read and analyzed. Film continues to supplement the literature as a means to examine the historical and social context of the language. Grammar tends to be taught from the students' own writing. This is a seminar that prepares the student for college-level work in world languages. Enrollment is by permission of the department.

**LF60/LS60 French VI/Spanish VI one credit**

This course, an advanced study of the language, may be offered as an independent study.

**LI10 Italian I one credit**

This introductory course emphasizes all four basic communicative elements of language learning, i.e. listening, reading, writing and speaking. Cultural themes are explored as students become better acquainted with contemporary Italian society. Basic grammar and vocabulary are practiced daily. Elementary projects are also incorporated into the class. This course is offered as an elective to juniors and seniors who are able to build upon the language skills acquired in their previous study of world languages. This elective course does not fulfill the language requirement for graduation

## THE FINE ARTS DEPARTMENT

The fine arts program in the upper school teaches skills and acquaints students with an understanding of the history, creative philosophy, and the magnitude of accomplishments in various visual and performing arts fields. Art and the making of art are critical to students' understanding of culture, environment, and diversity. Students' aesthetic development is central in a liberal arts education. Art, whether visual or performing, is within all of us, and the department endeavors to nurture this ability in each student. The goal is to provide an arts environment in which technique and vision, creativity and the joy of the creative process, are honored. Students are offered a variety of courses in the visual and vocal arts, and instrumental music.

Each course in the visual arts curriculum is sequentially designed, so students develop basic visual, design, and technical skills in two- or three-dimensional media. The course sequence begins with Art Foundations, which is the prerequisite for all other visual arts courses. As students demonstrate competence and interest, they are encouraged to initiate projects that deepen their technical study and foster creativity. During oral critiques, a regular component of all visual art courses, students offer questions and insights about their own, and each other's work. Local and regional museum and media field trips are planned to involve students directly in the aesthetic, historical, and cultural, as well as the technical aspects, of the art world.

The special phenomenon of performance requires the participation of both performer and audience. Accordingly, courses in the performing arts emphasize the active involvement of students as both skilled performers and knowledgeable spectators. Students are taught about the language of music and its history. In addition, individual exploration and composition are among the concepts and activities which help students become better as musicians or singers; judge better as informed audience members; and indeed, live better on the world's stage.

### Visual Arts

**va10                      Art Foundations                      one-half credit**

The Art Foundations course is the prerequisite to all other visual arts courses. It provides students with a core of knowledge about how to work with the tools and media used in advanced courses in two- and three-dimensional art. Students are introduced to basic elements of drawing, color theory, painting and design. Key concepts include work with line, shape, texture, value and color. Students alternate between working from observation and more conceptual design-based projects. The purpose of the class is to develop awareness of the rigors of seeing and understanding design as a visual language. Aspects of art history will also be discussed. Students wishing to bypass this course must submit a portfolio of six to ten recent pieces of two- or three-dimensional art before registering for an advanced art course.

**VA30                      Drawing and Painting I                      one credit**

Drawing and Painting I is a major course in which students continue to explore the concepts learned in Art Foundations. There is an expectation that these will be applied with greater confidence and a willingness to take creative risks. Students again work from observation as well as imagination. The goal is to develop greater competence and sophistication in their thinking. Projects include still-life, landscapes, and direct observational portrait work. Research essays, sketchbooks, critiques and class presentations expand students' visual vocabulary and creative understanding. Students will begin to assemble their individual portfolios. Prerequisite: va10 Art Foundations, or permission of the department.

**VA35                      Drawing and Painting II                      one credit**

This major course is designed for advanced students who want to continue to explore the elements presented in Drawing and Painting I. Students will consider how the materials can influence content in their work. Students will begin to discover their strengths and challenges, and whether or not they gravitate more towards certain materials, techniques and styles of working with these materials. Students will study historical and contemporary artists who relate to the student's interests. Students will have opportunities to propose projects during the second semester. Development and critique of students' portfolios and discussion of the college application process are also elements of this course. Drawing and Painting II students meet during the same time as the Studio Major class. The instruction and assignments for both classes are differentiated.

**VA40                      Photography I                      one credit**

Photography I will focus primarily on the functions of camera properties for both wet and digital media. Students will learn how a traditional camera and its separate parts function. Students will explore light and film exposure, develop negatives, make prints. Most importantly, they will develop an awareness of the elements of photography; line, shape, value, texture, movement, light, perspective, pattern, scale and mood. Each student must have his or her own camera. Additionally, there is a lab fee of \$100 per student for supplies. Prerequisite is va10 Art Foundations or approval of the department. An eight to ten piece portfolio must be submitted when the student indicates intent to bypass Art Foundations.

**VA50                      Photography II                      one credit**

Photography II and III students explore the concepts introduced in Photography I with greater rigor and sophistication. Composition, content and personal vision will become issues to consider. These will be developed through investigations of other photographers, techniques and issues concerning photography as a form of artistic, journalistic and documentary expression. Students will investigate their history and surroundings, and work toward developing a personal story through photography. Issues of home, family, society, politics, religion the environment or an earnest application of the everyday, are examples of topics that may be explored as part of each student's story. Students will develop an individual portfolio of their work. Each student must have his or her own camera. Additionally, there is a lab fee of \$100 per student for supplies. Prerequisite is va10 Art Foundations or approval of the department. An eight to ten piece portfolio must be submitted when the student indicates intent to bypass Art Foundations.

**VA55                      Photography III                      one credit**

During the first semester, Photography III students will continue to develop their photography portfolio consisting of 15-20 pieces. During the second semester, students will create and subsequently submit a formal, written contract - based on a theme of their choosing - consisting of between eight to twelve assignments. Additionally, students will take turns leading critiques and class discussions, prepare a formal artist's statement, and curate their own school-based photography exhibition. Please note that each student must have his or her own camera. There is a lab fee of \$100.00 for this course to cover supplies during the year. Prerequisite: VA50, or permission of the department chair.

**VA61                      Studio Major                      one credit**

This course is designed for advanced students interested in pursuing higher levels of artistic exploration or considering art as a primary career choice. During the fall semester the class will focus on development of drawing skills and then move into exploration of painting in oils and encaustic painting, in which wax and pigments are combined to make a painting medium. At a minimum, students should budget at least three to four hours per week for working outside of class. In both semesters students are expected to exercise a high degree of personal responsibility in this course. In addition to their work in a variety of media, essays, sketchbooks, critiques and presentations are components of each student's evaluation. The development of individual portfolios, artistic philosophies and artistic historical knowledge will be products of this course. The

course will provide regular review of students' portfolios and guidance in preparation of an art portfolio for college. Drawing and Painting II students meet during the same time as the Studio Major class. The instruction and assignments for both classes are differentiated. Prerequisite: Drawing and Painting II or departmental permission.

**VA72                      Graphic Design    half credit**

Graphic Design is a powerful and changing art form. In this semester long course students will not only learn the skills and techniques of graphic design, but they may also have an opportunity to apply those skills to several real-life projects. Students will be introduced to the foundations of graphic design in a sequential manner. They will develop skills in the principles of design, including balance, proportion and dominance; reinforce their understanding of color, shape, texture and space, learn about typography and be introduced to aspects of marketing such as targeting an audience and selling an idea or concept. Students will also be introduced to the historical context of these skills in this art form. While a digital camera is not required, it would be useful to have. There is a lab fee of \$75 to cover materials for this course. Prerequisite: Art Foundations, or permission of the department.

**VA81                      Metalsmithing    one credit**

This course emphasizes metalsmithing skills and jewelry design. Students will be introduced to the history, science and design of metals as well appropriate skills in sequence. Techniques to be explored will include stone cutting and setting, raising, forging, soldering, lost wax casting, photo etching and chain making. Among the projects students will work on will be making a silver ring with cut stone, box construction, making a forged bracelet, making a raised chalice or bowl, making a linked chain and making cast ring. Students will be responsible for projects, quizzes, and short papers. Students will be required to purchase a jewelry kit at the beginning of the year. Silver and other materials will be available at the student store for those that chose to work in it. There is a lab fee of \$75 for this course.

**VA82                                      Advanced Metals II    one credit**

Metalsmithing II is continuation of building skills and learning techniques in Metal working. In the second year, students will investigate lapidary, advanced stone setting, hinge building, chain construction, metal clay, as well sculpture. Field trips to local studios, foundries, museums will help students create a fuller understanding of metal and jewelry Design. There will be a \$75 dollar materials fee to this course.

## **Performing Arts**

### **MU02                  Choir                                  one credit**

The choir performs a wide variety of ensemble literature for the entire community. Some prior vocal experience and music literacy are encouraged. The class will focus on acquisition and refinement of choral skills including diction, articulation, dynamics and producing a beautiful tone. Emphasis on part-singing and sight-reading are also part of this class. In addition to providing concerts for the school community during the year, the choir performs locally when opportunities arise.

### **MU08                  Instrumental Ensemble                                  one credit**

This group will practice and perform a variety of musical pieces, drawn from among the traditions of classical, jazz, blues, and/or popular music. Specific pieces will be chosen based on students' musical proficiency and range of instruments in the group. Some instrumental experience is required. Alongside the emphasis on performance, students will develop and enhance their musicianship skills through ear training and music theory, and by undertaking guided composition projects. In addition, students will develop a knowledge and appreciation of the richness and complexity of human history and the diversity of world cultures through some exposure to music history. During the school year the ensemble will provide concerts for the school community, and will perform locally when opportunities arise.

### **MU11                  Instrumental/Percussion Ensemble                  one credit**

This group will practice, perform, create, and question music made solely on percussion instruments. Experience with percussion is a prerequisite for this course. Having separated themselves from a more traditional ensemble that often calls upon the percussionist for color or support, members of the Instrumental/Percussion Ensemble will improve their reading and technique with more challenging material, while at the same time shoulder the responsibility and enjoyment of the musical foreground. This "upside down" musical setting will be an ideal place to ponder and create "solutions" for larger musical questions such as composition, arrangement, dynamics, texture, and the general nature of rhythm. The ensemble will develop knowledge of a variety of musical traditions from around the world as well a sense for contemporary trends. Aside from improving their skills on traditional instruments such as the snare drum, bass drum, vibraphone, glockenspiel, bells, triangles, hand drums, and so on. The percussionists will also sonically explore everyday objects around them or created by them in search of pleasing and unique sound pallets. Students will study for three out of the six days each cycle. On the remaining three days, the students will join the Instrumental Ensemble class, where the percussion students will work on pieces from a larger musical repertoire.

## THE RELIGIOUS THOUGHT DEPARTMENT

Religious Thought courses emphasize an exploration of spiritual, religious, and moral values through a study of several religious traditions and of contemporary issues. The required courses in the ninth and tenth grades employ a variety of teaching approaches, including formal study, informal discussion, and service activities.

### **R091                      Quakerism and Comparative Religion                      one-half credit                      ninth grade**

The ninth-grade religious thought course introduces students to the religious ideas, social concerns, current beliefs and practices, and historical background of the Religious Society of Friends (Quakers). These ideas and concerns are considered in relation to the students' own religious, philosophical, and ethical ideas. Basic tenets of Judaic, Christian and Islamic spiritual practices are studied. Through selected readings, students explore other aspects of spiritual searching through a brief exploration of Hinduism and Buddhism. To better understand Friends' conviction that beliefs must be accompanied by practice, RT 9 students plan and participate in three community service days.

### **R101                      Peace and Social Justice: Beliefs into Action                      one-half credit                      tenth grade**

The tenth-grade religious thought course combines regular classroom work and community service. Students examine religious and ethical responses to contemporary issues as well as their own beliefs and how they put those beliefs into action. Among the readings are Eboo Patel's *Acts of Faith*, Elie Wiesel's *Night*, and selections from *The Courage of Conviction* and from the writings of Martin Luther King. The 10<sup>th</sup> grade class will also visit the United States Holocaust Memorial Museum as part of its examination of spiritual resilience. Regular reflective writing assignments culminate with a spiritual autobiography or a "belief into action" essay.

## COMMUNITY SERVICE

Community service projects in upper school provide many opportunities for students to enact Friends Select's belief that "learning should be placed at the service of society" while learning about the social needs of the city of Philadelphia.

Ninth and tenth graders work with their classmates on several projects. Community Service begins with the Religious Thought 9 class and continues through their tenth-grade year. Projects for the 2005-2006 year included: The Other Carpenter (repairing houses of poor and elderly people in West Philadelphia), Hunter School (tutoring and mentoring elementary school students in an Hispanic section of North Philadelphia), Russell Byers Charter School (whose curriculum includes conflict resolution), Friends Center Child Care, conservation work in Fairmount Park, MANNA, the Metropolitan Action Nutrition Aids Alliance (preparing meals for delivery to homebound people with AIDS), and the Greater Philadelphia Food Bank (distribution center for food pantries). All upper school students may volunteer for after-school service work, including working at MANNA and tutoring at Friends Select, the Free Public Library and other locations.

## MEETING FOR WORSHIP

Meeting for Worship is the Friends' (Quaker) form of worship, in which the assembled group meets in a silent, cooperative search for Truth; those who are moved to speak rise to do so out of the silence.

Students and faculty attend Meeting for Worship every Wednesday morning. We typically gather at the Central Philadelphia Monthly Meetinghouse, one block away from the school, either by division or in community with the Middle School. On occasion, we gather by advisory for more intimate worship sharing, or as an entire K-12 community in All-School Meetings for Worship. All-School Meetings are often "programmed," or planned, to celebrate a holiday or mark important occasions or themes in the life of the school.

Meeting for Worship is overseen by the student/faculty Worship and Ministry Committee.

## **THE PHYSICAL EDUCATION DEPARTMENT**

The upper school physical education program provides a sequential program of instruction for ninth and tenth graders. Eleventh and twelfth graders are involved in an elective-based program of instruction. The curriculum encourages the development of the student's understanding and appreciation of his or her physical being (see "Physical Education Objectives: Upper School" below).

Ninth Grade students participate in team building activities that concentrate on skills associated with group/team activities. During the tenth-grade year, students participate in individual activities (sometimes referred to as "lifetime" activities). A quarter-length unit of health is also included in the ninth and tenth-grade programs. The health curriculum covers age-appropriate topics and provides students with both information and time for self-evaluation.

An elective program for eleventh and twelfth grades builds upon the skills and interests previously developed. Potential units of study may include but are not limited to: strength and conditioning, team sports, lifetime activities, rollerblading, initiative activities, and jogging. A Health unit is also required each year. During the eleventh grade year, students take a CPR and First Aid course and during the senior year, students take a health issues course.

Students are expected to change into appropriate physical education clothing before participating in class. The following defines "appropriate physical education" attire:

- a. shorts
- b. T-shirt or collared "golf" shirt
- c. sweatpants/sweatshirt
- d. "sneakers"--no double soles
- e. socks (preferably white)

## **PHYSICAL EDUCATION OBJECTIVES: UPPER SCHOOL**

- 1) Students will recognize the advantages of teamwork and cooperation toward attaining a desired goal.
- 2) Students will participate in experiences that encourage the development of lifetime physical skills for optimal physical well-being.
- 3) Students will be provided with experiences that assist them in developing and maintaining a high level of physical health and enjoyment of movement activities.
- 4) Students will develop knowledge of the scientific principles related to physical activity, exercise and health.
- 5) Students will be given opportunities to develop, refine, and demonstrate a higher level of knowledge and physical skills in a variety of activities.
- 6) Students will participate in experiences that help them understand the role of physical activity and sport in society.
- 7) Students will understand the social and personal responsibilities associated with participation, such as sportsmanship, fairness, and honesty.
- 8) Students will demonstrate understanding and respect for differences among people in physical activity settings.

### Physical Education Waiver Policy

Juniors and seniors are permitted to waive PE requirements if they participate in two after-school sports during the school.

As part of the course selection process in the Spring, juniors and seniors will sign up for each sport season, electing either PE or the “waiver” option. During the school year, we will have one-week “drop” periods for sports. Students who elect to drop their sport, will enter a PE class and make up the missed work. Students injured while participating in a sport will remain on the team for the entire season (participating in ways that their physician permits), and will not enter PE.

This policy will not apply to students who serve as managers for after-school sports teams. The school recognizes the valuable contributions that managers make to both their teams and to the greater school community. Managers’ responsibilities, however, do not encompass the physical activities that this policy recognizes. In addition, many other students commit extended hours to co-curricular activities (e.g., Fine Arts productions, Student Government, the Yearbook, and so on) without anticipating a waiver of graduation requirements. It therefore would not be equitable to make such an exception for team managers.

This policy also will not apply to students’ health requirements, so participation in an after-school sport will not enable students to waive Health classes.

### **ATHLETICS**

For interested athletes, there are interscholastic sports after school during all three seasons of the school year. Boys are offered soccer and cross country in the fall; basketball, swimming, or wrestling in the winter; and baseball, tennis, or crew in the spring. Girls may choose soccer, field hockey, or cross country in the fall; basketball or swimming in the winter; and softball, tennis, or crew in the spring. Friends Select is a member of the Friends Schools League and also competes with a wide variety of schools beyond the league. Varsity and junior varsity teams are available in each sport, depending on the number of participants. Participation in team sports does not, however, exempt all students from physical education (please see Physical Education Waiver Policy).

## **INFORMATION SERVICES**

### **Ruth Hallowell Gray Library**

The Ruth Hallowell Gray Library is at the heart, physically and intellectually, of the upper school. It serves the students and faculty of the middle and upper schools. The library houses over 10,000 volumes accessible via an online catalog. The library subscribes to a number of online databases for research purposes; many of these databases can be searched from home as well as at school. Electronic resources are accessible on the Friends Select network. The Library also offers the Power Library collection of databases made available to schools and public libraries in Pennsylvania who agree to collaborate in resource sharing. Materials from other libraries throughout Pennsylvania can be located and borrowed using Access PA, a statewide library catalog to which Friends Select belongs. The library also has a collection of newspapers and magazines. Students may use the school's computer network, which allows them access to the Friends Select Online Learning Center, the school e-mail system, software programs for coursework, and the internet. In addition to the library workstations, there are laptops available for use in the library.

The library is a place for research, student collaboration, and quiet study. The library staff is available as a resource for students, faculty, and staff. Teachers often bring groups to the library for instruction in the effective use of this facility and other information resources of Philadelphia. The library is normally open from 8 a.m. until 5 p.m. on school days.

### **Computer Room**

The Computer Room is centrally located in the upper school adjacent to the library. All of the workstations are connected to the school's network, enabling faculty, staff, and students to use e-mail, the internet, and many software programs. Students must have parental permission to go onto the internet. The Friends Select computers are to be used for educational and school purposes only. There is also a scanner available for student use. The facility is open throughout the school day, and students use the Online Learning Center, and do coursework during study halls, free periods, and breaks. After school, students can use the library computers and laptops for their coursework.

The Computer Room is used for computer science and fine arts classes, taught by members of the upper school faculty. At other times it is supervised by the library staff and network administrator. A large-screen projection system is available for class instruction.



