CHOOSING COURSES IN THE UPPER SCHOOL

Requirements for graduation are:
- English 9, 10, 11 and 12
- Mathematics through Algebra II and Trigonometry
- Spanish, French, Chinese or Latin through Level III
- Three-year required history sequence: History 9, U.S. to 1900, 20th Century World
- One year of laboratory science and two additional Upper School 3-credit science courses. Biology or Cellular Biology is also required. All ninth-graders take Physics, and tenth-graders take Chemistry or Accelerated Chemistry.
- One year of performing or visual arts. (Does not include art history, dramatic literature, public speaking, creative writing, music theory or music history/appreciation courses.)
- Students not meeting a minimum standard of competency in writing in English and history may be asked or required to enroll in a writing workshop or to participate in some other program to support their writing.

In addition:
- All ninth-graders will be enrolled in Peer Advisory.
- All sophomores will be enrolled in Health. (This is also a New York State graduation requirement.)
- All juniors will be enrolled in Introduction to College.

The typical (and minimum) course load consists of five major (3-credit) courses; seniors may select four major (3-credit) courses and two minor (2-credit) courses. Students desiring exceptions to these rules may petition the Academic Committee. Each season all students must enroll in physical education or play on a junior varsity or varsity team.

Because of the flexibility of the curriculum, it is important to choose a program that reflects not only immediate interests but also long term goals. We hope students will take full advantage of the counseling available from advisors, teachers, college counselors and the Upper School Director and Assistant Director.

All students enrolled in an Advanced Placement course are required to take the corresponding AP exam in May.

Please select your courses carefully. Changes during the summer and next fall will be made only for compelling reasons. Because of the complexity of the schedule, we cannot guarantee multiple requests for minor courses, so it is critical to prioritize minor course choices where indicated on the back of the course selection sheet.

Textbooks listed are representative. Actual titles change frequently.

Another history course may substitute for History 9 for students entering Hackley in grade 10 or 11.

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**Graduation Requirements Checklist** (all requirements are 3-credit courses, except in the arts):

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**College Recommendations/Requirements:** While course choice must first and foremost match the student’s abilities, goals and desires, it may be helpful to consider what many of the colleges Hackley students attend expect to see on a transcript, beyond Hackley's requirements. Many highly selective colleges, for instance, require or recommend **math every year**. Engineering schools sometimes want an SAT Subject Test in Chemistry or Physics, which may affect course selection. Most of the more selective colleges would also prefer that students take **language at least through level four**, providing the student can do well in the course. Of course, not all Hackley students take these courses, and they still end up with good college options. The rule of thumb: the more selective the college, the greater its curricular expectations. Please feel free to contact the college counselors with questions.
UPPER SCHOOL ENGLISH

101. English 9
6 meetings per seven-day cycle/3 credits. Required for ninth-graders.

Ninth-grade English is designed to introduce all upper school students to the foundational reading, writing, and thinking skills necessary to become successful English students throughout their high school careers and beyond. Students are exposed to drama, film, creative nonfiction, poetry, short stories, and novels, where they learn the conventions associated with these forms and the skills necessary for reading, analyzing, and discussing them. Throughout the course of the year, the students learn how to close-read language-based details within a text, determine which of those details have significance, and characterize them into a textual pattern (reoccurring language in a text). It is through examining these textual patterns that students learn how to begin the process of argumentation, both verbal and written. This course aims to use writing to generate ideas in addition to expressing interpretations and arguments in traditional analytical essays as well as creative writing pieces. Over the course of the year students work on key aspects of writing from composing sentences and paragraphs to multi-stage essays that move from proposals to drafts to final versions.

Typical works include a summer reading text, short fiction, a film, and such texts as Romeo and Juliet, Antigone, and I Know Why the Caged Bird Sings.

As in History 9, students not meeting a minimum standard of competency in English 9 may be asked or required to enroll in a writing workshop or to participate in some other program to support their writing.

103. English 10
6 meetings per seven-day cycle/3 credits. Required for sophomores.

In tenth-grade English, we explore works of poetry, drama, and fiction in order to develop students’ reading, writing, and speaking skills. In developing these skills, students enhance their ability to explore textual patterns (reoccurring language in a text) and to reflect on the consequences of abstract ideas in the world beyond the text. Classroom discussion supports the development of close-reading and analytical thinking, and students take increasing ownership in discussion over the course of the year. In their writing, students continue to develop upon the analytical foundation learned in ninth grade. Their writing throughout the year consists of in-class essays, homework posts, reflective journals, some creative work, and formal multi-stage essays that move from generative writing to topic proposals to drafts to final versions.

Possible course texts include a summer reading text, a variety of poetry and short fiction, a Shakespearean play, and a novel (past novels include: A Passage to India, Heart of Darkness, Black Swan Green, and others).
104. English 11
6 meetings per seven-day cycle/3 credits. Required for juniors.

In eleventh-grade English, we explore American works of fiction, nonfiction, and poetry in order to continue to develop students’ reading, writing, thinking, and speaking skills. In this curriculum that emphasizes the way stories are told, students will encounter challenging and divergent styles of narrative that will enhance their ability to reflect on the consequences of abstract ideas in the world beyond the text. Classroom discussion and online discussion board posts function as the bedrock of course, and, as the year progresses, class will be run via student presentations and leaderless discussions. In their writing, students continue to develop their analytical skills from tenth grade, but with a focus on putting texts in conversation with contemporary articles, pop culture, and literary theory. Their writing throughout the year consists of in-class essays, homework posts, reflective journals, some creative work, and formal multi-stage essays that move from generative writing to topic proposals to drafts to final versions.

Possible course texts include a summer reading text, American fiction, nonfiction, poetry, and scholarly articles (past works include: A Heartbreaking Work of Staggering Genius, Between the World and Me, The Sound and the Fury, The Great Gatsby, The Brief Wondrous Life of Oscar Wao, The Bluest Eye)

107. English 12
6 meetings per seven-day cycle/3 credits. Required for seniors.

Ranging over American, British, and World Literature in translation—as well as the so-called “new” English literature of Africa, India, and the Caribbean—each of Hackley’s two twelfth-grade English courses comprises a three-trimester unit introducing students to collegiate-level work in exploring and writing about literature, culture, and theory.

While each of the courses offers a unique selection of texts, themes, and critical perspectives, all courses serve to develop students’ skills as readers of many types of “texts”: literature, journalism, films, theatre, advertisements, and the visual arts. In addition, students will develop their skills both as writers and thinkers through class presentations, group projects, and writing tasks in a variety of genres.

Students will come to appreciate that the Anglo-American literary tradition is not the only viable tradition; that the Anglo-American tradition has complexities they have not yet encountered; that a historical approach must not look purely at the center of a literary domain, but must also look at its borders on the margins of the text; that there are no “theory-free” readings of texts or cultures; that all language is political and that even the “plain style” has an agenda; that the politics of “othering” limits our perceptions; that we must step out of and look critically at the center of society; and that we have much to learn from the range of critical theories open to us – including but not limited to historicism, new criticism, feminism, Marxism, deconstruction, new historicism, cultural materialism, queer theory, post-colonial theory, etc.
Students will pursue class presentations, group projects, and writing tasks in a variety of genres, with the major written project (but no exam) due in the third trimester.

**English 12 Logistics:**

The English Department will offer two three-trimester course options to seniors: *Hitchhikers Guide to Insanity* and *Gumshoes*. See descriptions below.

Students will indicate their preferred course on course selection forms. While we will make every effort to accommodate student preferences, both scheduling conflicts and the necessity of maintaining a favorable student-to-teacher ratio inevitably prevent a small number of students from enrolling in their chosen English 12 course.

**107a: A Hitchhiker’s Guide to Insanity: Mental Illness as a Literary Trope**

When doctors complain a novel or film depicts mental illness inaccurately, they often miss the point. While some works depict mental illness to improve understanding of the mentally ill, most focus on mental illness as a device by which to reveal what is silly or wise, bad or good, unhealthy or healthy. Our goal here is to explore what literary madness shows us about the world and ourselves — and how it does so. In some works, madness is a pitiable condition to which we are driven. In others, madness is our only sane response to the horrible or absurd. In others, madness is a nervous punch line — a way to dismiss what makes us uncomfortable. Who among us doesn’t know a story about a “crazy” ex boy- or girl-friend? In still others, madness is a mark of divine inspiration or genius. We’ve all heard of an idea is “so crazy it might just work.” While the British cherish mental illness domesticated as eccentricity, other cultures stigmatize mental illness as shameful. Finally, as Michel Foucault points out, cultures use insanity as a label by which to contain what they fear socially or politically. So, writing about insanity may be a response to political or social conflict. After all, in Russia dissidents once were hospitalized for their views and in America feminist discontent once was medicalized and treated.

Short texts will include such works as “Diary of a Madman” by Nikolai Gogol, “Ward Number Six” by Anton Chekov, “Cares of a Family Man” by Franz Kafka, “Bartleby the Scrivener” by Herman Melville, and “Porphyria’s Lover” and other poems by Robert Browning.


Films may include: *Psycho, Mame, A Clockwork Orange, A Beautiful Mind*, and *The Soloist.*
Sherlock Holmes always maintained to his amanuensis Dr. Watson that his great insights owed themselves to little more than “elementary” principles. Indeed one might assert that any quest for knowledge is a quest for that which is the case -- for the truth. If one proceeds from agreed-upon observable facts, one can solve any number of cases: Who stole the Maltese Falcon? What happened at the Watergate Hotel? Just who was this Charles Foster Kane fellow? The principles of deduction can help to order our investigations not only into specific issues or scandals, but also into personal identity and even metaphysical or ontological realities. What, though, if those facts are elusive, kept secret by certain individuals or forces, or even themselves somehow in question? What can an analysis of the act of detection tell us about the detective, as well as the world that she/he strives to understand? Indeed, characters -- the citizens who read about them -- all journey in some way from innocence to experience (or even some kind of enlightenment). In this course, we will consider the identity politics of those who detect, the complexities of the social and political environments through which those detectives move, the philosophical or political nature of the sought insight or critical missing object (re-imbuing the Hitchcockian “MacGuffin” with meaning), and the critical shift from gathering facts to assessing various interpretations of the “truth.”

Texts may include, but are not limited to, Thomas Pynchon’s *The Crying of Lot 49*, Jonathan Lethem’s *Motherless Brooklyn*, Akimitsu Takagi’s *The Tattoo Murder Case*, Willkie Collins’s *The Moonstone*, Maj Sjöwall and Per Wahlöö’s *Roseanna*, Walter Mosley’s *Little Scarlet*, a volume from Alexander McCall Smith’s series *The No. 1 Ladies’ Detective Agency*, Sherman Alexie’s *Indian Killer*, Mark Haddon’s *The Curious Incident of the Dog in the Night-Time* (novel / play), Diane Wei Liang’s *Paper Butterfly*, Subcomandante Marcos and Paco Ignacio Taibo II’s *The Uncomfortable Dead*, Tana French’s *Broken Harbor*, Ruth Ozeki’s *A Tale for the Time Being*, and films such as Hitchcock’s *Rear Window*, Welles’s *Citizen Kane*, Polanski’s *Chinatown*, Paluka’s *All the President’s Men*, and Kurosawa’s *High and Low*.

**Advanced Placement English Exams**

During the spring semester, Juniors and Seniors who wish to take the AP Language and Composition exam and/or the AP Literature and Composition exam may take advantage of an after-school review program in the appropriate AP English test-taking strategies. These sessions will be provided by the English Department.

**English Minors**

**152. The Vision: Multiple Views, Rich Media**

3 meetings per seven-day cycle/2 credits. Open to grades 10-12.

**Enrollment in the course is by application only.** Enrollment will be limited to 12 students, including two editors-in-chief (who have already been selected for the 2016-17 year), three managing editors (to be selected from current sophomores for a two-year commitment in junior year and senior year, when they will serve as editors-in-chief), two literary editors, two art editors, one web editor, and one media/sound editor. When applying, students should indicate for which role or roles they feel they are best suited. Past experience with InDesign or a similar graphics program is a plus, though not a requirement, and students should mention what
relevant experience they have in their applications. **Applications are available in the U. S. office and are due in Ms. Akin’s mailbox by April 17th, decisions to be made by May 2nd.**

This course will involve students creating a year-long presentation of Hackley creative writing and visual arts through print, web, and digital media.

Students will begin by soliciting, evaluating, and editing literature and artwork for inclusion in a new on-line literary and art magazine. They will help create and manage a basic online posting system on the Hackley website, and they will work as editors to support the online presence of these materials—both for internal and external audiences—with regular bi-weekly postings.

Students will select the best of the art and literature gathered for online presentation and will include this work in the printed publication. Students will learn to use the InDesign graphics program to develop and manage visual layouts. They will design the printed publication and see it through all phases of editing, proofing, and print production. They will also have to work within a budget, which will necessitate creative decision making as they bring their vision (pun intended) into reality. And they will be required to support and meet frequent deadlines for various components and phases of the project, culminating with delivery in the spring of *The Vision* publication.

In addition, *The Vision* will offer published students the opportunity to read their work (or have it read) for an audio CD that will accompany the printed magazine. Students working on the publication will help support the recording process and oversee the creation of the CD.

Throughout the process of presenting both on-line and print versions of *The Vision*, students will learn to combine and manipulate different types of media such as text, audio, and graphics. They will employ microphones, scanners, and other input devices to gather information. While students will be enrolled based on application for specific roles in the editorial structure, where they will hold primary responsibility, students will participate in and learn all aspects of the project.

**165. Collaborative Storytelling and Role-Play Gaming**
*(Also listed in the History Department.)*
3 meetings per seven-day cycle/ 2 credits. Enrollment limited.

This interdisciplinary course will use roleplay gaming and collaborative storytelling as a means to analyze literature and historical periods, write creative fiction and poetry, and foster social and emotional learning. The structure of course units will involve reading from a particular literary genre, watching corresponding films, analyzing historical documents, collaboratively building a fictionalized world and characters based on class texts, and then roleplaying scenes and scenarios to foster ideas for individual student writing and group presentations.

In addition to role-playing, creative writing, and making presentations for class, students will learn about game system creation, reflect on metagaming, and lead games as the head storyteller, which requires public speaking and improvisation skills. In the process, students will develop their written, spoken, and creative expression as well as their teamwork, collaboration, creativity, and intercultural competency.

Potential texts and excerpts may include, among others: *The Lord of the Rings* Trilogy, Peter Jackson (films); *The Witcher 3: Wild Hunt*, CD Projekt (video game); *Frankenstein*, Mary Shelley.
Black Mirror and Black Mirror: Bandersnatch, Various Artists; The Walking Dead, Robert Kirkman (comic book series); Anglo-Saxon Chronicle; The Decameron, Giovanni Boccaccio; and Sacred texts in Buddhism and Taoism.

Potential game modules may include Vampire: The Masquerade by White Wolf, Collaborative Worldbuilding by Trent Hergenrader, Dungeons and Dragons by Wizards of the Coast, Star Wars: Age of Rebellion by Fantasy Flight Games, Dread by The Impossible Dream, among others.

185. Sophomore Seminar in Creative Writing
3 meetings per seven-day cycle/2 credits
Open to sophomores.

This is a course for those who think they can’t write creatively and for those who think maybe they can. Our major goal is that students become comfortable not only writing, but also talking about what they and others have written.

Some topics for writing will come from the teacher, and some from the students, but there will also be free writing without a particular topic and writing in which individuals choose their own topics.

123. Creative Writing
3 meetings per seven-day cycle/2 credits
Open to juniors and seniors; open to sophomores with special permission of the Department Head. Enrollment limited to two sections.

Foundations of Creative Writing students are required to keep a journal and to carry a small notebook in which they jot down thoughts, observations, overheard dialogue, or anything else that might be useful material in their creative writing. In addition, they have weekly assignments of varying lengths that involve them in a variety of writing techniques and subjects. The class meets three times a cycle to analyze and critique assignments, and to talk about writing.

124. Advanced Creative Writing
3 meetings per seven-day cycle/2 credits
Prerequisite: Creative Writing 123 or special permission of Department Head

“Life, friends, is boring,” writes John Berryman in his fourteenth Dream Song. “We must not say so.” And yet, clearly was Berryman compelled to do so, in this poem and the 384 other poems that make up his masterwork. The Dream Songs is many things – confessional, angry, sullen, sensual, jazzy, offensive, compassionate, elegiac – but it is first and foremost a work that is inimitably Berryman’s. Advanced Creative Writing, then, will provide a setting for proven (but still learning) writers to explore those topics, themes, ideas, and utterances they feel compelled to put to page. It is a course in which students will learn the further use of the creative tools they will need in composing what might turn out, one day, to be their own masterworks. It is a course that will train creative writers to recognize creative voice – in canonical writers, in each other, and in themselves. Students will read and write in a range of creative writing genres (including poetry, short fiction, plays and screenplays, and song lyrics), but they will also focus on a self-selected topic or aspect of craft – akin to the sort of concentration a student might develop and
pursue in an AP art studio course. The workshop experience will be the cornerstone of the course: students will submit their creative pieces for peer review and discussion. Peer creative writers will read those works prior to workshop, and prepare some feedback in advance. As personal reflection helps foster the development of a distinct unique voice, students will reflect in various ways on their own works and creative processes. Finally, students will encounter a variety of creative practices by reading widely from canonical and contemporary sources (which may include volumes from *The Best American Poetry* series and literary journals such as *Poetry, American Poetry Review*, and *Tin House*). The course may include occasional texts about the writing process (such as Dillard’s *The Writing Life*, Hugo’s *The Triggering Town*, and Dobyns’s *Best Words, Best Order*).

The pre-requisite for Advanced Creative Writing 124 is Creative Writing 123. In exceptional cases, students who have not satisfied this requirement may apply for departmental approval with a writing sample.

**060. INDEPENDENT RESEARCH IN ENGLISH AND HISTORY**  
(Also listed in the History Department)  
3 meetings per seven-day cycle/ 2 credits. Open to Juniors and Seniors

IREH offers students the opportunity to conduct advanced research and writing at the college level under the guidance of English and History faculty. Students will develop their own topics or research questions, review the scholarly literature in the relevant discipline(s), understand and employ the research methodologies relevant to their research, and write on the research question, ultimately producing significant research essays.

Students may choose to research and write on questions in English or History, or they may develop interdisciplinary questions touching on both. While much research can be carried out using resources available at Hackley, we will support students in developing relationships with scholars whose own work is relevant to the students’ research.

Students may complete the course in one academic year, or, should their research require it, and with approval of the relevant instructors and department chairs, may continue the course for a second year.

Enrollment in IREH is by application to the relevant department(s). Students wishing to pursue research in English should direct an application to the English Department Head. Students wishing to pursue research in History should direct an application to the History Department Head. Students wishing to do interdisciplinary research in both departments should direct applications to both Department Heads.

Students should submit at the time of course registration an application consisting of a short statement (approximately 250 words) explaining why they would like to pursue this course of study and what topic they think they might like to explore. Department Heads will then seek the recommendation of the students’ current teachers in the appropriate disciplines.

**186. Countenancing Horror: American & International Horror Film, 1920 - Present**  
3 meetings per seven-day cycle/ 2 credits. Limited enrollment: preference to seniors; juniors admitted as space permits.

Do you like scary movies? To be sure, plenty of fascinating insights can arise from asking of any horror film the question, “What scares us, & why?” This course, however, proceeds by first fixing that question.
in time. Why do definitions of the horrific change? Why do certain trends and tropes appear in certain eras but not others? Why, for instance, is the alien invasion film likelier to appear in the 1950s, the zombie film in the 1960s (and again in the 2010s), and the “pod person” in the 1970s? Why is the “wronged woman” a recurring figure in the horror cinema of 2000s Japan and Korea? This course will ask students to consider what the particular villains, monsters, and baddies in various eras and cultures have to teach us about certain cultural milieus and societal zeitgeists (a term which itself comes from the German for “time-ghost”). Course films may include may include *The Omen, Dawn of the Dead, Alien, Hellraiser, An American Werewolf In London, Ju-on, Let the Right One In*. Course texts may include excerpts from *The Horror Film* (Stephen Prince, editor) and various articles from scholarly journals. Students taking this elective understand that certain R-rated films will be part of the curriculum.

**Texts**

**157. Foundations of Reading, Writing, and Thinking**
3 meetings per seven-day cycle /2 credits.
Open to all Upper School students with preference to freshmen, sophomores, and juniors.

Focused on the practical, immediately useful basics of writing, “Foundations of Reading, Writing, and Thinking” is intended for students who want to improve their skills as readers and writers.

Language allows us to communicate our ideas and to learn those of others. The more skillfully we put our ideas into words, the better we can understand ourselves and the world around us. Focused on practical reading, writing, and thinking skills, the goal of this course is to help upper school students develop and strengthen their reading and writing skills, and through them to strengthen their thinking and communication skills. We will examine both published and student-generated writing.

We will begin by working on introductions and theses: what to include in them when writing and what to look for in them when reading. Next we will work on organization and support of ideas within paragraphs and organization of paragraphs within essays: how to organize to express ideas clearly and how to read actively to discern the organization and meaning of others. Then we will take up the often-neglected conclusion, giving it the same attention. In the process we will focus on close reading skills and on developing sensitivity to diction, syntax, and tone.

As the year progresses—and in response to student needs—we will also work on editing and proofreading skills, which will involve learning the necessary grammar and punctuation. As much as possible we will deal with grammar through online exercise and quizzes. In the 2nd and 3rd trimesters, the teacher will provide students with individualized instruction and feedback.

**142. The Good Life: Seminar in Moral Philosophy**
Not Offered 2019 - 2020
3 meetings per seven-day cycle/2 credits
Open to juniors and seniors. Enrollment Limited.

What does it mean to live a good life, and what is the relation between living well and making moral choices? In this course, we will think hard about these questions and wrestle with some of the most compelling issues of the human condition. Why should I want to do the right thing, and how do I know what that is? What makes a dilemma a moral dilemma? Is it more important to act morally, or to be the sort of person who makes moral choices? What does it mean to be a friend? Is there a relation between our happiness and the moral values we hold? Students will
consider theories by thinkers such as Aristotle, Epictetus, Kant, Mill and Frankel and test them against their own experience and lived dilemmas. The goal is to become more sensitive to the moral dimensions of our everyday life and to develop the thinking skills and vocabulary to address them. For the final project, each student will develop their own “Credo,” a set of self-identified principles essential to living one’s life well.

146. Literature of Social Comment Not Offered 2019 - 2020
(Also listed in the History Department.)
3 meetings per seven-day cycle/2 credits. Open to seniors and juniors.

This course will include ancient and modern texts on ethics, human rights, protest, and social action, will have a fairly wide range geographically and temporally, and will focus on several groups whose civil rights have been challenged. The direction of the course and the breadth of the syllabus will also reflect the interests of the class; students will be equally responsible for contributing discussion items, will monitor online and print media daily, and will be assessed on class participation. Other assessments will include written reflection, oral presentations, podcasts, and the use of additional technology. The course will culminate in a final project reflecting the passion of each student, to which considerable class time in Trimester 3 will be devoted. We will welcome occasional guest members to the class: faculty, students, alumni, and parents.

3 meetings per seven-day cycle/2 credits
Open to juniors and seniors; open to sophomores with special permission of the Department Head. Enrollment limited to twelve students.

Like Quentin Compson, English teachers and students worry constantly about time: how do we balance the importance of reading broadly while also reading deeply and richly?

This minor course offers one possible solution: spend an entire year reading one of the classic “tomes” of literature classes at a (reasonably) leisurely pace. While students will occasionally be asked to write short reflection pieces, assignments in this course will all be readings from the novel in order to prepare for rich, interesting discussions.

Why “The Whale” (Melville’s subtitle for the book)? Why read novel that seems to be about a bunch of white men doing “manly” things? Reading Moby Dick remains a part of Hackley history, its prose remains beautiful, and its fundamental weirdness remains intriguing, but Melville’s exhaustive exploration of America through the lens of a sea yarn provides the best reason for contemporary readers to tackle its complications. How are we to understand a nation championing equality yet legalizing slavery? A nation committed to democracy that enables demagoguery? A nation that heroically challenges frontiers while leaving destruction in its wake? What place is there for an individual within a nation’s communal institutions? What value do science, art, and introspection have when weighed against the forces of economic growth? Melville's novel does not judge: it reveals, questions, and sprawls.

The course will include numerous excursions, both intellectual and literal. We will visit the
Whaling Museum in New Bedford, Massachusetts for the annual marathon reading (and eat at the ridiculously good DB Burgers right next to the building), study the real biology of whales, debate the ethics and international complications of contemporary whaling, and, mostly, have a grand, leisurely, intellectual year.

190. Psychology Not Offered 2019 - 2020
3 Meetings per cycle/2 credits
Open to seniors and juniors. Preference to seniors. Juniors admitted as space may permit.

Understanding human behavior, whether it be that of others or of oneself, is at the core of all of life’s endeavors. This introductory course in psychology is designed to examine human behavior, social development, and mental processes. Students will learn how biological heritage, environment, and experience influence development and behavior. Through examination of psychologists and their research, students will gain a clear understanding about what motivates human behavior and how we perceive, remember, adapt, solve problems, form relationships, and find our place in the world. Topics will include development, learning, memory, intelligence, motivation, emotion, personality, social psychology, and abnormal psychology. Theorists will include, but will not be limited to, Freud, Piaget, Erikson, Pavlov, Skinner, Bandura, Kohlberg, Gilligan, Maslow, Gardner, Rogers, Milgram, and Zimbardo. Students will unravel the history of the field of psychology and discover the importance of psychological experiments through examination of past studies and their design, as well as through creating and developing their own experiments.

Texts:
Gleitman, Gross, and Reisberg, Psychology.
Hock, 40 Studies that Changed Psychology: Explorations into the History of Psychological Research
Oltmanns, Neale, Martin, and Davidson, Case Studies in Abnormal Psychology.

968. Public Speaking (Also listed in Performing Arts Department.)
3 meetings per seven-day cycle/2 credits
Open to all Upper School students
See Performing Arts Department listings for details.
201. History 9: Sources of Modernity
6 meetings per seven-day cycle/3 credits
Required for ninth-graders.

The ninth-grade course develops both content and skills that form the basis for further historical investigation throughout the Upper School. The course treats the period 1400-1789 through an examination of key questions whose resolutions have given rise to the modern world. These questions include conflicts focused on cultures, economies, religions, political philosophies and power structures, and intellectual and artistic currents. Key conflicts may include: Aztec/Spanish contact; cross-cultural contact and conflict between Europeans and Africans during the slave trade; the clash of scientific, economic and philosophic ideas during the Renaissance and the ensuing religious tumult of the Reformation; Tokugawa power and isolationism as a response to European trade and religious expansion; the ascendancy of the Qing dynasty and the origins of a problematic interdependence on global trade and conflict with European trade and religion; conflicts over power sharing between king and subjects in Britain and in France and the revolutions they engender.

Within the context of the study of content, the course aims to build basic historical skills in areas such as reading, writing and research and to apply more general skills such as note-taking, oral presentation and visual skills to the particular demands of historical endeavor.

As in English 9, students not meeting a minimum standard of competency in writing in History 9 may be asked or required to enroll in a writing workshop or to participate in some other program to support their writing.

204. United States History, Colonization to 1900
6 meetings per seven-day cycle/3 credits
Required for sophomores.

The course treats the history of the US from the colonial period to its emergence as a world power around the turn of the twentieth century. Within that scope, the course considers the vast changes in the US under the impact of westward movement, immigration, economic and military growth and expanding global significance. The course exposes students to the transformation of American society from a largely homogeneous one to a socio-economically diverse one, from a largely agricultural one to a largely industrial one. It presents the political and economic choices faced by the country over the time period, most potently the choices that led to Civil War in the middle of the nineteenth century. It explores the development of a uniquely American culture, increasingly distinct from its antecedents. It asks about the inclusion of various demographic groups within the fabric of that emerging society. Finally, the course examines the impact of nineteenth century nationalism and imperialism on an America newly victorious in the Spanish-American War of 1898.

As in English 10, students not meeting a minimum standard of competency in writing in this course may be asked or required to enroll in a writing workshop or to participate in some other program to support their writing.
206. The Twentieth Century World
6 meetings per seven-day cycle/3 credits
Required for juniors. (In special circumstances, may be taken senior year, with permission of the department head.)

Using as its springboard the emergence of the US as a major world power as a result of the Spanish-American War and World War I, the course explores the increasingly inter-connected global world of the twentieth century. Central to that consideration is the primacy of US power (economic, military and cultural), the global uses of that power and global reactions to that power. The two world wars and their aftermaths are significant concerns, as are the overarching realities of post-World War II bipolar geopolitics. The course considers far-reaching regional studies: the Middle East and Asia as targets of colonization and also during decolonization; the European totalitarian regimes of mid-century; race in both the US and South Africa; proxy wars of the Cold War period; the end of the bipolar world and the emergence of non-state threats are among the topics considered.

Students who are successful at both History 204 and 206 often take the AP examination in US History. History faculty hold review sessions for that examination in the spring of each year.

History Electives

Major and minor history electives are open to sophomores, juniors and seniors. When enrollment space is an issue, preference will be to seniors, juniors, and then sophomores. The department encourages you to consider your history choices over a three-year period so that you have the best chance of taking all the history electives you want to take.

Major Electives

205. Economics
6 meetings per seven-day cycle/3 credits

Economics is the study of the choices people make about how to use scarce resources, such as time, money, and the natural world. How much time should I study for a test, and how much time should I hang out with friends? Is there a “best” way to decide? Economics tries to figure that out. What should businesses produce? What if some people can’t afford a place to live? Should the government build more schools, or more tanks, or less of everything? Exactly how bad is it to cut down a rainforest? How do we make these decisions? Economists have offered many answers to these questions, and some of these answers have had profound effects on modern history. This course will attempt to understand the questions, the answers, and those profound effects. In doing so, we will examine the principles of micro- and macroeconomics, such as supply and demand, the theory of the firm, competition/monopoly, the Classicals and the Keynesians, fiscal and monetary policy, and more.
211. Modern European History
6 meetings per seven-day cycle/3 credits

While the past 100 years were known as “the American Century” and the next 100 may be “the Chinese Century,” the fact remains that many of our global mechanisms, institutions, legal and cultural norms have roots in the past 500 years of European history. The curriculum spans the era when Europeans first exploded onto the global stage. It continues through the Renaissance and religious wars, empire-building and revolution, Napoleon, industrialization, world wars, Communism, the EU, environmentalism, and the current uncertain moment. By spring the course arrives at the present moment with its multiple issues, such as immigration, the rise of the new nationalism, prospects for a common European identity, the challenge posed by Russia, among others. Among other topics, this course explores a) the creation of modern politics, including democracy; b) intellectual breakthroughs, particularly in science; c) the development of the modern economy – markets, finance, trade, industry, agriculture and skilled labor; d) the role of wars and peace in shaping Europe and the world; e) cultural innovation in visual arts, literature, and music; f) shifts in moral values, philosophy, and religious belief. While the course is not officially designated as such, it does provide a sound foundation for students wishing to take the AP exam. There is a range of assessments, including short oral presentations. Course-related activities include the notorious “Diplomacy” game and two optional and popular European pizza-and-film evenings.

214. Government and Politics: The United States and the World
6 meetings per seven-day cycle/3 credits

This course examines government and politics from both domestic and international perspectives. In an era of diminished interest and participation, this course aims to instruct and engage students in the political process. By reading, discussing, and writing about secondary texts and current events, students will gain both a historical and contemporary point of view of the vagaries and complexities of political systems.

231. History of Media & Culture
6 meetings per seven-day cycle/3 credits

This course examines the history of media in the United States from the emergence of the penny press in the 19th century to the rise of “new media” in the 21st century. In studying the development of newspapers, film, broadcasting, and digital media, the course’s primary focus is the historical relationship between media and democracy. How have communications technologies influenced the ways in which citizens both understood and participated in public life, and how have Americans shaped media to meet the requirements of a democratic society? To answer these questions, the course investigates not only the media’s impact on public opinion, political behavior, and policymaking, but also how government has shaped technological innovation, the political economy of the media, and freedom of expression. Finally, we will look at the relationship between culture, democracy, and the market, and how the media have configured public discourse, with particular attention to race and ethnicity, gender and sexuality, and class. Throughout the course, students will work to analyze the institutional development of communications technologies, the print, visual and digital texts they have produced, and contemporary responses to those media from both theoretical and empirical perspectives, and to develop their own historical interpretations through original research.
Minor Electives

220. Contemporary Issues Seminar
3 meetings per seven-day cycle/2 credits

A seminar that characterized by discussion, Contemporary Issues focuses on themes, topics, and controversies. In that sense it’s not simply a current events course that chases yesterday’s news headlines. Instead it examines the context of behind recurrent stories. This approaches enables students to more skillfully analyze both events and trends as they continue to develop in the future. In addition to discussion, class activities include debate and student presentations. The curriculum is typically designed by the teacher during the first half of the course. During the latter half students propose and select topics that interest them in particular. Class participation comprises 50% of the course grade, so active engagement is essential.

248. Topics in the History of Warfare
3 meetings per seven-day cycle/2 credits

This course will focus on the development of warfare between the Napoleonic Wars and the First World War. It will begin by looking at the horror of 1914; one million total casualties inflicted over a two-month period, numbers so staggering that the belligerent nations were forced to dig in across a massive line stretching from the English Channel to Switzerland. Moreover, soldiers in East Africa, Poland, the Balkans and the Dardanelles suffered similar fates.

While it is easy to say that technological innovation is the only culprit responsible for the catastrophic losses of 1914, a more in depth examination of the battles demonstrate that both tactical and philosophical views of warfare had a major impact on the way in which the initial campaigns of WWI were fought. Nations often fight the last war; in this case, technology outran military doctrine. Thus, the combination of misguided military science along with the lethality of new weapons left commanders in the position of having to radically alter the way war was fought. Armies in 1914, which would not have been out of place on the Napoleonic battlefield, were nearly unrecognizable by 1918 due to the sweeping changes made.

This course will build a bridge from Napoleon to those first few months of WWI, with the express purpose of tracking the changes, both tactical and technological, which led to the catastrophe of 1914. Conflict considered may include:

The Napoleonic Wars 1792-1815
The American Civil War 1861-1865
The Franco-Prussian War 1870-1871
The Second Anglo-Afghan War 1878-79
The Boer War 1899-1901
The Russo-Japanese War 1904-1905
The Balkan Wars 1912-1913
World War One 1914-1918
246. American Law
3 meetings per seven-day cycle/2 credits

This course is designed to begin to explore how the law works and give students some actual experience in doing what lawyers and judges do. It consists of the following units/topics: 1) What is Law? To start off the course we will examine the different sources of law (statutory, case law, etc.) and the organization of the American court system, and get a basic understanding of how laws are used; 2) Criminal Law and Juvenile Justice: This topic will fascinate students who consume shows like Law & Order. In this unit they get a deeper understanding of the challenges behind criminal justice such as balancing protecting the community with rehabilitation for the offender; 3) Individual Rights and Liberties (Constitutional Law): The U.S. Constitution is a unique and rich source of personal rights that has made the United States an example to the rest of the world. But how to interpret the Constitution and the rights it affords has been a long, difficult, and ongoing process. Some of the most interesting debates contained in the law can be found in this field of law. Some topics will include: Freedom of Speech, Freedom of Religion, Due Process, The Right to Privacy, Discrimination. This unit may vary year-to-year depending on what issues the Court is addressing in its current term. 4) Torts (A Civil Wrong): Almost everyone is aware of the “lawsuit,” but most people don’t really understand the principles behind lawsuits. This unit will bring this concept into focus and highlight some different kinds of torts and provide examples by examining real cases.

247. Art and Society: Medieval and Renaissance
3 meetings per seven-day cycle/2 credits

This course will investigate the ways in which groups of people who were considered outside the mainstream were represented during the Middle Ages and early Renaissance. It will consist of the following units/topics:

1- “Bright lights, big foreheads”
   What was considered beautiful by the standards of the time? What were standard ways in which things were traditionally represented and what were meaningful counterexamples.
2- “Jousting on Snails”
   It is difficult to see why such strange images were painted into the margins of medieval texts. Why were they there? Who was represented there and what were their odd peccadillos? Were these the meaningless doodles of bored scribes? If not, to what extent did these images shed light on the text or its patron?
3- “Sorcerous Jews and Muslim astronomers”
   What were the sources of fear and suspicion of Jews and Muslims at this time? To what extent did literacy, science and speculative philosophy seem demonic? How was this represented in art?
4- “Cloaked”
   How were gender and sexuality represented in clothing, nudity and general appearance? What ideas about femininity or masculinity were current?
244. Debate
3 Meetings per cycle/0 credits
Open to all Upper School students.
Debate will provide students opportunity within the school day to prepare for scheduled debates. Students will be able to improve their research skills, their ability to put forward a cogent argument and their public speaking skills. Students who sign up for the course are expected to participate in interscholastic debates. These debates occur on Saturdays throughout the school year. Students who wish to take part in competitive debates must sign up for this elective if their schedules allow. Students whose schedules do not allow them to enroll in this course may be allowed to participate on a case-by-case basis.

142. The Good Life: Seminar in Moral Philosophy  Not Offered in 2019 - 2020
3 meetings per seven-day cycle/2 credits
Open to juniors and seniors. Enrollment limited.
See English Department listings for details.

249. History of the Middle East
3 meetings per seven-day cycle/2 credits
If forced to choose between your religion, your country, and your ethnic community, to which would you remain most loyal? This is one of the moral and political dilemmas that has dominated the region we call the Middle East since the fall of the Ottoman Empire in 1918. To explore how the peoples of the Middle East have tried to negotiate their contested loyalties, we will begin our work with some basic geographic, social, and theoretical context of the region. Where, precisely, do the borders of the Middle East lie? What is a caliphate? Why do Middle Easterners frequently feel so misunderstood by the west? Having grounded ourselves in that basic understanding of the region, we will proceed to examine the Middle East's history of competing loyalty claims by looking at three major periods of its history: The end of the First World War and the creation of the first nation states in the Middle East, the 1950's and 60's and the emergence of ethnic nationalist movements across state lines, and 1970's signaling of the rise of Islamist movements within the region. Along with our study of history, we will be tracking the current events in the region to get a better sense of how the Middle East’s past affects its present.

234. Modern Latin America  Not offered in 2019-20
3 meetings per seven-day cycle/2 credits
The course will look at a number of themes in the history of Modern Latin America, investigating specific countries insofar as they exemplify those themes. Thus, it is not a survey course, though it will necessarily investigate the narrative chronologies immediately surrounding the thematic material. Themes may include the following: race; competing economic models; the role of the military in Latin American polities; democratization and the search for “democracy without adjective”; US-Latin American relations, and others. Students will also have the opportunity in the last part of the year to explore questions of their own devising.
241. Modern Africa
3 meetings per seven-day cycle/2 credits

The course is not intended as a survey, but one in which students will explore historical and present-day forces in a number of African nations. The chronological focus will be on the 20th and 21st centuries. Nations likely to be studied include South Africa, Rwanda, Congo, Kenya, Algeria, Egypt and Nigeria. Current events inform topics explored. The course utilizes an array of texts, including historical monographs, memoirs, biographies, novels and films.

243. Modern China
3 meetings per seven-day cycle/2 credits

China is perhaps poised to become the dominant economic, political, cultural and military power in the next decades. This course is intended to provide an understanding of the history of China and to prepare students for the so-called Asia/China century. The aim is to provide students with a solid understanding of the main milestones, leaders and philosophies of the period from the late Qing Dynasty to the present. Students will consider what has shaped China’s vision and its perception of its place on the world stage.

255. Being Human
3 meetings per seven-day cycle/2 credits

This course is an interdisciplinary exploration of human nature and identity. How do we make sense of the human animal in all its complexity both as individuals and in relation to each other and the world? A tasting menu of brief but rich readings and intriguing visual texts will inspire and fuel conversations in this seminar-style class. Informal writing, journaling, discussions, and interviewing will culminate in student-developed essays and projects. Units include

*Evolution’s Child:*
How does the biology of our species determine what we are in the world? We are animals with a glorious ability to reflect. Is the ability to think a biological adaptation that is useful but ultimately meaningless? Are we biologically determined to the point where freedom is an illusion?

*Institutions That Shape Us*
How do institutions shape, limit, and liberate us?
What is authority? Which institutions have authority?
How does authority gain legitimacy?

*A Brief History of Individual Identity*
To what extent is the understanding of ourselves shaped by how other people view us? How do we use social media to curate our public selves? How have we been at odds with our own identities and with the identities of others?

060. INDEPENDENT RESEARCH IN ENGLISH AND HISTORY
(See English Department Listing for Details.)

065. Collaborative Storytelling and Role-Play Gaming
(See English Department Listing for Details.)
Common Math Tracks

Course placement is based on previous performance and teacher recommendation. See course descriptions for details. Algebra II w/ Trig (303 or 365) is required for graduation. The college counselors recommend that students take math every year.

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*In special cases, Geometry and Algebra II (303 or 365) may be taken simultaneously. This is not broadly recommended.
UPPER SCHOOL MATHEMATICS

301. Quadratic Topics in Algebra 1
6 meetings per seven-day cycle/3 credits

In this course, students build on their study of linear topics and begin to explore quadratic equations. Students quickly review the basics of simplifying algebraic expressions, solving one-variable linear equations and inequalities, and graphing linear equations. We then move on to study systems of linear equations before we tackle exponents, exponential functions, and quadratic equations. We will conclude our study with polynomials and factoring, rational equations and functions, and radicals and their relationship to geometry. The course stresses relevancy with an emphasis on real-life applications.

Text: Larson, Boswell, Kanold and Stiff, Algebra 1

302. Geometry
6 meetings per seven-day cycle/3 credits
Prerequisite or co-requisite: Quadratic Topics 301 or the equivalent.

In this Euclidean geometry course, the main emphasis is on plane geometry. The traditional topics are covered: parallel lines and planes, congruency, parallelograms, similarity, right triangle relationships, circles, polygons, and constructions. Direct and indirect proofs are taught as methods of reasoning. Non-Euclidean topics such as solid geometry, coordinate geometry, and transformational geometry are introduced.

Text: Harold, Jacob, Geometry: Seeing, Doing, Understanding

365. Algebra II with Trigonometry
6 meetings per seven-day cycle/3 credits
Prerequisite: Quadratic Topics 301. Prerequisite or co-requisite: Geometry 302.

Students in this course review the essentials of first-year algebra including functions and relations and algebraic and graphical solutions of linear and quadratic equations and inequalities. We move on to discuss complex numbers, conic sections, and trigonometric, exponential, and logarithmic functions.

Students are required to have a calculator with graphing capabilities. The TI-89 is recommended. Text: Blitzer, Algebra 2 and Trigonometry

303. Advanced Algebra II with Trigonometry
6 meetings per seven-day cycle/3 credits
Prerequisite: “A-” or above in Quadratic Topics 301 and departmental recommendation.
Prerequisite or co-requisite: Geometry 302.

This course is designed for serious students who intend to go on to higher work in mathematics and who intend to do more than the minimum secondary school work in math and science. This is a fast-paced course that requires a strong background in Algebra I skills. Students in this course quickly review and expand upon the essentials of Algebra I and develop the structure and theory of the real number system. Topics include the concepts of function and relation,
algebraic and graphical solutions of linear and quadratic equations and inequalities, polynomial equations and complex numbers, conic sections, exponential and logarithmic functions, and the study of trigonometry and circular functions.

Students are required to have a calculator with graphics capabilities. The Texas Instruments TI-89 is recommended. Text: Blitzer, *Algebra 2 and Trigonometry*

**304. Math 4: Pre-Calculus**
6 meetings per seven-day cycle/3 credits  
Prerequisite: Adv Alg 2/Trig 303, or “B” or above in Alg 2/Trig 365 and departmental recommendation

This course establishes a deeper knowledge of the topics covered in the Algebra II courses (303 and 365). It treats selected topics of algebra and trigonometry, including matrices, arithmetic and geometric sequences, mathematical induction, and the binomial expansion formula. It is also designed to provide the students with a deeper understanding of functions and to prepare students to take AP Calculus AB 328 the following year.

Students are required to have a calculator with graphics capabilities. The Texas Instruments TI-89 is recommended.

Text: Stewart, *PreCalculus*

**305. Math 5: Advanced Pre-Calculus**
6 meetings per seven-day cycle/3 credits  
Prerequisite: A “B+” or above in Adv Alg 2/Trig 303, and departmental recommendation.

Advanced Pre-Calculus is designed for students who enjoy math and want to push themselves daily. The course is very rigorous and demanding and prepares students for AP Calculus AB 328 or AP Calculus AB/BC 312. We study many topics including polynomials, inequalities, functions, exponents and logarithms, trigonometry, polar coordinates, vectors and determinants, parametric equations, sequences and series, combinatorics, and probability. Students are required to derive all formulas and there is a great emphasis on solving multi-step, multi-process problems. Students are required to have a calculator with graphics capabilities. The Texas Instruments TI-89 is recommended.

Text: Brown, *Advanced Mathematics: Precalculus with Discrete Mathematics and Data Analysis*

**330. Statistics and Probability**
6 meetings per seven-day cycle/3 credits  
Prerequisite: Alg 2/Trig 365 or Adv Alg 2/Trig 303. This course is open to juniors and seniors.

“Statistical thinking will one day be as necessary for efficient citizenship as the ability to read and write”. –H.G. Wells

We live in the information age; raw data, graphs, rates, percentages, probabilities, averages, forecasts, and trend lines are an inescapable part of our everyday lives. Everyone who needs to collect and analyze data needs to understand statistics, including those involved in every
branch of natural science, the social sciences (psychology, sociology, anthropology, etc.),
business and economics, political science and government, and law and medicine.

This course is designed to examine how data and statistics shape our world. Students will learn
the importance of collecting and studying data in real-life situations. They will explore data
analysis, data production, statistical inference, and probability and, in turn, are provided with the
tools to make good decisions with data.

309. AP Statistics
6 meetings per seven-day cycle/3 credits
Prerequisite: “B” or above in Adv Pre-Calc 305 or AP Calc AB 328, and departmental
recommendation; or “B+” or above in Pre-Calc 304 and recommendation of teacher; or “A-“ or
above in Adv Alg 2/Trig 303 and departmental recommendation. Occasionally, students with
straight A’s in Alg 2/Trig 365 may be considered for AP Statistics by applying to the department
chair.

This course follows the curriculum recommended by the College Board for the Statistics
Advanced Placement Exam. The purpose of the course is to introduce students to the major
concepts and tools for collecting, analyzing, and drawing conclusions from data. Topics are
divided into four major themes: exploratory analysis, planning a study, probability, and statistical
inference. Students are required to have a calculator with graphing and statistical capabilities.

Text: Yates, Moore, McCabe, The Practice of Statistics

329. Calculus-Based AP Statistics
6 meetings per seven-day cycle/3 credits
Pre-requisite: A- or above in AP Calc AB 328, B+ or better in Acc AP Calc AB 308, or B or better
in AP Calc AB/BC 312 and departmental recommendation. Co-requisite: AP Calc BC 310,
unless BC Calculus (310 or 312) taken previously.

In this course probability theory is used to make sense of randomness and uncertainty, and
statistics is used to make intelligent judgments and informed decisions in the presence of
uncertainty and variation. Calculus provides the methodological basis in both disciplines.
Students will use quantitative methods to analyze data, make rational decisions under
uncertainty, design experiments, and model randomness and variability in the social and natural
sciences. This course is more mathematically rigorous than AP Statistics.

Textbook: Devore, Jay L., Berk, Kenneth N. Modern Mathematical Statistics with Applications
Springer 2nd Edition 2012 (also available as an eBook)

328. AP Calculus I (AB)
6 meetings per seven-day cycle/3 credits
Prerequisite: Adv Pre-Calc 305 or a B+ or above in Pre-Calc 304, and departmental
recommendation.

This course will focus on gaining a conceptual understanding of calculus and discovering a wide
variety of applications in the real world. Topics will include functions, limits, differentiation, and
integration and applications from engineering, physics, life sciences, and economics. All AP
topics will be covered.
Students are required to have a calculator with graphing capabilities. The Texas Instruments TI-89 is recommended.

Text: James Stewart, *Single Variable Calculus: Concepts and Context*

**310. AP Calculus II (BC)**
6 meetings per seven-day cycle/3 credits
Prerequisite: A- or above in AP Calc AB 328 and departmental recommendation.

This course follows the curriculum recommended by the College Board for the Calculus BC Advanced Placement Exam. Applications of integration begun in AP Calculus AB are reviewed and additional applications including arc length and work are studied. Other topics include techniques of integration, infinite series, the calculus of polar coordinate functions, parametric equations, vector functions, improper integrals, and simple differential equations.

Students are required to have a calculator with graphics capabilities. The Texas Instruments TI-89 is recommended. Some course time will be devoted to discussing the mathematics that the calculator might be using to perform the calculations.

Text: Finney, Demana, Waits, Kennedy, *Calculus Graphical, Numerical, Algebraic*

**312. AP Calculus (AB/BC)**
6 meetings per seven-day cycle/3 credits
Prerequisite: An “A-” average in Adv Pre-Calc 305 and recommendation of the 305 instructor

This is a fast-paced course for students who wish to cover all of the topics included on both the AB and BC Advanced Placement Examinations. In order to achieve this goal, students will be required to complete a summer self-study assignment. Students will be tested on this material and then we will move on to applications of derivatives, curve sketching, techniques of integration and its applications, infinite series, the calculus of polar coordinate functions, parametric equations, vector functions, improper integrals, and simple differential equations. This course is designed for students who have a passion for mathematics and want to challenge themselves daily. Because of the material to be covered, students will need to be independent, self-motivated learners. Rising juniors should only consider this course if they wish to continue on in math beyond the BC course during their senior year.

Students are required to have a calculator with graphing capabilities. The Texas Instruments TI-89 is recommended.

**314. Multivariable Calculus/Linear Algebra**
6 meetings per seven-day cycle/3 credits
Prerequisite: B+ in AP Calculus BC 310 or AP Calculus AB/BC 312 and departmental recommendation.

This course is open to students that have successfully completed BC Calculus (Math 310 or 312). The first half of this course covers vector and multi-variable calculus. Topics include vectors, parametric curves, partial derivatives, double and triple integrals, and vector calculus in 2D- and 3D-space. The second half covers matrix theory and linear algebra, emphasizing topics useful in other disciplines, including systems of equations, vector spaces, determinants, and eigenvalues. Students will be required to complete a short independent study on an application
of these topics. This course follows MIT syllabi with free resources available to students through MIT OpenCourseWare.

Textbooks: Edwards and Penney, Multivariable Calculus. 
Strang, Introduction to Linear Algebra.

390. Math Team 
1 meeting per seven-day cycle/0 credits
Open to all Upper School students

The Math Team class will provide students with an opportunity to prepare for participation in mathematics contests. Students will study a variety of problem solving techniques and they will practice using problems from previous contests. Any student can participate, regardless of what math class he or she is currently taking. The only requirement is that students have an interest in mathematics and a desire to stretch their mathematical thinking. Students who want to take part in interscholastic math competitions should sign up for this course if their schedule allows.
### Science Tracks
(major courses only)

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*Biology or Cellular Biology required for graduation.*

**Prerequisite math courses, grades, and/or recommendations required.**
UPPER SCHOOL SCIENCE

CORE SCIENCE COURSES

418. Physics (9th Grade Physics)
6 meetings per seven-day cycle/3 credits

A student of Physics gains a conceptual introduction to the laws of the physical world. Subjects include graphing, motion analysis, forces, momentum, work, energy, rotational mechanics, gravitation, electrostatics and circuits. Problem-solving methods of teaching physics are also used. Students improve their applied quantitative skills by solving physics problems, thereby illustrating knowledge of fundamental physics concepts. The course also stresses development of laboratory skills through regularly scheduled laboratory sessions. Students are encouraged to question, observe, collect data, analyze results and reach conclusions on physical relationships. The course culminates in a rocket project that pulls together many of the skills and content knowledge learned throughout the year. Independent creative thought and study are encouraged throughout the course.

eText: McLay, Physics First – A 9th Grade Physics eTextbook

408. Chemistry (10th grade)
6 meetings per seven-day cycle/3 credits
Prerequisite: Physics 418

This course serves as an introduction to the principles of chemistry, further preparing students for future work in science. Topics covered include chemical formulas and equations, states of matter, atomic structure, bonding, stoichiometry, and thermochemistry. Laboratory work is an integral part of the course as is class participation that focuses on problem-solving.

410. Accelerated Chemistry (10th grade)
6 meetings per seven-day cycle/3 credits
Prerequisite: Departmental recommendation and an “A” in Physics 418. Co-requisite: Adv Alg 2/Trig 303 or Alg 2/Trig 365, but 303 strongly recommended.

This course covers the same units as Chemistry 408 but at a significantly faster pace allowing the students to address supplementary topics within each area of study. Additional quantitatively challenging topics are covered. Laboratory work is an integral part of the course as are nightly homework assignments that focus on problem-solving and data analysis. Recommended for students planning on taking AP Chemistry.

404. Biology
6 meetings per seven-day cycle/3 credits
Prerequisite: Chemistry 408 or Accelerated Chemistry 410.
Open to juniors and seniors

This biology class is focused on human biology. Students will study organ systems and learn to appreciate how their bodies work to solve the problems of being and staying alive. Evolution is an overarching theme, which will allow for comparisons to all organisms in the natural world. Students will also focus on sustainability and how human interactions impact the world ecosystem. This class is designed to be a hands-on class with several labs, activities and projects per unit. In addition there will be current event readings. Students will be expected to keep a detailed lab journal in which they document the lab and write their responses to questions.

Note: This class does not prepare students for the SAT Subject Test in Biology.
Text: Campbell, Concepts and Connection 7th ed.

414. Cellular Biology
6 meetings per seven-day cycle/3 credits
Prerequisites: Chemistry 408 or Accelerated Chemistry 410. (NOT recommended for students with a B+ or lower in Chemistry 408.) Open to junior and seniors. Recommended for juniors planning to take AP Biology in senior year.

We designed this course as an introductory course for the student that is seriously interested in biology and is a motivated learner. The themes of evolution, the relationship between structure and function, and science as a process will frame the course. Students acquire a working knowledge of photosynthesis, respiration, cell-division, reproduction, heredity, biochemistry, molecular genetics and evolution. Reading, writing, lab, and analytical skills will be necessary for success.
Text: Campbell, Concepts and Connection 7th ed.

SCIENCE ELECTIVES (MAJORS)

425. Advanced Physics
6 meetings per seven-day cycle/3 credits
Prerequisites: completion of Adv Alg 2/Trig 303 or Alg 2/Trig 365

This is an Algebra/Trigonometry based continuation of Physics 418. The course offers an in-depth study of Fluid Mechanics, Thermal Physics, and Waves. The topics and expectations of the course are comparable to those of a second semester first year college physics course. The course is unique in that significant time is spent exploring the experimental design process, in which students create and present demonstrations and experiments. These reinforce the concepts being studied. In addition, the course features extensive problem solving both conceptually and mathematically. Significant independence and choice is given to the students in their pursuit of applications, demonstrations, and experiments that enhance the course material. Emphasis is placed on public speaking, presenting to peers and teachers alike, in both formal and informal settings.

Text: Serway and Jewett, Physics for Scientists and Engineers
455 **Food and Power: The Science and Politics Behind What We Eat.**
6 meetings per seven-day cycle/3 credits
Prerequisite: Chemistry. Open to juniors and seniors. Priority given to seniors.

Food is necessary for life, yet it is far more than a necessity. What we eat is heavily tied to our culture, our history, our political systems, our beliefs and our available technologies. What we eat influences our own health as well as the health of the planet. This interdisciplinary course looks at food and its relationships with power, culture and the environment. We will also cook, garden, and learn about the science and nutrition behind what we eat. Course work will include readings from varied sources, class discussions, hands-on activities, projects, presentations, papers and quizzes.

406. **Advanced Forest Ecology Research**
6 meetings per seven-day cycle/3 credits
Prerequisite: Chemistry. Open to seniors and juniors.

This field intensive course will develop students’ analytical and investigative abilities. Students will begin with a focus on the natural history of Hackley, including studies of tree, bird, reptile, amphibian and mammal identification, and bird calls. Students will create a field notebook with approximately 100 organisms, to include pressings of plants and descriptions of organisms such as how to identify, Latin names, where located on campus, and behavior (if animal). A trip to Teatown Nature Reservation will facilitate learning about the flora and fauna of the Hudson Valley. Students will also help Teatown scientists with ongoing research projects.

One of the major problems facing conservation is lack of biological information. Long-term data collection projects benefit the community by determining how the forest structure is changing and thus how to better manage our land. Students will participate in long-term research projects in Hackley’s field station. Most studies were started in 2009 and continuing research adds important new data. One such project is salamander abundance based on a National Parks study. Another project is a water quality analysis of two vernal pools at our field station. A third is a study of macro invertebrate abundance in the two vernal pools using leaf packs. A fourth major project is a bird abundance study done in conjunction with Cornell’s Project Feeder Watch. During the winter months students will count the total number of birds seen and identify different species visiting our bird feeders for at least 50 minutes a week. Several bluebird nest boxes have been mounted over campus and in the spring students will have the opportunity to work with scientists at other research facilities, such as Lasdon Park and Arboretum.

One of the major solutions to conversation problems is education. Students will have the opportunity to work/teach the lower grades about forest ecology. If time allows some students will perform a statistical analysis of our data and give a final presentation to members of the faculty. All students will take a spring trip to the Bronx Zoo to take a class on wildlife conservation.


411. **AP Chemistry**
6 meetings per seven-day cycle/3 credits
Prerequisites: “A-“ or “A” in Accelerated Chemistry 410 and departmental recommendation.
Students must pick up a summer self-study assignment before the end of the present school year. Students will be tested on this material during the first week of class.

This course undertakes a rigorous quantitative study of chemical principles and prepares students for the Advanced Placement examination in chemistry. Topics covered include atomic structure, chemical bonding, states of matter, thermodynamics, equilibria, kinetics, electrochemistry and solutions. Laboratory work is heavily emphasized through weekly exercises. Students must sit for the AP Chemistry examination in May.


421. AP Physics “C” (calculus-based)
6 meetings per seven-day cycle/3 credits
Prerequisites: Departmental recommendation and an “A-” in Precalculus 304 or “B+” in Adv. Precalculus 305. Co-requisite: AP Calc AB 328 or AP Calc AB/BC 312, for students who have not yet taken one of these calculus courses. Please note: this course requires a working knowledge of calculus from the start, so students taking AP Calculus AB as a co-req will find the course more challenging than those who are taking Calc AB/BC or Multivariable Calc.

Students must pick up a summer self-study assignment before the end of the present school year. Students will be tested on this material during the first week of class.

This course is open to juniors and seniors and follows the syllabus recommended by the College Board for the Advanced Placement examination in Physics “C”. It is a systematic college-level treatment of the main physical principles for students planning to pursue careers in science or engineering. Students are required to sit for the May AP Physics exam.

Text: Serway and Jewett, Physics for Scientists and Engineers

405. AP Biology
6 meetings per seven-day cycle/3 credits
Prerequisites: “A” or “A-“ in Cellular Biology 414 or departmental recommendation.

Students must pick up a summer self-study assignment before the end of the present school year and will be tested on this material during the first week of class. Students must also turn in their outline notes of the self-study topics covered during their summer review.

This is a laboratory-based course that prepares the student for the Advanced Placement examination in Biology. This course will develop students’ deep conceptual understanding of a range of biological topics. It will engage them through an inquiry-based lab experience. There will be an emphasis on integrating application, reasoning, and quantitative skills. The four framing ideas for the course as delineated by the College Board are:

- The process of evolution drives the diversity and unity of life.
- Biological systems utilize energy and molecular building blocks to grow, reproduce and maintain homeostasis.
- Living systems retrieve, transmit, and respond to information essential to life processes.
- Biological systems interact, and these interactions possess complex properties.
415. Advanced Topics in Biology
6 meetings per seven-day cycle/3 credits
Prerequisites: Biology or Cellular Biology. Open to seniors.

Advanced Biology is a second year biology class designed for students interested in continuing their exploration of biology. The course will focus on varied topics, such as plants, human evolution, and virology, and course work will be adjusted to reflect current global events in science. Since it is a second-year biology class, there is an expectation that certain topics and concepts are well understood and can be incorporated into class with minimal review. Graded assignments will vary – ranging from longer-term lab assignments, independent research and presentations, as well as more traditional exams. Reading of primary science literature will be an integral part of the course. Critical thinking and thoughtful classroom discussion will be a daily expectation.

Text: TBD

SCIENCE MINORS

442. Marine Biology Seminar
3 meetings per seven-day cycle/2 credits
Prerequisite: Biology or Cellular Biology

Students spend one class each week listening to a lecture, and the other in a laboratory exercise. Through this venue, they learn the physical properties of the oceans (waves, tides, and currents) coral reefs, estuaries, and rocky shores before they are exposed to marine ecology. The course concludes with an intensive study of marine invertebrates and vertebrates. Students visit local aquariums and undertake a project near the end of the year. Students are exposed to material that is challenging, and therefore need a strong interest in biology. This course requires a minimum enrollment to run.

Text: Karleskint, Introduction to Marine Biology

444. Astronomy and Meteorology
3 meetings per seven-day cycle/2 credits
Open to all juniors and seniors. Limited enrollment. Preference given to seniors.

This course will combine astronomy and meteorology, allowing the student to study the major aspects of both. In doing so, the more interesting and fascinating aspects of each will be discussed without the need to focus on the minute physical and chemical details. The topics in astronomy will include the history of astronomy, the Earth, the Moon, the solar system, comets and asteroids, stars and stellar evolution, galaxies, and cosmology. The majority of the astronomy part of the course will fall from November to February as the weather at night tends to be clearer and allow for better viewing of stars. As a result a few night labs will be required.

The purpose of the meteorology section is to study the weather both locally and globally. Topics in this course will include temperatures, humidity, barometric pressures, and their effects on daily weather. In addition there will be a focus on specific weather phenomena such as hurricanes, tornadoes, lightning storms, floods, and droughts.
The class will begin with a study of the basics of what constitutes weather. On a daily basis students will measure the temperature, barometric pressure, humidity, and wind speed, along with the visible weather. By keeping a log of these daily readings, students will begin to see if they can predict upcoming weather events. Finally, a look will be taken at the effects that humans may be having on local and global weather patterns, particularly the possible effects of global climate change on weather.

Text: McLay, E-text
Students will also be required to purchase a Weather Forecasting Card (approximately $15.00) and a Sky Safari App (approximately $3.00).

INDEPENDENT RESEARCH PROGRAM

The Independent Research Program (IRP) at Hackley is an opportunity for students to complete independent, collegiate-level scientific research in a genuine research setting. This is a three-year program, where each student in the program will design and execute their own experiments in science, math, or computer science. The program focuses on teaching students the skills of performing proper literature reviews, designing experiments, analyzing data, and presenting results to an audience. The program will culminate in students submitting their work for regional and national science and engineering fairs.

The majority of the experiments will take place at research facilities off-campus during the summers after the sophomore and junior years; students must be willing to commit 6-8 weeks of each summer to their research. While the program will help students reach out to mentors at these off-campus sites, ultimately, it is the responsibility of the student to find and secure internships for both summers. If a student cannot find placement for the summer after junior year, the student will not be able to return to the program for senior year.

Students must apply and be accepted into this three-year program. We expect to accept approximately 2-5 rising sophomores each year. The application process will begin early spring of 9th grade. Students should see Dr. Ying with questions.

460. Independent Research 10
6 meetings per seven-day cycle/3 credits. Pass/Fail. Approval via application process.

This course is the first year course for the Independent Research Program. The goals of this course are for students to decide on their independent research project and to contact potential mentors to host them for the following summer. The course focuses on basic skills associated with research, such as literature reviews, designing and conducting experiments, data analysis and presenting their results to an audience. Students are expected to be motivated to work efficiently and independently throughout the course.

461. Independent Research 11
6 meetings per seven-day cycle/3 credits. Pass/Fail. Prerequisite: Independent Research 10 and permission of the instructor.

This course is the second year course for the Independent Research Program. The goals of this course are for students to finalize their research project for the program and to secure a mentor to guide their research for the following summer. Students continue to hone their skills in analyzing and presenting data in the form of written reports and presentations. They will also serve as
mentors for students in IRP 10. At the end of the year, students will be expected to present their results in local science competitions. Students are expected to be motivated to work efficiently and independently throughout the year.

462. Independent Research 12
6 meetings per seven-day cycle/3 credits. Pass/Fail.
Prerequisite: Independent Research 11 and permission of the instructor.

This course is the final course of the Independent Research Program. The goal of this course is for students to submit their work to regional and national competitions. The deadlines of these competitions are during the first trimester of school, which coincide with early decision college applications deadlines. As such, students need to be highly motivated and be able to work independently. During the latter half of the year, students will be expected to serve as mentors for students in IRP 10 and 11.
### Modern Language Course Sequences

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UPPER SCHOOL MODERN LANGUAGES

FRENCH

501. French I
6 meetings per seven-day cycle/3 credits

French I includes all elements of language instruction: listening, speaking, reading, writing, culture and civilization.

The course stresses oral communication and pronunciation. Grammar will be presented in a variety of ways, and short compositions, mainly dialogues, will be assigned. Individual projects and role-playing will further involve the students. The class will advance at a fairly brisk pace, so that by the end of the year, students will have a very practical sense of the language and will be able to carry on simple conversations useful for traveling and living in French-speaking countries.

Text and Workbook: *D’Accord 1* (Vista Higher Learning)

502. French II
6 meetings per seven-day cycle/3 credits

This course is open to students who have completed French I either in one year in the Upper School or in three years in the Middle School program. The course is highly interactive and affords students endless opportunities to develop their speaking and listening comprehension skills. Reading and writing are practiced regularly, and through use of video the students are exposed to French culture daily. At the end of French II students speak fluidly and with a very practical vocabulary and should be able to make their way in a great number of everyday situations in France and francophone countries.

Textbook and Workbook:
* D’Accord 2* (Vista Higher Learning)
*Readings: Qui File Cécile?*

503. French III
6 meetings per seven-day cycle/3 credits

Initially this course focuses on oral work, based on everyday conversation and usage. Correct pronunciation will be stressed and practiced. Students review basic grammar and expand on it to include greater complexity. As new grammatical material is encountered, more complex texts are added for reading comprehension. Stories featuring le petit Nicolas provide idiomatic expressions and a touch of humor. Several major projects entail research, writing and/or oral presentation.

Readings in French history and culture are incorporated, with additional stress on vocabulary. By the end of the year, students will have completed their study of fundamental grammar and will have had substantially more practice in reading and composition. Films and videos reinforce historical material as well as provoking discussion.

Textbook and Workbook:
* D’Accord 2* (Vista Higher Learning)
504. French IV
6 meetings per seven-day cycle/3 credits

This class, designed for students who wish to continue their study of French without necessarily matriculating towards the AP examination, is topic-based. Topics covered include Health and Fitness, Education, Relationships, Holidays and Travel, Environment. The approach is multi-skill, with an emphasis on the oral use of the language and comprehension skills, both aural and reading. Written work tends to be discursive and/or imaginative by nature, giving students the chance to formulate and express their own opinions and reactions and to practice different writing styles. There is also a film component, which begins with a review of the development of French cinema and continues throughout with a number of French films, chosen for their quality and/or their relevance to topics being studied. Some time is also spent each week on grammar review.

Textbook: D’Accord 3 (Vista Higher Learning)
Reading: Sartre, *Les Jeux Sont Faits*

507. AP French Language and Culture
6 meetings per seven-day cycle/3 credits
Prerequisite: Completion of French III or IV with a grade of "B+" or above, as well as recommendation of current French teacher. Students take the AP French Language and Culture exam in May.

The latest version of the AP French Language and Culture program includes language study at a high level, based around the exploration of certain prescribed themes.

Students will encounter many different kinds of French – everyday, literary, journalistic, and technical – and will develop and practice all four linguistic skills – listening, reading, speaking, and writing – via authentic activities and materials. The language’s grammar and essential structures will be studied and applied in a variety of realistic situations and for a variety of purposes – simple reporting or résumé, personal response, re-formulation, persuasive speaking or writing, for example. The acquisition of strong comprehension skills and effective communication strategies are prime goals of the course.

Alongside its linguistic goals, the course will engage students in an exploration of French and Francophone culture in both contemporary and historical contexts and develop their awareness and appreciation of its manifestation via the tangible (e.g. books, music) and the intangible (e.g. laws, institutions), via practices (e.g. social interactions within a culture) and perspectives (e.g. values, attitudes). Prescribed themes include Global Challenges, Beauty and Aesthetics, Contemporary Life, Science and Technology. Materials will be drawn from a wide variety of media.

Texts: Delfosse, Kurgebov and Draggett, *Thèmes* (Vista Higher Learning)
Ladd & AP French, *Preparing for the Language & Culture Examination*

505. French V
6 meetings per seven-day cycle/3 credits
Prerequisite: French IV or AP French Language, as well as recommendation of current French teacher

The French V course prepares students to continue their studies of the French language at an advanced level in college and is an appropriate successor to either AP French Language or French IV. The goal of this class is to give students an opportunity to use the French they have already learned and take their language skills to the next level in both accuracy and complexity. To that end, the class will revolve around discussions and debates prompted by
reading French newspaper articles, watching French movies, and studying French culture in general. The topics covered will also provide a focus for reading, listening and oral work. Modern French literature will be read. Class will be conducted entirely in French to give the students ample opportunity to practice, and students will be evaluated on their ability and willingness to express themselves on all topics covered.

Textbook: Coursaget and Myers, *Breaking the French Barrier, Advanced*  
Saint-Exupéry, *Le Petit Prince*

509. Post-AP Advanced French Literature
6 meetings per seven-day cycle/ 3 credits  
Prerequisite: AP French Language. (Occasionally, rising seniors who are strong French IV students may be permitted in this course upon the recommendation of their current teacher.)

This course provides an opportunity for students to use and develop their knowledge of France and its culture, as well as their French language skills, through an encounter with a carefully selected group of literary texts, supplemented from time to time by video material and film. If you like to read, and to think and talk about what you read, then this is the course for you. As the course evolves students will acquire the critical vocabulary needed to discuss and to write about what they read and see.  
The course will include an overview of French literature from the 17th century to the present day, plus a more thorough treatment of the two topics outlined below.

Héros/Anti-héros
Does the essential meaning of heroism remain forever the same, or does it evolve in response to changing times? What is an anti-hero?

Possible texts:
Camus, *L’étranger*  
Corneille, *Le Cid*  
(Vitrac, *Victor, ou les enfants au pouvoir*)

La Francophonie/La Négritude/ littérature post-coloniale
How are the effects of French colonialism reflected in the literature of former colonies? Francophone works from West Africa and the Caribbean.

Possible texts:
Bâ, *Une Si Longue Lettre* (Sénégal)  
Jacques Chevrier, *Anthologie Africaine 1, Roman Nouvelle*  
Césaire, *Une Tempête* (Martinique)
511. Spanish I  
6 meetings per seven-day cycle/3 credits

At the end of the first year, students will have mastered a vocabulary of about 2,000 words. They will be able to communicate ideas, in both oral and in written form, about such topics such as the weather, school, family, dining, sports, hobbies and travel. Through readings and listening exercises, students will develop their passive communication skills. The cultural diversity of the Spanish speaking world is thoroughly explored in the course. Video and interactive computer programs are used to reinforce grammar, vocabulary and all four linguistic skills.

Text and workbooks: Descubre 1

512. Spanish II  
6 meetings per seven-day cycle/3 credits

This course is open to students who have completed a Spanish I course and covers a fairly extensive amount of grammatical concepts. As in Spanish I, students will be able to communicate their ideas in both oral and written forms, with significant emphasis on the narrative tenses, the imperative mood and the future and conditional tenses. They are exposed on a regular basis to the history and cultural components of the various Spanish-speaking countries through readings and use of video and audio material. The course is highly interactive and promotes endless opportunities for students to develop their speaking and listening comprehension skills. At the end of Spanish II students will speak with greater fluency and demonstrate an overall strong command of several key topics of grammar. Students who maintain a high level of performance throughout the year and show a propensity to master the concepts with relative ease are eligible for Accelerated Spanish III, with the recommendation of the current teacher.

Text and workbooks: Descubre 2

513. Spanish III  
6 meetings per seven-day cycle/3 credits

As in previous years, reading, conversation and composition continue to be stressed. Students build their themed vocabulary through three types of readings (historical, literary and journalistic) while broadening their cultural knowledge of the Spanish speaking world. A great deal of new vocabulary is encountered. In addition, grammar is reviewed, and several new structures (perfect tenses, continued study of the subjunctive mood) are introduced during the second and third trimesters. The texts are supplemented by video and audio material and outside readings.

Text and workbooks: Descubre 2

524. Accelerated Spanish III  
6 meetings per seven-day cycle/3 credits  
Prerequisite: “A-” in Spanish II and recommendation of current Spanish teacher

In addition to the above mentioned for Spanish III, the Accelerated Spanish III course will include more advanced cultural and historical readings as well as a greater emphasis on speaking and writing.

Text and workbooks: Descubre 2
514. Spanish IV
6 meetings per seven-day cycle/3 credits

This class is for students who have completed their third year of Spanish and intend to put their background in the language to practical use. Students are challenged to develop their own ideas and skills as global citizens as they master linguistic principles. Daily conversations, pair activities, readings, journal entries and research projects focus on current themes pertaining to the Spanish-speaking world such as sustainability in nature, culture and economics. The goal is for students to develop fluency and ease in aural and written Spanish. Additionally, students build awareness of common pitfalls for English speakers and master the structure of the Spanish sentence so that they are ready to progress into advanced high school or college coursework.

Text and workbooks: Descubre 3

515. Advanced Communication in Spanish
6 meetings per seven-day cycle/3 credits
Prerequisite: Spanish IV and recommendation of current Spanish teacher, or AP Spanish.

Students continue their studies of Spanish at an advanced level with special attention given to developing active communication skills. This course is appropriate for students who have completed Spanish IV or AP Spanish. The primary objective of this course is the development of the student's communicative skills by focusing on the practical applications and functions of advanced grammatical structures. After years of theoretical study, students will have the opportunity to use their Spanish to respond to the distinct, ever-evolving and authentic needs of the Spanish-speaking community in Westchester County through Service-Learning project(s). This is a conversation-based course where in-class engagement and active participation are heavily weighted. Further cultural and linguistic competency is fostered by a series of projects and thematic units. In this course, students will speak more fluently and with greater confidence about varied themes via extensive vocabulary expansion and fluency practice; acquire linguistic independence through better understanding of tense-sequencing and functional language; understand and communicate effectively with native speakers despite rapid speech patterns or strong accents; and participate in a long-term service-learning project exclusively in Spanish.

517. AP Spanish Language and Culture
6 meetings per seven-day cycle/3 credits
Prerequisite: Accelerated Spanish III (with an “A-” or above) or Spanish IV, and recommendation of current Spanish teacher. All AP Students take the AP Exam in May.

The AP Language course will be conducted in Spanish with very few exceptions. Students will be encouraged to practice the target language consistently and express themselves in a variety of styles, using strategies for different audiences (informal vs. formal). The vocabulary will be cyclical, presented in thematic units, and there will be vocabulary quizzes. Throughout the year, students will be expected to give two minute presentations in preparation for the verbal component of the AP exam. Additionally, students will spend time in the computer lab where they will practice the strategies for both informal speaking and formal oral presentation.

Students will do a variety of listening comprehension exercises that include short dialogues and narratives as well as selections from the BBC and CNN in Spanish. Films are used in order to enhance cultural knowledge, for exposure to varied types of pronunciations and to spark discussion of topics such as history, politics and family life.
This course also requires reading of short stories by Hispanic authors leading to subsequent class discussion and related writing assignments. Through frequent writing assignments, students will be exposed to different strategies in preparation for the informal and formal writing component of the exam.

Texts: Diaz, *AP Spanish, Preparing for the Language Exam*  
*Temas AP Spanish Language & Culture*

### 516. Post-AP Spanish: Literature & Film

6 meetings per seven-day cycle/3 credits  
Prerequisite: AP Spanish Language & Culture  
Advanced heritage speakers may request departmental permission in lieu of prerequisite.

In this seminar-style course, we will explore seminal literary movements through individual works of literature and film of the Spanish-speaking world. Each literary movement will be accompanied by historical, artistic and cultural units that frame the literary movement in its full context and incorporate film adaptations of some of the major texts. The course will prepare students for college-level writing and discussions of novels, short stories, poetic verse, dramatic texts and film.

Units of study will include the poetry of the Generation of ’98 lamenting the end of the Spanish empire, the vibrant poetry of Modernism in the early 1920s, the world of Magic Realism in the 1960s, Afro-Cuban identity literature and the influence of American writers in the Literature of the Spanish-speaking world. The course will enable students to develop the critical tools to view and analyze literary film adaptations in order to evaluate the creative liberties that directors take when transforming works of literature into works of cinematic art.

Films: *La luz prodigiosa, El cartero de Neruda, Un lugar en el mundo, La lengua de la mariposa.*

### 519. Post-AP Spanish: Language & Culture

6 meetings per seven-day cycle/3 credits  
Prerequisite: AP Spanish Language & Culture

This course seeks to develop further our most advanced Spanish students' ability to communicate comfortably, fluently and accurately. Through a series of thematic units of varying lengths, students will expand their knowledge of functional language and lexical groups, improve precision in written and spoken language, explore contemporary aspects of the Spanish-speaking culture and experience the practical application of Spanish through an extensive, long-term Service-Learning project in Westchester County. Our most advanced Spanish language students are given the opportunity to use the language to connect with and learn from our Spanish-speaking community while engaging in meaningful service. *This conversation-based course requires a high-level of class engagement and active participation.* The course will include such units as:

- Effective cross-cultural communication  
- Historical survey of the music of the Spanish-speaking Caribbean  
- Latin-American immigrant experience(s) in the United States  
- Contemporary issues of the Spanish-speaking world  
- Los Romani - origins, myths and cultural legacy in Spain

Text: *La Travesía de Enrique* by Sonia Nazario  
Additional materials provided by the teacher
555. Civic Engagement for Advanced Spanish Speakers
3 Meetings out of the 7-day cycle

Students must have completed a Post-AP Spanish course (Language & Culture or Literature & Film) or or be Native-Speakers of Spanish (Sophomore year and up)

This course seeks to sustain and further develop our highest-level Spanish students’ ability to communicate fluently and accurately, while responding to the ever-evolving needs of the Spanish-speaking communities in Westchester County. Through a series of short-term and long-term Service-Learning and Community Service projects with organizations like Abbott House, Open Door Family Medical Clinic, The Life Center in Sleepy Hollow, WestHab Housing Development or TaSH (Tarrytown and Sleepy Hollow Farmer’s Market) these Spanish students, as well as our Native-Speaker student population, will have the opportunity to use their Spanish language skills to contribute to the surrounding communities in a positive, active and engaged way.

CHINESE

561. Chinese I
6 meetings per seven-day cycle/ 3 credits

In this beginning Chinese course, students will learn pronunciation patterns, tones, and basic grammatical forms, including all elements of language instruction: listening, speaking, reading, writing, culture, and history at a pace appropriate to an upper school course. Students will learn to read and write pinyin (phonetic representation of Chinese sounds) with correct tones, including techniques to input characters for electronic transmission. The students will study Chinese character reproduction, including an introduction to Chinese radicals and measure words. The course approach will be thematic and new materials will be incorporated by means of conversations, short articles, cartoons, stories, and presentations. A textbook, workbook and character workbook will form the central core of the course, supplemented by other audio-visual and web-based resources.

Textbook:  
Integrated Chinese Level 1 Part 1 Textbook, Simplified, 3rd edition 
Integrated Chinese Level 1 Part 1 Workbook, Simplified, 3rd edition 
Integrated Chinese Level 1 Part 1 Character Workbook, 3rd edition

562. Chinese II
6 meetings per seven-day cycle/ 3 credits

In Chinese II, students will continue to work on Chinese conversation forms, augmented by new vocabulary, additional simplified characters and grammatical expressions. Students will expand their basic communication skills and will read and write short passages on familiar and personal topics. Chinese history and culture will continue to be introduced to help students develop a broader understanding and appreciation for their study of the language.

Textbook:  
Integrated Chinese Level 1 Part 1 & 2 Textbook, Simplified, 3rd edition 
Integrated Chinese Level 1 Part 1 & 2 Workbook, Simplified 3rd edition 
Integrated Chinese Level 1 Part 1 & 2 Character Workbook, 3rd edition

563. Chinese III
6 meetings per seven-day cycle/ 3 credits
The Chinese III course gives students the opportunity to continue to expand their oral and written knowledge of Chinese so that they are able to discuss daily life topics with ease and confidence, read short stories and write about a variety of topics in more detail. Students will build upon their conversational and grammatical forms with more complex vocabulary and approximately 250 additional simplified Chinese characters. Chinese history and culture will continue to be included in the course materials to help students develop a deeper understanding and appreciation of the language.

Textbook:  
Integrated Chinese Level 1 Part 2 Textbook, Simplified, 3rd edition  
Integrated Chinese Level 1 Part 2 Workbook, Simplified, 3rd edition  
Integrated Chinese Level 1 Part 2 Character Workbook, 3rd edition

564. Chinese IV  
6 meetings per seven-day cycle/3 credits

The Chinese IV course builds on Chinese III and will give students the opportunity to continue to grow their oral and written knowledge of Chinese at an accelerated pace so that they are able to handle a variety of more complicated communicative tasks with ease and confidence. The class will read short stories and write about a variety of situational topics in more detail and complexity. Students will continue to build their conversational grammatical forms with the introduction of new patterns, grammatical expressions, including Chinese adages, and approximately 200 more Chinese simplified characters. Chinese history and culture, as in the previous levels, will continue to be introduced to help students better understand the language and culture of China.

Textbook:  
Howard and Xu, Huanying: An Invitation to Chinese, Volume 2, Textbook  
Howard and Xu, Huanying: An Invitation to Chinese, Volume 2, Part 1 Workbook and Part 2 Workbook

566. Chinese V  
6 meetings per seven-day cycle/3 credits

The Chinese V course prepares students to continue their study of the Chinese language at an advanced level in college. It will help students to solidify their knowledge of spoken and written Chinese and bring their linguistic abilities to a level appropriate for their age group. Students will continue to build upon their conversational and grammatical forms, vocabulary, and retention of Chinese characters. Varied aspects of Chinese culture and history will be used as topics for reading and class discussion. The class will be conducted primarily in Chinese. Writing assignments involving both writing and typing in Chinese will be given throughout the course.

Textbook:  
Howard and Xu, Huanying: An Invitation to Chinese, Volume 3, Textbook  
Howard and Xu, Huanying: An Invitation to Chinese, Volume 3, Part 1 Workbook
567. AP Chinese Language and Culture
6 meetings per seven-day cycle/ 3 credits
Chinese IV and recommendation of current Chinese teacher

This course conforms to the standards and expectations as described in the College Board curriculum for AP Chinese Language and Culture and moves at a fast pace. Students prepare authentic testing materials as prescribed for the AP Examination in Chinese Language and Culture, and use media to record original responses and presentations. All students must take the AP Chinese exam in May.
UPPER SCHOOL CLASSICS

601. Latin I
6 meetings per seven-day cycle/3 credits

This course presents basic Latin vocabulary and grammatical structures, such as declensions, conjugations, dependent clauses, the indicative mood, noun/adjective agreement, constructions of time and place, the active and passive voices. In addition to grammar and vocabulary, students are introduced to Roman history of the late Republican and early Imperial periods through the life of the poet Horace, whose poetry students will study in Latin 3. Considerable attention is paid to English derivatives from Latin vocabulary, myth, Roman culture, geography, art and archaeology. Emphasis is placed not only on reading but also on speaking Latin. Students will use extensive online resources- including vocabulary flashcards, drills, and other materials - which complement the textbook.

Texts:

Balme, Oxford Latin Course, College Edition: Grammar, Exercises, Context, Volume 1
Balme, Oxford Latin Course, College Edition: Readings and Vocabulary

602. Latin II
6 meetings per seven-day cycle/3 credits

This course reviews the conjugations, declensions, and grammar learned in Latin I and then presents the subjunctive mood and subjunctive constructions, such as result clauses, indirect questions, and purpose clauses. Students encounter the ablative absolute, indirect statement, and other dependent clause constructions. Students begin to tackle authentic Latin in the form of excerpts from Horace's poetry. Online resources remain an integral component of this course. The Oxford Latin Course, College Edition is an accelerated version of the series used in the Middle School Latin classes; this consistency of approach will ease the combination of rising 9th graders with new students to Hackley in the Latin 3 class.

Texts:

Balme, Oxford Latin Course, College Edition: Grammar, Exercises, Context, Volume 1
Balme, Oxford Latin Course, College Edition: Readings and Vocabulary

603. Latin III
6 meetings per seven-day cycle/3 credits

This course focuses primarily on the literature of the late Republican and early Imperial periods of Roman history. Following a comprehensive review of Latin grammar, students read excerpts from Caesar's Commentarii, Cicero's orations (studying rhetorical techniques, periodic sentence structure, and contemporary Roman history), Vergil's Aeneid, and Catullus, as well as Horace and Ovid as time permits. Students will study the character of Julius Caesar and his role in the final years of the Roman Republic. Particular attention will be paid to rhetorical and poetic devices, such as hyperbole, anaphora and tricolon, poetic meter, and poetic forms.
604. Latin IV
6 meetings per seven-day cycle/3 credits

Latin IV focuses on cementing grammar concepts and vocabulary through authentic Latin. Students will build on the reading from Latin III – Cicero, Caesar, and Vergil – and will explore the poetry of Ovid, Catullus, and Horace as well. Students will expand upon their knowledge of archaeological techniques. They will participate in a both a MOOC from the University of Southampton (UK) on the University’s dig at Portus, as well as on site excavation of our own Hackley dig site. Continued reading in LNM Volume 3 will expose students to the life of Desiderius Erasmus, Petrarch, and other Late Latin writers. Students will practice writing literary critical essays, expand their knowledge of late Republican and early Imperial history, and experience passage-based multiple choice questions; this will prepare students to meet the challenges of AP Latin: Vergil and Caesar.

Texts: Shapiro, O Tempora! O Mores!: Cicero’s Catilinarian Orations, A Student Edition with Historical Essays
Minkova and Tunberg, Latin for the New Millennium, V. 3
Dettmer and Osburn, Latin for the New Millennium Latin 3: Select Latin Enrichment Readings
LaFleur, Love and Transformation: An Ovid Reader

605. AP Latin: Vergil and Caesar
6 meetings per seven-day cycle/3 credits

Prerequisite: Latin IV with a B average and recommendation of the Latin IV instructor or a B+ average in Latin III and recommendation of the Latin III instructor.

Students will read selections from books 1-6 of Vergil’s Aeneid and from books 1-6 of Caesar’s de Bello Gallico, as directed by the AP syllabus. Through practice AP questions, writing literary critical essays, and the honing of translation skills, students prepare for the AP examination in May. In addition to stylistic idiosyncrasies and specialized vocabulary, students learn to examine word choice, literary devices, meter, word painting, and tone in their analysis. Themes such as Roman values, war and empire, leadership, views of non-Romans, history and memory, and human beings and the gods will be explored in the works of both authors. Students are encouraged to reduce their reliance on notes and vocabulary lists as they make the transition from translation to reading.

Texts: Weiden-Boyd, A Vergil Workbook
Williams and Nousek, A Caesar Workbook
Colakis, Excelability in Advanced Latin: A Workbook for Students
Weiden-Boyd, Vergil’s Aeneid: Selected Readings from Books 1,2,4, and 6
Perry, A Call to Conquest: Readings from Caesar’s Gallic Wars
Gilliver, Essential Histories: Caesar Gallic Wars 58-50 BC
610. Greek
5 meetings per seven-day cycle/3 credits
Open to seniors (juniors will be considered with Department Head approval)
Prerequisite: Latin II or higher with approval (initials on course selection sheet) of the
Department Head; under certain circumstances, consideration will be given to other advanced
language students.

This is an intensive course in the elements of Classical Greek for students who have had
success in other language courses. A strong command of grammatical terminology and the
workings of an inflected language is mandatory. This course will prepare the student for further
study at the college level.

Lawall, Johnson, & Miraglia, *Workbook I for Athenaze*

614. Etymology: Greek and Latin in Current Use  Not offered 2019-2020
3 meetings per seven-day cycle/2 credits
Open to juniors and seniors only

This course explores many facets of the English language. Since at least 60% of English is
derived from Greek and Latin, students study Greek and Latin roots, prefixes, and suffixes, and
they learn how to use the dictionary effectively. Students learn common Latin phrases and
abbreviations and work on a vocabulary-building “A to Z” project. Since vocabulary only grows
when it is used, students learn to write more effective and informative prose, and they read
mythology and ancient literature in translation. Students prepare 4 short oral presentations
during the year on topics concerning the development and character of the English language;
the topics range from homophones and homographs to dialects to pop music-ese to the origin of
personal names. Students consolidate their word-wealth through word games, crossword
puzzles, and regular “Jeopardy!”-type contests. Other topics to be addressed include scientific
and medical terminology, loan words, euphemisms, place names, and literary terms. Selections
from the PBS video series “The Story of English” will be examined.

Text: Greene, *Word Clues: the Vocabulary Builder*
Upper School Computer Department
Course Sequencing

715 Post-AP Mobile App Development
(a=major course)
(b=minor course)

### Game Design and Programming
(major course)

723 AP Computer Science
(major course)

725 Programming, Simulations, and Design
(minor course)

710 Intro to Computer Science
(minor course)

726 Design Thinking, Applied Programming, and Fabrication
(minor course)

Can be taken any time during grades 9-12

731 Electronic Publishing I
(minor course)

732a, or f. Electronic Publishing II: Dial
(a=minor course)
(f=major course)

732b. Electronic Publishing II: Hilltop
(minor course)
UPPER SCHOOL COMPUTER SCIENCE

Computer Science Courses

710. Intro to Computer Science
3 meetings per seven-day cycle/2 credits
Open to all students. No previous experience with computer science is needed.

This project-based course delves into the basic principles of computer science. Students will explore the history of computers, learn about hardware, operating systems, and software, and be introduced to fundamental programming concepts. A visual programming language will be used to create apps for the Android operating system that enable novice programmers to take advantage of features such as GPS, texting, and sensors. Emphasis will be placed on problem-solving and the need to structure and develop solutions in a logical manner. Other topics include: creativity and conceptualization, analysis of algorithms, the influence computer science has on economic, social, and cultural innovation, and an introduction to syntax-based programming language.

725. Programming, Simulations & Design
3 meetings per seven-day cycle/2 credits
Prerequisite: Intro to Computer Science 710 or special permission of the department head. This course is a prerequisite for AP Computer Science 723.

This course is recommended for students who are comfortable moving into syntax-based programming and have a basic understanding of loops, selection statements, variables and logical thought.

The course will use visual programming, an IDE (Integrated Development Environment), and the Java programming language to build on the concepts learned in the prerequisite Intro to Computer Science 710 course. Students will use object oriented concepts to structure syntactically valid programming statements in a logical manner to develop games and simulations. Programming concepts include: objects, primitive data types, classes, inheritance, conditional statements, iteration and introduction to arrays. You will learn strategies to assist with planning, designing and implementing programs.

726. Design Thinking, Applied Programming and Fabrication
3 meetings per seven-day cycle/2 credits

Working in the Hackley Makerspace and applying the processes of design thinking and problem solving, students will engage in projects that result in the creation of a physical object. After skill building in the tools of the maker lab, (i.e., 3D printers, Raspberry Pi, power tools), students will discuss project scope and materials, and will implement their ideas through the use of 3D design software, such as Tinkercad and Sketchup. Prototyping with construction materials and tools in a "maker lab," students will test designs for viability. Construction project materials will include items such as LEGO, plastics for 3D printing, and recycled materials. Some projects, including robotics and circuit boards, will allow for computer programming of constructed objects.
**755 Game Design and Programming**  
6 meetings per seven-day cycle/3 credits  
Prerequisite: Programming, Simulations, and Design 725

This course is recommended for students who have an intermediate understanding of programming concepts. Correlations to topics learned in the prerequisite will be created while students develop a variety of interactive text and graphical games via hands-on projects. A variety of environments and languages will be utilized as new concepts are taught. Students must be able to navigate an API, debug code and construct syntactically valid programming statements. Understanding of control flow, variables, objects, functions, and inheritance are necessary. By class’s end, students will have programmed several of their own games and gained a thorough understanding of the basics of game design and development.

**723. AP Computer Science**  
6 meetings per seven-day cycle/3 credits  
Prerequisite: Programming, Simulations and Design 725 and departmental recommendation. Special permission of the department head may be granted in lieu of prerequisites.

This course is recommended for students who are can construct syntactically valid programming statements and understand flow of control, variables, methods, classes, IDE's and APIs.

This rigorous course will prepare students for the AP Computer Science examination in the Java programming language. Fundamental skills are necessary in order to design and implement computer programs that are understandable, adaptable, reusable and solve a problem. The goals of this course are comparable to those found in an introductory Computer Science course offered at a university. Topics include: algorithm analysis and development, advanced data structures, program implementation, analysis and computing in context.

**715. Post-AP Mobile App Development**  
(715b: Minor course - 3 meetings per seven-day cycle/2 credits)  
(715a: Major course - 6 meetings per seven-day cycle/3 credits)  
Prerequisite: A grade of “B” or above in AP Computer Science 723 and departmental recommendation.

This course is recommended for self-motivated students who can construct syntactically valid programming statements with an understanding of object-oriented programming concepts including: encapsulation, abstraction, inheritance, interfaces, flow of control, method decomposition, and construction.

This project-based course examines the principles of mobile application design and development. Students specify and clearly define a project which produces a quality mobile app pursued throughout the course. Course work will include project conception, design, implementation, and pilot testing through mobile phone applications on a predetermined platform (iOS/Android). Students are required to meet deadlines towards a proposed project.
Electronic Publishing Courses

731. Electronic Publishing I
3 meetings per seven-day cycle/2 credits
Open to all students.
This course is a prerequisite for 732a. Electronic Publishing II: Dial and 732b. Electronic Publishing II: Hilltop

This course combines the study of print and digital media with an emphasis on creating multimedia stories. As the course is designed to give structure to the creation and maintenance of student publications, students will explore all aspects of the journalistic process, including writing and presenting content using electronic publishing applications for print and online delivery. Students will learn the basics of journalistic writing, including composing interesting leads and nut graf's, and organizing facts using an inverted pyramid style. Students will also develop proficiency in the use of a variety of commercially available software packages for electronic publishing, video production, color printers, digital cameras, and scanners to layout and publish their work. The course will include extensive hands-on practice.

732a. Electronic Publishing II: Dial
3 meetings per seven-day cycle/2 credits
Prerequisite: Electronic Publishing I or special permission of the department head
Required of all members of Dial Staff.

This course continues building on the skills learned in Electronic Publishing I. This is an advanced course which continues to explore all aspects of the journalistic process begun in Electronic Publishing I and is designed to give structure to the creation and maintenance of the student newspaper, the Dial, in both its print as well as digital formats. Students will enhance their skills in journalistic writing begun in Electronic Publishing I; however, the emphasis is on the elements of production including scheduling, assignments, design, layout and graphics. Students will use computers, a variety of commercially available software packages for desktop and web publishing and multimedia creation, color printers, digital cameras, and scanners to layout and publish their work. The course will center around hands-on practice. Requirements center around the timely completion and publication of the print and digital formats of the student newspaper.

732b. Electronic Publishing II: Hilltop
3 meetings per seven-day cycle/2 credits
Prerequisite: Electronic Publishing I or special permission of the department head

This course is designed for those who are interested in working on the yearbook. Having already learned Adobe InDesign and journalistic writing in Electronic Publishing I, students will apply their skills in copy editing, caption writing and design concept. Upon joining this course, each student will be assigned to be the editor for a specific section of the yearbook. Through the completion of the yearbook pages, students will build and strengthen their organization skills and learn how best to manage yearbook page deadlines. Some knowledge in Photoshop is helpful but not required.

732f. Advanced Electronic Publishing II: Dial Editors
5 meetings per seven-day cycle/3 credits
Open to Dial Editors

This course continues to build on the skills learned in Electronic Publishing II and to explore all
aspects of the journalistic process in the electronic-publishing track. The course focuses on the creation and maintenance of Hackley’s award-winning student newspaper, The Dial. In addition to practicing advanced skills in journalistic writing, layout, design and graphics, students will develop the collaborative leadership roles needed to complete each issue in an efficient and timely manner. Students are responsible for all elements of production—scheduling, assignments, mentoring, design, layout, and graphics. For example, students will develop proficiency in using commercially available software packages for desktop and web publishing, color printers, digital cameras and scanners.

152. The Vision: Multiple Views, Rich Media
3 meetings per seven-day cycle/2 credits
Open to grades 10-12. No prerequisites, but experience preferred. Enrollment by application only. See English Department listings for details.
UPPER SCHOOL VISUAL ARTS

(All courses fulfill the graduation requirement in visual/performing arts.)

811. Foundations of Studio Art
3 meetings per seven-day cycle/2 credits
Open to all students.

This course provides a comprehensive foundation to the visual arts. The objective is to excite students about the breadth of creative exploration while building technical skills and a sense of self as artist. Students study the principles of drawing and design as they experiment with a wide variety of media and methods, including pencil, ink, watercolor, and computer graphics. Through lectures and in-class critiques, students learn about relevant artists and acquire critical skills. Requirements include short, written responses to question sheets, participation in class critiques, and a field trip to Manhattan. This class (or 3-D Sculpture & Design 822) is a prerequisite for 812, 814, 825, 832, and 842.

812. Intermediate Studio Art (Minor)
3 meetings per seven-day cycle/2 credits
Prerequisite: Foundations of Studio Art 811, 3-D Sculpture & Design 822 or permission of the instructor

This course allows students with prior studio experience the opportunity to continue their investigation of the visual arts. Students will focus on further developing their drawing skills with a range of media, including graphite, charcoal and pastel. Students will also be encouraged to sharpen their perceptual drawing skills through a series of challenging life drawing exercises. In-studio critiques will help students to think and speak confidently about their own work as well as the art around them. Requirements include both short and long term art assignments. A field trip to Manhattan will take place in the fall.

814. Intermediate Studio Art (Major)
6 meetings per seven-day cycle/3 credits
Prerequisite: Foundations of Studio Art 811, 3-D Sculpture & Design 822 or permission of the instructor

This class offers qualified students the opportunity to pursue an exploration of the visual arts with intensity and focus, enabling them to investigate several two-dimensional media, while maintaining an emphasis on drawing skills and on an understanding of composition and design. As they study significant artists and art periods, they will begin to make connections between art and culture, forming an individual sense of style. Students interested in this course should have a strong desire to develop both skills and analytic abilities as they start to see themselves as artists. Requirements include weekly sketchbook assignments, long-term projects and in-class critiques. Field trips to Manhattan museums and galleries will take place in both fall and spring semesters.

816. Advanced Studio Art/Drawing and Painting
6 meetings per seven-day cycle/3 credits
Prerequisite: Intermediate Studio Art (Minor) 812, Intermediate Studio Art (Major) 814 or permission of the instructor
Advanced Studio offers students who are ready to make art a major part of their Upper School experience the chance to further develop their drawing and design skills, as well as deepen their understanding of a full range of formal visual issues. An extensive syllabus of drawing projects will help students build a solid portfolio of formal work, and prepare them for the rigors of AP Studio Art in the senior year. The course places an emphasis on life-drawing, as well as the importance of the critique as a vital tool in the creative process. Students will also be encouraged to work independently on outside assignments, as a means of cultivating their own personal creative interests and vision. Important artists will be presented and discussed throughout the year. Requirements include in-studio assignments and a field trip.

822. Three-Dimensional Sculpture & Design
3 meetings per seven-day cycle/2 credits
Open to all students.

This class emphasizes the translation of two-dimensional ideas to three-dimensional forms as students explore problems in spatial organization. Using a variety of media and techniques, such as clay, wire, sheet metal, and wood, students will respond to a range of sculptural challenges designed to expand the boundaries of possibility. Emphasis is placed on developing skills in creative thinking, problem solving, drawing, and craftsmanship. Requirements include the ability to articulate concepts and ideas while utilizing the "language of art". Participation in class discussions and critiques enables the students to reflect on their work and artistic development. Students are required to attend the field trip to the Metropolitan Museum of Art in the fall. This class (or 811) may serve as a prerequisite for 812, 814, 825, 832, and 842.

818. AP Studio Art/Portfolio (Major)
6 meetings per seven-day cycle/3 credits
Open to seniors only.
Prerequisite: 816 and Mr. Cice’s permission, in the form of his initials on course selection sheet

AP Studio is intended for students who are seriously interested in the practical experience and study of art. The AP syllabus demands a high level of commitment and performance throughout the year, and is therefore not a course for the casually interested. A rigorous syllabus of in-studio projects, combined with independent “concentration” work, will provide students with an ample body of work from which to assemble a final AP portfolio for submission to the College Board in May. To succeed, portfolios must exhibit a sound grasp and understanding of a full range of formal art issues, as well as an ability to explore more personally creative concepts and directions. A number of museum/gallery excursions will take place during the year, including one overnight trip, and students will have the opportunity to participate in external exhibitions.

825. Advanced Sculpture and Ceramics
3 meetings per seven-day cycle/2 credits
Open to sophomores, juniors and seniors.
Prerequisite: 811 or 822 (or permission of the instructor)

In this course, students will develop their craftsmanship skills while learning to construct models in wood, welding (using an M.I.G. welding machine), cold forging and cutting steel (with the chop saw and plasma cutter). Students may choose to hone their skills in throwing pottery on the electric wheel, building large-scale vessels and constructions with the extruder, and exploring the sculptural qualities of paperclay. Drawing is an essential component of all
sculptural project development. Students will research contemporary as well as historical art and artists as they develop their personal visual vocabulary. Advanced Sculpture students will work towards exhibiting a cohesive body of sculpture in the Upper School Art Show in May. Students may also enter local and national exhibits and competitions throughout the year. Requirements include a visit to an exhibition and a written art review, as well as participation in class discussions and critiques. Students who have taken this course may continue their studies in sculpture and design by registering for an independent study with the approval of the instructor, Ms. Coble.

832. Foundations of Photography
3 meetings per seven-day cycle/2 credits
Open to sophomores, juniors, seniors.
Prerequisite: 811 or 822 or permission of the instructor

This course is designed for those who are interested in learning black and white photography. Beginning with a survey of the historical development of photography, students will learn the fundamentals of the medium, from basic camera operation and darkroom techniques to the rules of composition. Through class projects, students will gain a solid understanding of various photographic techniques and learn to use those techniques effectively to express their personal visual ideas. For the first half of the year, students will focus on traditional film method. In the spring, digital photography will be introduced. Students will learn how to use digital cameras as well as manipulate their images in Photoshop. Class critiques and the study of master photographers’ work will help promote discriminating technical and artistic judgment. A manual-option 35mm camera (preferably SLR camera) is required for the first half of the year. Students may use either a point-and-shoot camera or a digital SLR for the second half of the year.

834. Intermediate Photography
3 meetings per seven-day cycle/2 credits
Open to juniors and seniors only.
Prerequisite: Foundations of Photography 832 OR permission of the instructor

As a continuation of Foundations of Photography 832, this course enables students to develop their visual strengths in photography as they sharpen their technical skills. Each class project is designed to target a specific photographic issue of either technical or expressionistic importance. Students will learn new lighting techniques as well as ways in which they may best express their individual ideas. They will also continue to develop their analytical skills as they participate in class critiques and study the work of master photographers.

836. Advanced Photography
6 meetings per seven-day cycle/3 credits
Open to juniors and seniors only.
Prerequisite: Intermediate Photography 834 or permission of the instructor

This course is for serious photography students interested in refining their craft and personal vision. Having completed both Foundations and Intermediate level photography courses, each student is expected to produce a body of work that demonstrates both mature technical skills and individual expression. Advanced lighting techniques will be introduced and explored throughout the year. A large portion of the course will be devoted to digital photography. Each student is expected to become proficient in advanced Photoshop techniques.
842. Architecture and Design
3 meetings per seven-day cycle/2 credits
Prerequisite: Foundations of Studio Art 811, or 3-D Sculpture & Design 822, or permission of the instructor
Limited enrollment. Preference given to seniors.

This course introduces students to the world of buildings and their design. Students begin the year with a variety of mechanical and schematic drawing exercises or “puzzles,” designed to teach them how to visualize complex architectural forms in space. Students will also become familiar with a range of architectural tools and techniques, as they learn to confidently draft fundamental design elements such as plans, sections, and elevations. In the final trimester, students will have the opportunity to design and draft a full set of plans for an original structure of their own conception, as well as construct a scaled model of their building. Throughout the year, as a means of cultivating a deeper appreciation for the role of architecture in society, the storied history of architecture will be presented and discussed. A full-day field trip into Manhattan is scheduled for the spring.

865. Introduction to Filmmaking
3 meetings per seven-day cycle/2 credits
Prerequisite: Intermediate Studio Art (812 or 814) or Architecture and Design 842, or special permission of the instructor

This is a production-oriented course that guides students on a step-by-step exploration of the fundamentals of filmmaking, including brainstorming short film ideas, script writing, character development, storyboarding, animatic creation, directing and cinematography essentials, picture editing, sound design, and titles/credits. After a short overview of cinema and animation history, students begin production of a short film of approximately 10 to 20 minutes in length. Grouped in teams, students will brainstorm, write, direct, shoot, and edit a short film that emphasizes a strong story structure. Teams will be encouraged to share these key responsibilities to give each group member a first-hand understanding of the filmmaking process. With permission of the instructor, some students may work on shorter solo film projects. Video camera basics will be covered to allow students to take full advantage of the camera’s tools to further enhance a film’s aesthetic quality and creative potential. Students may choose to explore their artistic visions by making films of any genre, including fiction, non-fiction, animated, live-action, music-themed, documentary, comedy, drama, etc. Throughout the year, students will be introduced to various professionals in the field who will advise them on their conceptual, pre-production and post-production phases of their films.

801. Independent Study: Visual Arts
2 credits/meetings to be arranged with instructor.

For students with a focused interest in pursuing a specific idea that does not fall within the scope of the above course descriptions (whether three-dimensional design, photography, studio art, or ceramics), the option of individual instruction is available. Students should present a carefully considered proposal to the Department Head for approval.
UPPER SCHOOL PERFORMING ARTS

(All courses fulfill the graduation requirement in visual/performing arts except for Public Speaking 968 and Music Theory 928.)

Hackley School sustains vigorous and flexible music- and drama-performance programs which offer students opportunities (a) to hone their skills as actors, directors, playwrights, singers, instrumentalists, and composers, (b) to gain new experience in performing arts disciplines with which they may have been previously unfamiliar, and (c) to significantly extend their artistic and intellectual reach.

**Music.** Singers and instrumentalists are encouraged to enroll in a major ensemble class (Band Ensembles, String Orchestra, Female Chorus). Participants in these classes will have opportunities to perform in both the large core ensemble and smaller satellite groups, which include chamber ensembles for strings, winds, and percussion, smaller singing groups, and jazz groups. Performing groups present at least two concerts per year; numerous informal performance opportunities are available as well.

**Scheduling.** Although each major ensemble is scheduled for five of seven possible meeting periods, the actual number of meeting times per cycle can range from three to five, depending upon various factors such as the number of ensembles in which the student participates, sectional rehearsals determined by the ensemble director, and the proximity of a specific performance date. Ensemble directors will clearly summarize expectations and map out rehearsal schedules in the initial meetings of each class.

**NYSSMA.** Students enrolled in a Hackley ensemble class are eligible to audition for NYSSMA, which determines placement in All-County and All-State ensembles.

In addition to the three major ensemble classes, the Department also offers other classes in music performance, history, theory and mentorship. See descriptions below.

**Drama.** Students interested in theater are encouraged to enroll in a drama course. They should also consider participating in our after-school drama program, which presents two major productions each year.

UPPER SCHOOL MUSIC COURSES

**928. Music Theory**
2 meetings per seven-day cycle/1 credit
Permission of Department Head required.
(Note: This course does not satisfy the Visual/Performing Arts graduation requirement.)

Students will be introduced to the basic elements of music through sight-reading, melodic analysis, notation and composition, and will improve ear training through the study of pitch, intervals, chords and scales. Beginning with classical harmony and progressing through contemporary music-rock, pop and jazz harmonies- students will develop a deeper understanding of music.
922a. Female Chorus
5 meetings per seven-day cycle (see above)/1 credit
Open to all students.

The Female Chorus offers opportunities to sing a variety of repertoire representative of diverse time periods and cultures. Students develop sight-reading and ensemble skills, learn vocal technique, and deepen their musicianship. Each student will have the opportunity to audition for the *a cappella* satellite group. All students will perform in formal and informal concerts throughout the year.

922b. Male a Cappella
2 meetings per seven-day cycle/1 credit
Open to all students.

The basics of *a cappella* singing will be taught in a comfortable group setting. Students will improve performance skills, musicality, vocal technique and self-confidence. They will develop stage presence and learn to work as part of a team. Daily rehearsals will challenge singers while introducing a variety of repertoire. Students will perform in the winter and spring concerts.

912. Chorus
Not offered in 2019 - 2020

Scheduled for 5 meeting times per seven-day cycle (see above)/1 credit
Open to all students.

Hackley’s choral program offers students opportunities to sing art music, folk music, jazz, and popular music representative of diverse time periods and cultures. Students enrolled in Hackley Chorus will develop their sight-singing skills and deepen their musicianship in the course of exploring these diverse choral traditions. They may opt to join *a cappella* satellite groups for girls and for boys. Both the Chorus and the smaller ensembles offer formal and informal performances throughout the school year.

914. String Orchestra and Chamber Ensembles
Scheduled for 5 meeting times per seven-day cycle (see above) / 1 credit
Prerequisite: Open to experienced string players.
Open to experienced pianists with consent of instructor; piano students must audition, demonstrating an ability to sight-read basic chamber music repertoire.

Students enrolled in String Orchestra will have demonstrated competence on their instrument (violin, viola, violoncello, contrabass, and piano). Most students will be placed in the String Orchestra and a smaller chamber ensemble, such as a duo, trio, or quartet; such placement is based on student ability and experience. To supplement regular large- and chamber-group rehearsals, the director may designate certain rehearsal days for sectional rehearsal or individual practice. All groups study and perform music from both the traditional orchestral and chamber repertoire, as well as more contemporary works.
916. Band Ensembles: Concert Band, Jazz Orchestra, and Chamber Ensembles
Scheduled for 5 meeting times per seven-day cycle (see above)/1 credit
Prerequisite: Open to players of woodwind, brass, and percussion instruments.

Students enrolled in Band Ensembles will have demonstrated competence on a woodwind, brass, or percussion instrument. In addition to playing in the Concert Band, students will have the opportunity to join multiple satellite groups, including the Jazz Orchestra, Woodwind Quintet, and ensembles featuring woodwind, brass, and percussion instruments in various combinations. All Band Ensembles will meet on a rotating schedule determined by the director within the Band Ensembles period. Each ensemble performs at least two concerts a year. The Concert Band repertoire includes traditional concert pieces, new works for band, and pops selections. Other enrichment activities, such as trips to hear professional ensembles, are part of the curriculum.

970. Jazz Combos
3 meetings per seven-day cycle/1 credit
Prerequisite: Open to all experienced instrumentalists.

Those students who are proficient on their instrument and who wish to study the art of jazz improvisation may register for Jazz Combos. Students are placed into a specific band based upon their particular instrument and level of ability. The harmonic and stylistic vocabulary of jazz is explored and each student learns how to apply that vocabulary to improvisation and to performing in a jazz combo. The repertoire is primarily classic jazz compositions by artists such as Thelonius Monk, Horace Sliver, Herbie Hancock and Wayne Shorter, however more contemporary pieces are regularly performed and the students are encouraged both to suggest repertoire and to write for their band. Two concerts a year are performed and there are numerous other performance opportunities.

902a. Independent Study in Musical Mentoring
2 meetings per seven-day cycle, scheduled by instructor and student/1 credit

This Independent Study is available to Upper School musicians that would like to mentor Middle and Lower School musicians. As a musical mentor, Upper School musicians will be asked to encourage younger musicians with practice plans, enjoy great recordings together and participate in one community service concert per trimester.

Mentors would be assigned to meet with a Middle School student one period per 7-day cycle and would meet with their faculty advisory the other meeting time to plan classes, establish practice plans and rehearse for community service concerts. The mentors would be included in one community service activity, either on- or off-campus per trimester.
**900. Independent Study: Musicianship**
Meeting times: as needed. 1 or 2 credits.
Prerequisite: Permission of department head

Students who demonstrate a high level of interest and ability in composition or performance may undertake independent study under the supervision of a faculty member in the Department.

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**UPPER SCHOOL DRAMA COURSES**

**963. Acting I (Introduction to the Art Form)**
3 meetings per seven-day cycle/2 credits
Open to all students. (No experience necessary.)

This course will focus on the building blocks of acting through improvisation, character building, play and character analysis, and theater history. Students will learn to think on their feet, develop characters and relationships, and strengthen listening skills. They will study character development, develop rehearsal skills, and become adept at script analysis. Students will perform in a play at the end of the year.

**964. Acting II (Performance and Technique)**
3 meetings per seven-day cycle/2 credits
Prerequisite: Acting I or equivalent performance experience. Open to students in grades 10-12.

This course builds upon the foundations established in Acting I. Topics include:
- Dramaturgical studies, including play and script analysis
- Pioneers in theater and their techniques
- Character development
- Monologue writing, development and performance
- Analysis of various theater styles, including musical, historical, satirical, one-acts, comedy, and drama
- Theater for social justice: the study of theater to examine — and reverse — injustice in local and global communities

Students will perform in a play at the end of the academic year.

**976. Acting III (Advanced Topics in Theater)**
3 meetings per seven-day cycle/2 credits
Prerequisite: Acting II or special permission of the instructor

This is a third-year course in theater; it is designed for students who wish to explore more deeply the arts of acting and playwriting and the craft of theatrical production. Topics covered will include:

- How to read, analyze, and prepare as a performer to support the ideals of the playwright
- Script design for a variety of theatrical works (e.g. one-person show, one-act play, television/movie scripts, monologues)
- Character development: in-depth work constructing characters from internal and external stimuli.
- The basics of directing, stage management, costuming, set design and construction.
Students will study works of theater; playwrights may include: Shakespeare, Brecht, Beckett, Wilson, Ward, Miller, Albee, and Kushner. Through analysis and performance students will broaden their theatrical experience and deepen their understanding of theatrical narrative and character. They will scrutinize the writings of directors who have developed diverse theories of acting and direction.

This year-long course will serve as a foundation for the Upper School spring performance. Under direction of the instructor, students will select, workshop, and perform their own projects.

**965. Acting IV (Advanced Acting)**
3 meetings per seven-day cycle/2 credits
Prerequisite: Acting III or special permission of instructor

Advanced Acting focuses on the practical application of acting tools through scene study, monologue work and numerous collaborative projects. Students will form an in-house theatre company responsible for selecting, reviewing, staging, marketing and performing a series of on- and off-campus performances. Projects include the Collage Concert and participation in the National ESU Shakespeare competition. Off-site activities may include trips to Broadway shows, back-of-house tours and discussions with industry professionals. The final project is the selection and preparation of a published or original piece to be performed within the immediate and expanded community.

**978. Musical Theatre Seminar**
3 meetings per seven-day cycle/2 credits
Open to all students

Students will study acting, dancing, singing and auditioning for musical theater. Scene and monologue work will provide opportunities for character study, and fundamentals of voice production will help students improve presentation skills and increase confidence. Students will have the opportunity to perform in a showcase.

**968. Public Speaking** *(Also listed in English Department.)*
3 meetings per seven-day cycle/2 credits
Open to all students.
(Note: This course does not satisfy the Visual/Performing Arts graduation requirement.)

This course will assist students in developing better public-speaking skills through the use of voice, speech and presentation technique.

Topics covered in this class will include:
- Presenting informative, persuasive, storytelling, demonstration, impromptu and group speeches
- Dealing with stage fright
- Using one’s voice to one’s advantage
- Relating to the audience

Students will be required to write their own speeches throughout the course of the year. They will watch and analyze great inspirational speeches, as well as those of their classmates.
HEALTH AND WELLNESS

070. Health and Wellness
2 meetings per seven-day cycle/0 credits. Required for sophomores. All sophomores are registered for this course automatically.

This required course meets twice per cycle for the entire year and will provide students with opportunities to learn about ways to have a healthy lifestyle and make responsible choices. Topics will include, but are not limited to, emotional health, nutrition and fitness, drug and alcohol abuse prevention, sexual education, and chronic and communicable diseases. The course will focus on developing the student’s information base and practical skills in order to encourage responsible choices in the related topic areas, and includes the introduction and practice of techniques for stress reduction, health maintenance, and peak performance.

PEER ADVISORY

All ninth-graders will be registered for Peer Advisory automatically. Each advisory group meets once per cycle and is led by several juniors assigned as the group’s Peer Advisors and the Director of Health Education. The course listing below is for rising juniors interested in applying to become Peer Advisors.

972. Peer Advisory
2 meetings per seven-day cycle/1 credit
Open to juniors only. Grading is Pass/Fail.
Prerequisite: Approval through an application and interview process. Students must submit an application and a teacher recommendation to Ms. Pabst by April 18th. Students must also sign up for and complete a 10-minute interview with Mr. Arnold or Ms Pabst between April 26th and April 27th. Decisions will be made by May 7th.

Peer Advisory will be scheduled as a minor course and meet 2x/cycle; one meeting will be a training session and the other meeting will be with a Peer Advisory group. Those taking more than 5 majors and 1 minor will likely not be able to fit Peer Advisory into their schedules.

The Peer Advisory program provides students with the opportunity to mentor a group of ninth-grade students. Participation in the program requires a strong commitment to being a responsible role model and to the peer mentoring philosophy of helping others for the good of the community. Some of the goals of the program are to foster relationships among students and to build long-lasting community values. An important aspect of the role of the Peer Advisor is to help support the ninth-graders in their transition to the Upper School.

The Peer Advisory program includes training in mentoring skills, such as communication and listening skills. It will involve ongoing training and supervision of lessons/activities that the Peer Advisors will conduct with their group of ninth-grade advisees. During the first third of the year, Peer Advisors will work with the Chair of the Health Department, but will run all sessions independently during the second and third trimesters.
Additional time commitments for peer advisors:
Peer Advisors will meet once in late August, during the week before school starts, to prepare for 9th-grade orientation, and will assist with ninth-grade orientation later in the week.

Peer advisors will also be required to attend a training session during the fall pre-season period.

COLLEGE COUNSELING

974. Introduction to College: Preparing for the Search and Application Processes
1 meeting per seven-day cycle/0 credits. Required for juniors.
All juniors will be registered for this course automatically.

The college search and application processes play a big role in the lives of juniors and seniors, but are juniors ready? This course will introduce juniors to the world of higher education and their many collegiate options. It will also give students tools to learn about their options and understand the role higher education may have in shaping their lives. Finally, it will help students understand the admissions process and how to maximize their options.

Topics are likely to include the following:

- College options: the rich and varied college landscape, establishing your own selection criteria, how to search out, evaluate and choose your options
- Standardized testing: SAT, SAT Subject Tests, ACT, AP; requirements, strategy and planning
- Career exploration and college majors
- Introduction to Maia Learning computer program
- Higher education rankings, reputations, and actual results: what’s in a brand name?
- How colleges choose among their applicants and how to figure your odds
- Creating a balanced list and the “win-win” scenario
- College contact: visits, interviews, and meeting college representatives
- How to apply: the Common Application and others
- College application essays, “supplements”, activities and recommendations
- How to support one another during the search and application processes
UPPER SCHOOL PHYSICAL EDUCATION AND INTERSCHOLASTIC ATHLETICS

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Physical Education

Students in grades 9-12 not participating on an interscholastic sports team during a particular season are required to participate in Physical Education class. The Physical Education program offers activities in fitness, lifetime, group sports, along with outdoor education. Classes meet for two one-hour sessions per week, from 3:15-4:15. (Off-campus class options that meet once per week meet from 3:15-5:30 p.m.)

Physical Education Exemption: students in grades 10-12 can request permission to substitute outside athletic participation in lieu of Physical Education. To qualify for this exemption the student must submit a completed permission form by the specified date. A decision will be rendered by the Head of Physical Education based on the following criteria: (1) Participation must be a minimum of 2 hours per week excluding weekends, (2) must take place at an established facility or with an established organization, (3) supervision must be by a coach or certified trainer. (Parents may not fulfill this role unless employed by the facility or as a team coach.) The supervisor must submit a monthly attendance record and summary of instruction and/or competitions participated in by the student to the Head of Physical Education. As to ninth grade students, only those with exceptional qualifications will be considered for exemption.