

Saint Ann's School
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HIGH SCHOOL

COURSE CATALOG

2019-2020



Dear High Schoolers,

All art is at once surface and symbol.

Those who go beneath the surface do so at their peril.

—Oscar Wilde, *The Picture of Dorian Gray*

If we are to believe Mr. Wilde, then the pages of this book are riddled with danger, for every class on offer will lead you deep down one rabbit hole or another, never content to let you simply gaze across the surface of a subject. The works of art that you create—be they painted in oil or executed mathematically—may be of surface and symbol, but your engagement with all that you do will surely plumb the depths.

Welcome to a year of great peril, indeed.

Love,

Chloe

MINIMUM

GRADUATION

REQUIREMENTS

Arts	Four courses in the arts, preferably at least one in art, one in music, and one in theater
Computer	No requirement, but students are encouraged to become comfortable with usage and applications of the computer
English	Four years
History	Four years
Language	Four years of language study
Math	Four years, including Algebra 1, Geometry, and Algebra 2
Rec Arts	One course or the equivalent, or one interscholastic sport, per year
Science	Three years including one year of biology and one year of physical science

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ART

All classes meet one double period per week unless otherwise noted. **Note:** Although the descriptions for many of the art electives are general, it is the teachers' prerogative to be more specialized in their individual approaches. For instance, the painting and painting/drawing courses have several sections taught by different teachers in the department. Each teacher guides the curriculum through personal aesthetic passions and interests, while taking into consideration the experiential and technical abilities of each student in the class.

Animation

(Tokmakova)

Over the course of the year, each student will produce an animated film. Collaborations are also welcome. Students will write a script or explore a more abstract approach to storytelling, creating their own unique sets and characters from clay, paper cutouts, found materials, or drawings. We will use traditional stop-motion techniques to shoot our films frame by frame, using Dragon Animation software. During the editing stage everything comes together. The images can be layered or manipulated, and the soundtrack, including dialogue, music, audio effects, or narration can be added. No previous experience necessary.

Introduction to Architecture & Design 1

(Rumage)

This course introduces and explores some of the basic drawing systems used to communicate three dimensional architectural ideas within two dimensional formats (elevations, floor plans, isometric and axonometric). Students progress from representing simple three dimensional forms to drawing self-designed architectural structures and subsequently translating their architectural plans into scale models constructed from chipboard and a variety of materials.

Introduction to Architecture & Design 2

(Rumage)

This course is an extension of Introduction to Architecture and Design. The course will broaden the exploration of architectural concepts and model making, allowing students to gain greater confidence and fluency, while applying the various projection and mechanical drawing systems to specific design problems. This is an excellent course to prepare for the more rigorous Advanced Architecture and Design seminar. **Prerequisite(s):** Introduction to Architecture & Design

Advanced Architecture & Design

(Rumage)

(See Seminars)

Introduction to Digital Photography

(The Department)

This is a photography course that explores image making through an entirely digital format. Along with using digital cameras, the course relies on the computer to refine and manipulate images that are then produced through a digital printer. No photography experience is necessary.

Advanced Digital Photography

(The Department)

Advanced Digital Photography builds on the ideas presented in Introduction to Digital Photography. Students will explore how to nuance their images to move beyond the real—to understand how to use light to generate a variety of visual, psychological, and conceptual effects. Class assignments pursue alternate approaches to the organization of information: maps, diagrams, indexes, and encyclopedias. Over the course of the year, two separate portfolios of photos will be generated (one for each semester). We will draw inspiration from master manipulators (such as Hiro, Jeff Wall, Thomas Demand, Ryszard Horowitz and Philippe Halsman), as well as more experimental images found in print advertising. A solid understanding of how to use an SLR camera in manual mode is required. **Prerequisite(s):** Introduction to Digital Photography

Drawing

(The Department, Sassoon)

In this class we investigate ideas about visual communication, using a variety of media and surfaces. Observation, perception, composition, and the language of mark-making are stressed. Students will work from still life, works of the Old Masters, models, and other sources. Using materials like pencil, charcoal, pastel, ink, watercolor, colored pencils, marker, and transfer techniques, we will explore line, tonality, volume, and texture, as we gain rendering skills toward development of an expressive personal vocabulary.

Failure: Art, Philosophy, And Criticism

(G. Smith) (3x per week)

This course explores failure not as a negative outcome, but as the natural backdrop for creative endeavors in contemporary society. Students explore the shape of this failure through two intertwined tracks. In the first, students will engage in a range of art projects, focusing primarily on video, drawing, and collage. Assignments might include creating a self-portrait, making a video from found footage, presenting a manifesto, or collaborating to create a zine. As the year progresses, projects will become increasingly open-ended, and students will be encouraged to follow their own interests.

As with any creative endeavor, failure is part of the art-making process. But as we complete our projects, other routes of entropy, lack, and absurdity will creep in. For example, how to talk about what we've made? Can we make judgments? Expanding our stage a bit, who decides which points of view are valid, and how? This leads us to our second track of the course, where students will also consider failure from a philosophical and political angle. Through readings and discussions, students will consider how concepts like absolute truth or religious certainty have become difficult to latch onto. Even the boundaries between common pairings such as true/false, right/ wrong, individual/community, or male/female, have become foggy. Where do these concepts come from, and why do they no longer seem entirely sound? Or do they in fact retain their power? This ambiguous failure of the authority of absolutes is a main focus of the course. Students' art projects will be in dialogue with these discussions, and will also be guided by short readings by authors such as Plato, Aristotle, Nietzsche, Cage, de Beauvoir, Goodman, Jameson, Halberstam, Preciado, and Svenonius. The ultimate goal is for students to develop their own understanding of, and artistic response to, the tangled grey areas between purported absolutes and certainties. **Note:** This class will meet one single period and one double period per week. No prior art-making experience is assumed.

Figure Drawing

(Hillis, Tokmakova)

This class involves drawing from the live model and includes anatomical exercises that will explore the skeleton, muscles and organs to convey an understanding of forms and shapes that make and influence our positions and motions. A goal within each drawing session is an attention to anatomy and proportion and to ways of describing contour and form through the study of light, shadow and movement.

Figure Drawing with Extensive Study of the Head and Facial Expression

(Arnold) (4x per week)

In this course students will learn to draw the human figure from a live model, both dressed and nude. From short movement sketches to longer studies of a still model, students will explore the figure, including special studies of its hands and feet, using china ink, graphite, charcoal, oil sticks, etc. We will pay particular attention to the head. Students will learn to depict the head proportionally, from different angles, and in three dimensions. Drawing from a live model as well as from classical sculptures, they will learn to depict individual facial characteristics, creating a portrait. During the second semester, students will be ready to make stylized portraits (e.g. caricatures, cartoons, and anthropomorphized animals) as well as various realistic expressions. We will also explore drawing groups of interacting figures. This course will be demanding, requiring stamina, dedication, and a desire to learn how to draw realistically. Previous drawing experience is desirable but not necessary. **Note:** This class will meet two double periods per week.

Painting

(Hillis, Lee, Tokmakova)

This course is an exploration, through a variety of painting media, of pictorial construction, color, composition, and conception.

Painting Intensive

(Bellfatto, Keating) (4x per week)

See Painting. Offered in an intensive format of two double periods per week. **Prerequisite(s):** permission of the instructor

Painting Nature from Life

(Arnold)

Representational art requires intense focus and concentration. Drawing and painting the natural world from life is a powerful aid to increasing visual skills. In this class students will draw and paint mushrooms, flowers, and plants, as well as various small animals. Throughout the course students will explore many techniques—watercolor, oil paint, pen and ink. We will also look at great artworks focused on nature by da Vinci, Audobon, Rubens, Van Gogh, O’Keeffe, and others.

Painting & Drawing

(Hillis, Keating)

An exploration of pictorial life—how drawing begins, its development, manifestation and transmutation. An alchemical approach to picture making: experimentation with content in a variety of styles and media toward the development of a personal vision.

Photography 1: Basic Camera and Darkroom Techniques

(Giraldo)

Learn to capture and share your view of the world through the lens of traditional black and white photography. In addition to class discussions and critiques, students learn the basics of composition and visual communication through slide show presentations of well-known and lesser-known photographers, assignments to be completed outside of class, and in-class exercises in the analog photographic process. Students will learn on 35mm manual cameras and black and white film.

Photography 2\3: Personal Style and Advanced Darkroom Techniques

(Giraldo)

Already equipped with the basics of the analog photographic process, students will learn techniques in documentary photography, portraiture, and methods to develop personal style. Darkroom practice will include the use of new materials such as Fiber-based Silver Gelatin and Medium Format Negatives. **Prerequisite(s):** Introduction to Photography, or equivalent experience in black and white photography and darkroom developing, as determined by the instructor

Printmaking

(Lee)

This is a broad course that combines various screen printing techniques with relief printing (linoleum, woodblock, and intaglio techniques). The premise is to evolve imagery from an understanding of the character of these processes.

Printmaking: Posters

(Lee)

This course is devoted to silkscreen design and production. A historical survey of poster designs includes: Japanese 19th century playbills, Polish circus posters, Mexican revolutionary leaflets, rock posters of the sixties, and more. This course works with the Theater Department to produce the posters for all school productions throughout the year. Various printing techniques are explored. We will also print T-shirts and fabric.

Ceramic Sculpture

(Bellfatto)

Not a pottery course. We explore basic clay building techniques such as coil, slab and pinch-pot to generate functional and non-functional sculpture. Various surface treatments are investigated: stain, slip, paint, and glazes. Students develop a body of work reflecting an eclectic variety of sources and themes: personal, historical, geometric and organic form, human and animal figure, narrative relief, and architecture.

Sculpture

(Reid IV)

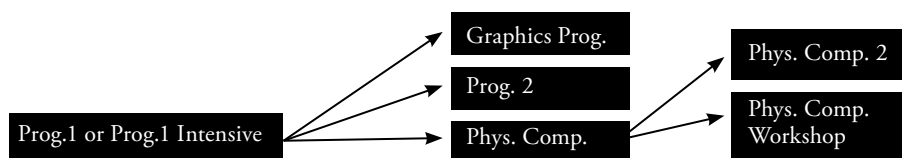
This class is an introduction to the rendering of three-dimensional form. We will focus on building ideas from conception to completion. Students begin projects by drafting a sculpture plan to serve as a construction blueprint throughout the process. Each project focuses on a different fabrication method: carving (subtractive), armature construction (additive), molding and casting (replicative). Joinery techniques such as physical and superficial connections, lap joints and butt joints are studied and implemented. Projects will be created using a wide selection of materials, including but not limited to: soap, concrete, modeling clay, chip-board, and wax.

COMPUTER

We are surrounded by science fiction—portable computers, artificial intelligence, 3D printing, electronic games, online journals, instant reference books, genetic sequencing, cameras everywhere, nanotech, increasingly massive datasets—constant innovation with data processing, design, number crunching, and computer science. Our courses show students how to be more than just consumers or users: they will be independent creators on computers, able to control and help shape the tools of today and tomorrow. Using software that runs similarly on Mac, Windows, Unix/Linux, and tablet computers, our courses teach a range of topics including programming, graphics, circuitry, web, spreadsheet analysis, logic, and other skills that are useful for doing everything from analysis to artwork. Classes are full year and meet twice a week unless otherwise noted. Visit tinyurl.com/sacc2020classes for more information about any of these classes.

No Prerequisites

Classes After Prog. 1



3D Modeling and Printing

(The Department)

3D printers are personal fabrication tools that are a part of an evolving modern world of technology that allows students to become producers, inventors and artists. Students will create, design, invent and prototype while efficiently and inexpensively taking their digital designs into the real world. Students will be able to easily understand the strengths and limitations of their work and will be encouraged to modify their designs, thereby participating in an iterative engineering design process. Students will learn various 3D modeling techniques and explore several 3D modeling software tools and packages.

Graphics Programming

(Roam)

Let's write programs that can draw 3D computer graphics (houses, robots, landscapes): let's try to build our own "sketchup" or better. Once we complete a brief introduction to matrix multiplication, we can start shading, rotating, and animating objects that we have designed. Our programs read and process text files that contain descriptions of 3D graphic objects and display the resulting 3D objects from arbitrary viewpoints. For advanced students, projects include the construction of race car and airplane games with first person and chase plane viewpoints. **Prerequisite(s):** Programming I or permission of the instructor

Physical Computing 1

(The Department)

Learn how to interact physically with a computer without using the mouse, keyboard or monitor. Move beyond the idea that a computer is a box or a system of information retrieval and processing. Using a microcontroller, a single-chip computer that can fit in your hand, write and execute interactive computer programs that convert movement into digital information. Work with components such as resistors, capacitors, diodes and transistors as well as integrated circuits. Through lab exercises and longer creative assignments learn how to program, prototype and use components effectively. Control motors and interpret sensor data, as well as explore advanced concepts in interface, motion and display. **Prerequisite(s):** some programming experience or permission of the department chair

Physical Computing 2

(The Department)

Students combine theory and practice to interface microcontrollers and transducers. We learn how to make devices respond to a wide range of human physical actions. Building on previous knowledge acquired in Physical Computing 1, we build projects from schematics, make programs based on class examples, and make interfaces talk to each other. Topics may include: networking protocols and network topologies; mobile objects and wireless networks of various sorts; digital logic building blocks and digital numbering systems. Students are involved in short production assignments and final projects, and create a digital portfolio to document their work and research. **Prerequisite(s):** Physical Computing 1 or permission of the instructor

Physical Computing Workshop

(The Department)

Creating interactive work relies on building a relationship between the object and the viewer. By gathering information in the form of input, processing that into meaningful data, and outputting that contextually, new forms of engagement and interaction with an audience can be established. This class is for students who have prior experience with Physical Computing and would like the opportunity to develop their own project and spend time researching,

testing, prototyping and documenting it. **Prerequisite(s):** Physical Computing 1 or permission of the instructor

Programming 1

(The Department)

Explore the science and art of computer programming. For students who want to create and modify their own computer software, this course uses the high-level programming languages Java (an internet-savvy version of C++) and Livecode (multimedia coding tool) to introduce the basics of computer control and interactive web sites. We use loops, variables, procedures, input, output, and branching decisions (with Boolean logic) to control graphics, sounds, and information. Expect to work with Java using the “Processing” tool to create animated color graphics that respond to key and mouse movement.

Programming 1 (Intensive)

(The Department) (4x per week)

Explore the science and art of computer programming. Learn important problem-solving and design strategies like modularization and iterative design which can apply to both programming and non-programming environments. This intensive, four periods per week class is for students who want to master fundamental programming concepts which include loops, variables, procedures, input, output, conditionals and data structures. Assignments will allow students to control graphics, sounds, and data while also encouraging them to think creatively, reason systematically, and work collaboratively.

Programming 2

(The Department)

A continuation of Programming 1, for students who are becoming more confident in their ability to combine data types and complex computer routines. We use Java and Python (internet-savvy relatives of C++) and other languages to look more deeply at object-oriented programming: class definitions, inheritance, methods, fields, arrays, and collections. Large projects include writing an interactive, animated project with control windows and graphics.

Prerequisite(s): Programming 1 or permission of the department chair

ENGLISH

Western Literature & The Essay (9th Grade)

(The Department)

The backbone of the ninth grade English course is formed by modern European and American literature, with Shakespeare, Sophocles, and poets from all periods in permanent residence. Freshmen vigorously air their responses to literature, hone their essay skills, and experiment creatively throughout the year. Grammar and vocabulary exercises reinforce reading and writing skills.

Poetry, Drama & The Novel (10th Grade)

(The Department)

Sophomores encounter increasing demands on the quality of their thinking and writing, while we provide a widening background in the Western classical tradition and in modern voices. Across the year students examine several genres in depth. The first term typically concentrates on drama and poetry, the second on short forms and the novel. Authors include Shakespeare and Faulkner, Camus, O'Connor, and Baldwin. In an additional class period each week, small groups of six to ten sophomores practice their analytic skills and work on individual writing problems.

Junior/Senior Electives

The Art of Hell

(Avrich)

Through me you pass into the city of woe:

Through me you pass into eternal pain:...

Abandon hope all ye who enter here.

—written on the gates of Hell from *Dante's Inferno*

The mind is its own place, and in itself

Can make a Heav'n of Hell, a Hell of Heav'n.

—Satan, from John Milton's *Paradise Lost*

Why do creative minds make masterpieces out of Hell? Throughout the history of literature and the arts, Hell, the dark landscape of human sin, of crime and punishment, of everlasting doom, has inspired some of our greatest imaginative works. The characters we meet in the fiery pit are seductive, rebellious, innovative and, unlike the angels, psychologically complex. We relate to the soulful Dante, wandering the infernal urban ghetto, and to Mil-

ton's fallen archangel Satan, charred but not undimmed. Besides, great sinners tend to be great talkers. As we know from the movies, the villains always get the good lines.

In this course, we will take a tour of *The Inferno*, Dante's concentrically circular city of progressively sinful and ghastly souls. We will also ponder Milton's majestic masterwork, *Paradise Lost*, Shakespeare's resonant, nihilistic *King Lear*, and T.S. Eliot's woebegone, world-weary *Waste Land*. Student art and multimedia projects will accompany expository and creative writing, tasteless musicals, theatrical performances, and tableaux vivants.

Fact and Fiction

(Donohue)

What do we mean when we say that a work of fiction is realistic, or when we praise a non-fictional work for being "as gripping as any novel"? Why do people sometimes complain of fictional events, which by definition never happened, "That would never happen"? How do our minds process fictional narratives differently from nonfictional ones, and what happens when the text doesn't tell us which mode to read it in? Can fiction depict reality as well as journalism can? What do we even mean by "reality," and how might it ever be rendered by marks on a page?

In this elective we investigate the relation between fact and fiction. Many of our readings will be nonfiction: Joan Didion's *Slouching Toward Bethlehem*, James Baldwin's *No Name in the Street*, Katherine Boo's *Behind the Beautiful Forevers*, and a few theoretical and even polemical texts about the nature of fiction and reality (including David Shields's maddening *Reality Hunger* and philosopher Colin Radford's "How Can We Be Moved by the Fate of Anna Karenina?").

About half our readings will be fiction, but everything will have some complicated relationship with fact. James Baldwin's fiction shares many concerns with his nonfiction, but can his short stories do things that Baldwin's essays cannot? Vladimir Nabokov's *Invitation to a Beheading* creates a fictional world in which some things are "true" but others are "not." Virginia Woolf's *Orlando* might "really" be about Vita Sackville-West. Henry James considers the ethics of truth-telling in *The Liar*. Karl Ove Knausgaard's *My Struggle: Book 1*—which may or may not be a novel—rounds out our year.

We'll also read some lyric poems, divided into poets who wear fictional masks and others who seem to insist on the "reality" of their poems' projected selves. And we'll look at a few excerpts from authors who originally claimed their work was true, but were later forced to admit that they'd made things up.

From the Iron Tsar to the Man of Steel: Russian History and Literature

(Aronson/Mellon)

This course is an examination of approximately 125 years of Russian history and literature that takes us from Nicholas I (our Iron Tsar) to Joseph Stalin (born Joseph Jugashvili—our

Man of Steel), and from Pushkin to Akhmatova. Starting in the time of the Decembrists (the dissident Russian Army officers who planned the overthrow of Nicholas I, and the namesake of the indie rock band; it all comes together), we will trace the development of the history and literature of Russia side by side as it weathers most of the 19th century and half of the 20th century. Our narrators for this journey will include but will not be limited to: Pushkin, Tolstoy, Lermontov, Fyodor, Stone, Tooze, Dostoyevsky, Turgenev, Akhmatova, Bulgakov, Gerwarth, and Lenin. We will also be looking at the art, music, photography and film that comes out of this period. This course is interdisciplinary in nature, and will count towards both History and English elective credit, so expect lots and lots (and lots) of reading and many types of writing assignments, including two major essays. Expect as well to immerse yourself in a world both strangely familiar and thoroughly compelling in the way that it contrasts with American and European history and literature. **Note:** This class will meet four double periods per week and grant both English and History credit.

A House Divided

(Chapman)

A house is a place where you negotiate identity, assemble and lose property, and sit down for meals. A house is a web of relationships, an instrument to reckon time and growth, a crucible of beliefs and rebellion. It's a place where memory is a member of the family.

In this course we look at houses, tangible and intangible, where walls thicken or fall down flat. Colliding at fault lines of race and gender, age and status, people and cultures can calcify or become something new. We'll watch some defend their certainties to the grave, marvel when others walk through walls or get caught climbing them. With Morrison and Sebald we'll see emigrants, shadowed by the enormity of slavery or the Third Reich, fight ghosts to reclaim lost homes and families. With Douglass and Gilman we'll storm barricades that say No Entrance or remain trapped inside them, failing to find the exit. We'll try to understand how rebuilding a soul can explode or transform a family, a society, a culture.

Probable authors and texts include: Toni Morrison's *Beloved*; W.G. Sebald's *The Emigrants*; Frederick Douglass's autobiography; Charlotte Perkins Gilman's "The Yellow Wallpaper"; Marilynne Robinson's *Housekeeping*; James Baldwin's *The Fire Next Time*. Possible authors include, among others: Mohsin Hamid; Maxine Hong Kingston; Lynn Nottage; Kazuo Ishiguro; Harold Pinter; Emily Brontë; Shakespeare (*King Lear* and *Julius Caesar* are in the running).

How to Be Bad

(Spencer)

We've all heard a familiar refrain from supervillains and evil Disney critters: Oh, it feels so good to be bad! Getting down with your bad self generates great pleasures and sometimes great art. Others act "bad" out of ideological commitments—*Crime and Punishment*'s Raskolnikov justifies his heinous crime by appealing to the philosophical idea of the "extraordinary man." And yet others are "bad" because they fail to keep up with the times, because they adhere to "backwards" politics or cling to "outdated" identities. Whatever the case, "badness" is more than one pole on the moral spectrum: it is also about *style*.

This course will track characters who tend towards making the “wrong” choices—consciously. Why does one decide to be bad, and how does one remain a baddie in the face of compulsory goodness? We’ll move beyond the impasse of the moral relativism debate and instead treat “badness” as a set of *stylistic* practices. We’ll think about “badness” as encompassing an array of techniques that require cultivation and which can lead to self-individuation, especially in the face of a toxic political or social climate. To frame our thinking, we’ll read excerpts from Nietzsche on good, bad, evil, and the self, as well as a handful of trans and queer theorists on identity formation.

Readings will vary depending on what people have already read, but our big read will be Fyodor Dostoevsky’s *Crime and Punishment*. Other likely texts include *The Immoralist* (Gide), *Querelle* (Genet), *Trumpet* (Kay), *Savage Theories* (Oloixarac), *My Year of Rest and Relaxation* (Moshfegh), *Confessions of a Mask* (Mishima), excerpts from *Stone Butch Blues* (Feinberg).

Literature and Memory

(Fodaski)

There is so little to remember of anyone—an anecdote, a conversation at table. But every memory is turned over and over again, every word, however chance, written in the heart in the hope that memory will fulfill itself, and become flesh, and that the wanderers will find a way home, and the perished, whose lack we always feel, will step through the door finally and stroke our hair with dreaming, habitual fondness, not having meant to keep us waiting long.

—Marilynne Robinson, *Housekeeping*

Writing is an aid to memory, but how does memory affect, inform, and shape writing? This course will explore the ways in which certain authors make use of memory to propel their narratives. We will look at both the uses and influences of memory in texts, and the ways in which memory is uncovered through narrative devices. We will almost certainly examine works by Marcel Proust, Virginia Woolf, Toni Morrison, and William Faulkner, among others, paying close attention to the varying conditions and differing contexts within which these authors’ characters remember. How do various historical ruptures (World War I in Woolf, the fall of the Old South in Faulkner) affect memory?

The books we will choose from may include: *Swann’s Way* (the first volume of *Remembrance of Things Past*), *Mrs. Dalloway*, *Sula*, *The God of Small Things*, *The Sound and the Fury*, and William Maxwell’s *So Long*, *See You Tomorrow*. Other possible authors include W. G. Sebald, Willa Cather, Luis Borges, Zora Neale Hurston, Mohsin Hamid, and James Baldwin. We will take frequent breaks from prose to examine related issues in poetry as well. Finally, we may venture into nonfiction, with forays into *The Memory Palace of Mateo Ricci* and Frances Yates’s *The Art of Memory*. Alongside our focused reading, students will be expected to complete frequent writing assignments, both expository and creative. Some of the issues of memory and narrative that come up in our discussions will be explored through writing exercises, and we will occasionally imitate what these authors do in our own writing. An essay on each book will be required, and a final project on some aspect of memory in writing will complete the year.

Magical Realism

(Bodner)

What do ghosts, psychics, and telepathy have to do with colonial histories and postcolonial politics? Welcome to magical realism: a genre that weaves elements of fantasy into otherwise realistic settings—and exposes mechanisms of oppression in the process.

In this course, we will engage with many magical realist texts and a couple films, as well as the distinctive sociopolitical histories that each work (subtly or not so subtly) addresses. We'll begin with Gabriel García Márquez (*One Hundred Years of Solitude* or *Of Love and Other Demons*), Jorge Luis Borges (*Ficciones*), and Isabel Allende (*The House of the Spirits*), three Latin American authors who popularized the genre. What did Márquez mean when he said that “surrealism comes from the reality of Latin America”? Why does magical realism flourish in a place rife with dictatorships and political corruption?

With this foundational understanding, we'll move on to explore magical realist authors from other parts of the world. Likely texts include Salman Rushdie's *Midnight's Children*, Mikhail Bulgakov's *The Master and Margarita*, Téa Obreht's *The Tiger's Wife*, Angela Carter's *The Bloody Chamber*, and Toni Morrison's *Song of Solomon*. In other words, we'll deal with everything from a museum of female monsters and a vodka-drinking black cat to British colonialism in India and racism in the American Midwest. How do these writers capture the realities of social injustice through seemingly fantastical stories?

See or Seem: Literature of Disorientation

(Darrow)

You Are Here promises the X on the map.

The authors we read in this course will challenge each word of that sentence—

You. A sustained sense of self might give way to ephemeral passion, social pressure, institutional corruption, romantic fluctuation, family geometry, cultural influence, faulty memory, vivid imagination, location migration, lack of agency, unexpected incident, intoxication, or even (temporary?) insanity. Is there a discernible pattern of traits, ideas, feelings, or experiences that shapes a knowable you?

Are. “All that we see or seem // Is but a dream within a dream,” suggests Edgar Allan Poe.

Here. Experiments in quantum mechanics have demonstrated that atomic particles can exist in two places at once, simultaneously. You are made of atomic particles. Do the math. Also: If you're in an Uber, but also on your phone, and missing a friend, and thinking about next year... where exactly are you?

We will examine how authors have captured life's ubiquitous disorientations through devices of character, plot, setting, point of view, style, and symbol. We'll unpack the interior, social, political, natural, and supernatural tensions that frustrate our sense of clarity or alignment.

We'll break free from Aristotle's Unities in favor of Dickinson's "Success in Circuit lies." We'll zig and zag, get lost and (maybe) found.

Authors of longer works being considered include Margaret Atwood, James Baldwin, Charlotte Bronte, Joseph Conrad, Philip K. Dick, Fyodor Dostoevsky, William Faulkner, Maxine Hong Kingston, Kazuo Ishiguro, Branden Jacobs-Jenkins, Tony Kushner, Suzan Lori-Parks, Harold Pinter, Cormac McCarthy, Toni Morrison, Tim O'Brien, Flannery O'Connor, Marilynne Robinson, Jean-Paul Sartre, William Shakespeare, Jesmyn Ward, and Virginia Woolf.

Tragicomedy

(*Khoury*)

Admittedly, the term is an inelegant one. Lumping together two seeming opposites, it implies a lazy blurring of categories and distinctions. The writer who introduced the word to English, Philip Sidney, seems to have intended these connotations. In *An Apology for Poetry* (1595) he describes the disturbing popularity of recent plays that are "neither right Tragedies, nor right Comedies" but "mungrell Tragy-comedie"—works of art that fail to achieve the proper "commiseration" of the former or the "right sportfulness" of the latter. His argument, and Aristotle's before him, is that pity and humor don't mix: we can't laugh properly at subjects we care about or care much about subjects at which we're made to laugh.

Shakespeare is poking fun at the same trend when Polonius touts the readiness of the players to perform something "tragical-comical-historical-pastoral." But many of Shakespeare's own final plays reject clear categories, doing away with any last-act crescendo of marrying or burying, delivering comic and tragic elements in equal measure, even simultaneously. Whether to laugh or cry becomes a slipperier, more subjective question.

This course might begin with a Shakespearean tragicomedy before moving on to more recent heirs to the tradition, exploring along the way two other branches of the tragicomic: the less forgiving wit of satire and the gallows humor of the absurd. We will read many (but not all) of the following:

Shakespeare	<i>The Tempest or Twelfth Night</i>
Swift & Pope	Essays, poems, and short excerpts from <i>Gulliver's Travels</i>
Jane Austen	<i>Pride and Prejudice</i>
Gustave Flaubert	<i>Madame Bovary</i>
Vladimir Nabokov	<i>Invitation of a Small Evening</i>
Branden Jacobs-Jenkins	<i>Gloria and An Octoroon</i>
Jackie Sibblies Drury	<i>Fairview</i>
Denis Johnson	<i>Jesus' Son</i>
Zadie Smith	<i>On Beauty</i>
Samuel Beckett	<i>Waiting for Godot</i>

Writing the Revolution: 20th Century Literature of Protest and Dissent

(Mooney)

All literature is protest.

—Richard Wright

All literature might be protest, but not all protest is literature.

—James Baldwin

Boycotts, marches, petitions, riots, and guerilla attacks—these are the modes of protest that defined some of the greatest social shifts of the 20th century, from the campaign for Indian independence from the British Raj to the US civil rights movement. But what about poems, novels, short stories, and essays? What is the role of literature in social protest movements? Writers across the globe have put their skills to political use--have raged, lamented, reasoned, and provoked--yet the relationship between literary art and politics is complex. Are art and protest compatible aims? Where is the line between artistic expression and propaganda? And can a work of literature--the creative act of one individual--impel broader social change?

These are the questions we'll consider as we read examples of 20th century and modern protest literature, loosely defined as works of creative expression that identify and interrogate social ills--and, sometimes, point the way toward a better future. We'll study each work for its literary qualities and for its engagement with the social conditions that inspired it. We'll read works from key 20th century movements: South African anti-apartheid, Latin American anti-authoritarian, US labor rights and civil rights, women's liberation, anti-war, and queer justice. We'll also look at contemporary work connected to modern movements against police brutality, structural racism, and gender discrimination. Likely authors include John Steinbeck, James Baldwin, Richard Wright, Michael Herr, Audre Lorde, Nadine Gordimer, Julia Alvarez, Allen Ginsberg, David Wojnarowicz, Tony Kushner, Lynn Nottage, and Claudia Rankine.

Wrestlers, Dreamers, and Wanderers: Literature of the Middle East and Beyond

(Bosworth)

We begin with a reading of *Gilgamesh* and a selection of poems, prose, or drama deriving from that epic (Komunyakaa and Garcia's *Gilgamesh, a Verse Play*) or building on its central theme of the human wrestling with nature: *The Leviathan Cycle* or Gardinier's *The New World*, or Roy's remarkable novel, *The God of Small Things* or, for that matter, Shakespeare's *King Lear*. We examine also a more harmonious link to the natural world as expressed in the Koran or antediluvian biblical passages. Of note, early on, will be the back-and-forth of influences: the discovery of Western modernism in 20th century Cairo, for instance, and the self-centric writings it helped to generate. Also of note is the tendency of certain Arabic-language writers, at some point in their careers, to seek specifically Arabic inspiration. What results?

Onward, next, to the Middle-Eastern dreamers. We begin with Jacob's dream of a celestial ladder and the Joseph cycle in the Hebrew scriptures. We address dream interpretation in the

Koran and, perhaps, in Ferdowsi's epic *Persian Book of Kings* and Afghan-American novelist Hosseini's *The Kite Runner*. We will return repeatedly to the Middle-Eastern region with its modern Arabic, Farsi, Turkish, and Hebrew poets and prosers: Palestinian poets Darwish or Saadawi, or Lebanese poet Khoury-Ghata, or the first-generation Israeli poet Bialik, or present-day prosers Keret, Kashua, and Castel-Bloom. What is specific to a time and place? What is universality? What is Orientalism? What is usable in these notions?

Finally we turn to a study of the wanderer in the Middle East and beyond. We read in Had-dawy's translation of *The Arabian Nights* and *Nights*-inspired works such as Mahfouz's novel *The Journey of Ibn Fattouma*, Khoury's novel *Gate of the Sun*, and contemporary feminist retellings. We contrast these with the sequestering of women in Djébar's *Women of Algiers* in *Their Apartment* and her questioning of gender roles in the aftermath of revolution. If, by year's end, our larger questions remain unanswered, surely we will have learned to phrase them more meaningfully.

A term paper and a twenty-five-page portfolio of each student's collected creative writing will be assigned.

HEALTH

9th Grade Health

(The Department) (Spring semester)

9th grade health focus on substance use, sexuality, consent, and adjusting to the high school experience. We will explore how we make health-related decisions, discuss prevention as a cornerstone to wellness, and examine contemporary issues in health.

10th Grade Health

(The Department) (Fall semester)

10th grade health is interdisciplinary in focus and weaves in voices from around our school community in order to closely address issues of sexual and reproductive health, mental health, technology, and eating disorders, among other topics. The class focuses on the practical application of physical and mental health principles.

11th Grade Health

(The Department) (Fall semester)

This class looks at health as both a personal and social issue. Weaving in current events, media, and recent research, 11th grade health does a deep dive into mental health and tries to help students navigate their increasing independence as they prepare for adulthood. This class also explores controversies in public health and covers the wide range of viewpoints proffered on hot button issues while asking students to think critically about these issues themselves.

High School Mentoring

(Friedrichs/Garber)

(Please see Seminars)

HISTORY

World History: The Age of Revolutions to the Present (9th Grade)

(The Department)

This course covers the 19th and 20th centuries. From revolution to globalization, from industrialization to decolonization, we explore these and other themes in a global context. We emphasize intellectual histories along with political and social changes. Throughout the year, students learn to think critically and work with diverse primary and secondary sources to create both analytical and research-based essays.

U.S. History (10th Grade)

(The Department)

This course examines the origins and development of the United States from a variety of perspectives including race, class, and gender, providing the students opportunities for in-depth investigations of key moments and themes in U.S. history. In their final year before entering into the elective program, students continue to hone their skills as critical thinkers, readers and writers with a greater emphasis on historiography.

African-American History

(Johnson)

This course will cover African-American history from chattel slavery and the Atlantic Slave Trade to 2000. The class will focus on the social, cultural, political and economic circumstances that arise from the 17th-21st centuries. We will use *Freedom on My Mind: A History of African Americans with Documents* as our main textbook for the purpose of contextualization. There will also be an emphasis on primary sources to magnify the voices of African-Americans that are often ignored in the larger and more popular narratives of American history. Some of the narratives we will explore include African-American labor unions during the 1940s, such as the Brotherhood of Sleeping Car Porters, the social activism of women like Fannie Lou Hamer during the 1960s, and the political activism of lesbian authors like Audre Lorde and Pat Parker. In addition to regular reading and written work, this class will culminate with a final research paper.

Art History: Prehistory to the Present

(Kapp)

Art is the lie that enables us to realize the truth.

—Pablo Picasso

This class will put the “history” in art history– the Parthenon as summation of the classical ideal, Chinese landscapes as the realization of an aesthetic tradition unrelated to western conventions, Ai Weiwei or Kara Walker as the epitome of artist-activists – driven by the belief that to place a work in context is to see it more deeply.

More than just a survey of artistic styles, this course will equip you with the knowledge and skills to analyze any work of art (as well as other visual phenomena) you encounter. As we explore artistic traditions from around the globe, you will learn how art communicates, how it reveals something about the society and culture that produced it, and how it has been interpreted over time. Why did prehistoric people venture deep into darkened caves to create imagery on the walls? What did people make of these paintings when they were first discovered in the 19th century? How is the “strangeness” of much of modern art a response to the strangeness of life in a modern, industrialized world? More generally how do changes in artistic styles reveal (or conceal) changes in political, economic, and social relationships?

You can expect frequent writing assignments (often based on works of art from New York City museums), philosophical debates, and an array of creative projects. Readings for the course will include primary sources and scholarly essays by art historians and critics whose ideas have transformed the way we see and talk about art, aesthetics, and identity such as John Berger, Susan Sontag, and Linda Nochlin. The final project will be an in-depth study of a contemporary artist of your choosing.

Christendom in History and Ideology

(Deimling)

This is a history of Christianity and the Christian church in the social and political context of the societies in which it developed and became dominant. First we'll study Christianity itself: Jesus of Nazareth, the New Testament and other contemporary primary sources, the evolution of doctrines and institutions, persecution, conversion, legalization. Special emphasis will be placed on the cultural and intellectual context of Hellenistic Judaism and rival Roman religious and philosophical systems. We'll look at Latin and Byzantine Christianity and explore the idea of “Christendom” as a response to the collapse of the western Roman Empire and the Muslim military conquests of the formerly Christian Middle East. The Crusades, the Ottoman conquest of southeastern Europe, and the end of institutional unity in the sixteenth century will be covered. With God's help, we will also get to the modern period, and look at Christendom as a still-viable ideological alternative to nationalist, racial, liberal individualist, and socialist identities.

“Custer Died For Your Sins”—Indigenous Peoples’ Histories of Turtle Island

(Bertram)

We will center this class on the perspectives, narratives, and histories of the peoples and nations of Turtle Island – dubbed North America by settler colonialists – from before their discovery of Europeans to the present day. We will include explorations of pre-Invasion culture groups like the Mississippians, the Maya, and the Mexica; initial patterns of interaction with settler colonialists in México, Werowocomoco (where Jamestown was settled), and Wabanahkik (where Plymouth was settled); resistance against Euro-American expansions across the continent; the issue of genocide; and the persistence, preservation, and survivance of Indigenous cultures throughout the centuries.

To do this, we will examine a wide variety of source materials for this course, ranging from primary materials like waniyetu wowapi, ledger books, treaty documents, and other Indigenous narratives, to extant artifacts produced by the various nations of Turtle Island, secondary academic literature, contemporary Native writing, commentary, film, art, and performance. Students will be expected to commit to semi-regular excursions to museums in the area, and will write analytical research papers over the course of the year. Most readings will be in translation, though some may be multilingual, and weekly writing assignments will be expected.

The Enlightenment, For & Against

(Rutter)

Many of the central concepts of modern liberal democratic societies—equality before the law, government by consent, the distinctive value of each human life—were invented or refined in the Enlightenment, that is, in the second half of the 18th century in France, England, and Germany. Two traditions in particular, Kantianism and utilitarianism, articulated the new moral thinking of the age, turning their backs on traditional Christian and Greek ethical thought and aiming to approach ethics as a matter of pure principle, a science of concepts. So how has that worked out?

This is a philosophy class. Our first goal will be to lay out the premises of Kantian and utilitarian moral arguments, assessing their strengths and weakness on their own terms. Our second goal will be to ask whether the world conceptualized and created by the Enlightenment has proved to be a good and just one. Here we will consider the empirical arguments of Steven Pinker and his critics.

Our third subject, and the centerpiece of the spring term, will be the Counter-Enlightenment: the work of thinkers like Rousseau, Nietzsche, Foucault, Bernard Williams, and Alisdair MacIntyre who have raised doubts about the conceptual underpinnings of the Enlightenment and about its consequences for human societies and human souls. Finally, we will ask whether contemporary social justice movements—MeToo, Black Lives Matter, trans rights—are best understood as descendants of the Enlightenment or as critics of it.

From the Iron Tsar to the Man of Steel : Russian History and Literature

(Aronson/Mellon)

This course is an examination of approximately 125 years of Russian history and literature that takes us from Nicholas I (our Iron Tsar) to Joseph Stalin (born Joseph Jugashvili—our Man of Steel), and from Pushkin to Akhmatova. Starting in the time of the Decembrists (the dissident Russian Army officers who planned the overthrow of Nicholas I, and the namesake of the indie rock band; it all comes together), we will trace the development of the history and literature of Russia side by side as it weathers most of the 19th century and half of the 20th century. Our narrators for this journey will include but will not be limited to: Pushkin, Tolstoy, Lermontov, Figes, Stone, Tooze, Dostoyevsky, Turgenev, Akhmatova, Bulgakov, Gerwarth, and Lenin. We will also be looking at the art, music, photography and film that comes out of this period. This course is interdisciplinary in nature, and will count towards both History and English elective credit, so expect lots and lots (and lots) of reading and many types of writing assignments, including two major essays. Expect as well to immerse yourself in a world both strangely familiar and thoroughly compelling in the way that it contrasts with American and European history and literature. **Note:** This class will meet four double periods per week and grant both English and History credit.

Lift Every Voice: Transnational Blackness and the Making of a Diaspora

(Mackall)

(See Interdisciplinary studies)

Midwifery and Gender Politics of the 17th Century

(Wang)

The Art of Midwifry is doubtless one of the most useful and necessary of all Arts, for the...well-being of Mankind.

—Jane Sharp, *The Midwives Book*, 1671

The birthing room and the science of childbirth has long been the setting of some of history's most breathtaking dramas. From succession crises to changelings, the closely guarded secrets of the birthing room have determined the rise and fall of empires. In 17th century Europe, only the midwife and mother would be privy to these secrets. In a world dominated by powerful and wealthy men, midwives utilized the birthing room as a center of rebellion, running this all-important space for women, by women. This course primarily aims to examine the powerful consequences that emerged from England's birthing rooms in the 17th century, the shifting rules surrounding female-coded bodies, and most importantly, the fight for control over the all-important birthing-room narrative.

The subject of gender is central to our studies. Strict gender roles were essential to maintaining the hierarchy of the time, while those who dared to break them were punished harshly. The midwives we study will, in their own ways, risk it all to redefine the barriers of gender, medicine, and education. We will examine the lives of a few notable midwives including Alice Culpeper (wife of famed apothecarian Nicholas Culpeper), Jane Sharp, the first woman

to publish an English midwifery treatise, and Elizabeth Cellier, a Catholic midwife who would narrowly escape being hanged for treason before going on to propose the first Royal Midwives' Hospital. The far-reaching effects of the English Civil War, the Interregnum era, the return of the monarchy and a fractured England's attempts to put itself back together again will serve as a backdrop to the constant drama of the birthing room, as will England's expansion across the Atlantic Ocean. We will also examine, whenever possible, the practices taking place at this time in other parts of the world, including Continental Europe, Africa, and the Muslim world.

This course, while it will incorporate relevant secondary sources, will rest solidly on a primary source base of midwifery treatises, medical writings, and pamphlets of the era. We will read about surgical tools of the time, methods of remedying breech births, monstrous births, devil children, common childhood diseases, different pharmaceutical remedies, and gruesome murderous stories with midwives as the starring villains. Expect to hone your skills of primary source analysis and become quite familiar with reading in Old English. Writing will be assigned frequently and there will be a major research project in the course of the class.

Modern East Asia

(Kang)

This course will examine the histories of China, Korea, and Japan from the mid-19th Century to the present. Investigating how each country experienced the struggles of independence and hegemony within the realm of a changing new world order, we will examine a number of events and ideas that emerged in the 20th century. While each country developed its own national identity and experience, their overlapping experiences also shape their individual paths. Moreover, while Asia was certainly a distinct arena for major changes in the global order, we will inevitably consider the role that the Cold War played in shaping these countries' national identities. In addition to the political, economic and social influences on the histories of these countries, we will further look at the emerging cultural impact and products of their experiences. Viewing and examining art, feature films and music, we will assess the cultural manifestations of the formation of these modern states. Readings will include a number of secondary and primary resources, including memoirs. Be prepared to read carefully and write regularly. Also be prepared to watch a number of documentary films and listen to various podcasts. Assignments will include essays, debates and research.

Readings/assignments will include: Jung Chang's *Wild Swans*, Jonathon Spence's *Search for Modern China*, Victor Cha's *Impossible State*, Andrew Gordon's *Modern History of Japan*, Mori Ogai's *The Wild Geese*, Guy Delisle's *Pyongyang*, and Min Jin Lee's *Pachinko*. We will also view a number of documentary and feature films, including those by Zhang Yimuo, Bernardo Bertolucci, and Akira Kurosawa.

New York City History

(Swacker)

New York City History is designed to provide a broad overview of our city. The course will examine the entire history of New York City from the Dutch colonial period (1625-1664), through the English period (1664-1783), and up to the present. The history of the city will be examined from different perspectives: economic, spatial, immigration and demography, religion, ethnicity, politics, and the arts (including architecture and popular culture). The course will go beyond the period of master builder Robert Moses (1930s-1960s) to include the building boom and population growth of the past thirty years. An area of general emphasis will be large public projects: water service through reservoirs and aqueducts, bridges, canals, roadways, subways, airports.

School and Society: History of American Education

(Goldberg)

What are schools for? Who should go to school and at what age? Are public schools vehicles for democracy or tools of state indoctrination? Do private schools undermine the goal of equal opportunity, or are they the natural expression of a national ethos of liberty and choice? What is the goal of a college education? Should everyone get one? How are schools products of the society we live in, and how is society a product of our schools? What characterizes a “good” school? Do we even need school at all?! This course on the history and philosophy of education in the U.S. traces the different answers people have given to questions like these over the past four centuries. Ever since the Puritans, aiming to equip every child with the ability to read the Bible, passed a 1647 law mandating a public school in every town of fifty families, generations of Americans have placed extraordinary faith in the school as a vehicle for progress and a panacea for all that ails society. Of course, this nation has never been of one mind when it comes to definitions of progress, much less diagnoses of society’s ailments...and so schools have not only been sites of reform but sources of intense social conflict over questions of race, gender, sexuality, national identity, and the relationship between individual rights and state authority.

Topics will include: the origins and evolution of public schools; the influence of religion and religious activism; the efforts of black Americans and other minority groups to attain educational access and equality; the rise of progressive education and vocational programs in the early 1900s; the impact of 1960s and 1970s social movements such as the counterculture and second-wave feminism on curriculum and pedagogy; the history of higher education, including HBCUs and women’s colleges; the Back to Basics campaigns of the 1980s; and the history of educational alternatives, including homeschooling. Most of the readings will be taken from the original writings of educational theorists and advocates, to be supplemented with book chapters and scholarly journal articles. This is also a writing-heavy course, so expect weekly response essays, several research-based assignments, and a major thesis-driven paper in the spring. The class will be run seminar-style, with an emphasis on discussion.

Sex: A Historical and Biomedical Exploration of Human Reproduction

(Levin/Schragger)

(See Interdisciplinary Studies)

Independent Research in History

(The Department) (1x per week)

The Independent Research in History program enables students to explore a historical topic in depth over the course of the school year. Working with a mentor from the department, students will identify the significant historical questions raised by their chosen topic, and pursue them by various research techniques, and through the use of a variety of sources and documents. Students will meet one period a week in class, and once a week with their individual mentors throughout the year.

Each research project may be the work of up to two students. The expectation is that students will develop their research into a significant formal historical essay, to be presented at the end of the school year in a symposium. Papers may be accompanied by a supplementary presentation of research in another medium.

To be considered for Independent Study in History, students need to submit a substantial research proposal to be considered for approval by the department. This proposal should be submitted to the History Department by June 1.

Note: Preference will be given to juniors and seniors. The maximum enrollment for this program is 16 students.

INTERDISCIPLINARY STUDIES

Lift Every Voice: Transnational Blackness and the Making of a Diaspora

(Mackall)

Since they were first brought to the Americas in the 16th Century, people of African descent have organized themselves across ethnic and national boundaries to form families, to build communities, and to advocate for their human rights. In this course, we will consider the forces behind the development of the international movement to abolish the transatlantic slave trade, Pan-Africanism, Négritude, Africana Feminisms, and other transnational movements as well as their social, cultural, and historical implications.

We will center the voices and scholarship of people of African descent in our course materials—which will include primary historical documents, personal narrative/memoir, poetry, narrative fiction, scholarly writings, and multi-media materials—and, in keeping with the traditions of Sankofa, we will consider the contemporary implications and historical antecedents of this history.

Students will be expected to read independently and respond to the course materials in class discussions, regular short response essays, and a substantial culminating project, which might include written research, oral presentation, performance, or other creative expression.

Note: This course may be taken for Interdisciplinary credit by freshmen and sophomores, and it may be taken for either History or Interdisciplinary Studies credit by juniors and seniors.

The Science and Math of Music

(Kandel/Neeseman)

Why is it so difficult to tune a guitar, even (*especially?*) with an electronic tuner, and *impossible* to perfectly tune a saxophone? Why do all cultures have music/dance? What makes that catchy “hook” become an “ear worm,” something you’ll remember forever? How does the orchestra choose its instruments and stage layout; how does your favorite band? What’s the connection between the geometry of a space, and the music that will be performed there? Why do you prefer one pair of headphones to another? How does music evoke emotion and stoke memory? What is the “loudness war” in popular music—and how do reverbs, compressors, and distortion work, physically and mathematically? How are mp3s made? How are tubas made? What is the significance of the shape of the human ear? How are music and spoken language interconnected, in terms of their origin, structure, and social function?

In this course we will study the acoustics of musical instruments, from drums to trombones

to electric guitars. We'll analyze popular tracks using audio-engineering software, and compose our own "ear worms." We'll listen to songs and jams from around the world, and discuss the evolution and cognition of music itself. Ideas from physics, mathematics, and neuroscience will not only be discussed, they'll be *experienced*. We'll study simple instruments, such as the didgeridoo and dan moi (students will receive basic versions of these), and we'll examine our own learning processes. We'll ponder the musical aspects of Infant-Directed Speech. We'll tinker with pieces of equipment and software that expose the mathematics and science behind music and acoustics. We'll encounter compelling theories of the origin of language, the near-universality of certain scales/intervals/harmonies, the myriad connections between music and language, and the effects of music on the nervous system. There will be regular, substantial problem sets, and students will undertake individualized research projects. (No formal experience with music is needed, only appreciation and curiosity.)

Note: This course may be taken for Interdisciplinary Studies, Math, or Science credit.

Sex: A Historical and Biomedical Exploration of Human Reproduction

(Levin/Schragger)

This course, taught as a collaboration between the History and Science Departments, will intertwine women's history with the study of reproductive physiology, genetics, and bioethics. The major themes of the course will be taught from alternating historical and biological perspectives.

We will begin with the study of the anatomy and physiology of pregnancy and an examination of the historical impact of reproductive rights on women's roles in society and the workplace. This will be followed by a discussion of the hormonal mechanisms and historical evolution of birth control along with the study of sexually transmitted infections, including an in-depth exploration of the HIV/AIDS epidemic. Students will also examine more current issues relating to the biological, ethical, and historical aspects of modern reproductive technologies, including the science and legislation around in vitro fertilization, preimplantation genetic testing, surrogacy, cryopreservation of eggs, and more. Finally, the class will learn about sexual differentiation as it relates to notions of gender and how intersex and transgender rights have evolved in recent years.

Readings will include selections from *The Feminist Promise: 1792 to the Present* (Stansell), *All the Single Ladies* (Traister), and *Feminism in Our Time: The Essential Writings, World War II to the Present* (Schneir). Students will also watch documentary films and read articles from newspapers and magazines (*The New York Times* and *The New Yorker*), scientific journals (*The New England Journal of Medicine*, *Nature*, and *Science*), chapters from biology textbooks, the novel *Middlesex* (Eugenides), and the autobiography *My Own Country* (Verghese).

Note: This course is offered to juniors and seniors only, and may be taken for History, Interdisciplinary Studies, or Science credit.

“Who Lives, Who Dies, Who Tells Your Story?” Pop Culture and Historical Memory in America

(Oppenheim)

Pop culture shapes our ideas of what is normal and what our dreams can be and what our roles are. Politics, of course, decides how the power and the money in the country is distributed. Both are equally important, and each affects the other.

—Gloria Steinem

How has pop culture defined how the story of America has been told? In this class we will study examples of American popular arts and entertainments of the 19th, 20th, and 21st centuries, placing them in historical, cultural, artistic, and critical contexts. Instead of approaching these materials as idle diversions to be consumed and discarded, we will consider them as works that have helped shape the narrative of how different moments in American History are remembered. We will observe events through the lenses of novels, plays, films, and visual images. We will examine how the memory of different events, from the Revolutionary War to World War II, have been shaped as much, if not more, by the popular culture pieces they inspired than by accounts from those who experienced them.

The fall semester will begin with an in-depth examination of Ron Chernow’s biography “Hamilton” and Lin-Manuel Miranda’s Broadway adaptation thereof. We will then pay special attention to the racial stereotypes and appropriations in popular forms of entertainment arts from P. T. Barnum and his “sideshows” to *Uncle Tom’s Cabin* to films such as “Gone With the Wind” and “Birth of a Nation.” We will pay special attention to the portrayal of women in these pieces as well.

Students will be asked to submit regular responses to lectures, workshops, and other course materials, and these responses will come in both written and creative forms. There will be one research paper and a final project in which students will be asked to create (using primary source documents) a short film, play, podcast, or other creative work about a moment/event in American History that remains yet to be examined in popular culture. Guest lecturers and workshops on related topics will be a regular component, and topics may include The Art of Propaganda Posters, Hamilton and Historical Memory, The Lost Cause and Popular Culture, Hollywood and World War II, and the WPA. Texts will include: *Hamilton* (Chernow), *Confederates in the Attic* (Horwitz), *Abe Lincoln in Illinois* (Sherwood), *P.T. Barnum: America’s Greatest Showman* (Kunhardt), *Five Came Back: A Story of Hollywood and the Second World War*, *Civil War and Popular Culture* (Gallagher), *Popular Culture in American History* (edited by Jim Cullen), *Dance Floor Democracy: The Social Geography of Memory at the Hollywood Canteen* (Yellin), *The Crucible* (Miller), and more to be determined.

Note: This course may be taken for Interdisciplinary Studies credit.

CLASSICS & ASIAN LANGUAGES

ASIAN LANGUAGES

Chinese

Chinese classes at all levels are aimed at developing communication skills in listening, speaking, reading, and writing. Our goal is to lay solid foundations in language form and accuracy for students, which can help students use Chinese to exchange information and to communicate their ideas. We first start to introduce Pinyin, the four tones, characters, and basic sentence structures. Gradually, we more intensively study grammar, vocabulary, and different topics while reading more authentic materials. In addition to developing language skills, the courses endeavor to increase students' awareness and understanding of Chinese-speaking cultures. The integration of language learning and culture is strongly emphasized. Both traditional and simplified characters are introduced according to the interest of the students. We use *Chinese Made Easy Book 1* for the first year of Chinese, and continue with the four volumes of *Integrated Chinese*. A connected storyline in *Integrated Chinese* about a diverse group of students strings together all of the dialogues and narratives throughout each volume.

Chinese 1

(The Department)

This course is an introduction to the Chinese language, with an emphasis on pronunciation —Pin Yin and four tones. At the same time, students study radicals, stroke orders, characters and basic sentence structures. Chinese songs, poems, and rhymes are introduced.

Chinese 2

(The Department)

The review of Pin Yin and tones continues throughout the year with an emphasis on the use of Chinese to discuss related topics both orally and in writing. Students study more grammar, sentence structures and vocabulary. The topics include school life, subjects, shopping, making an appointment and transportation. Students are encouraged to initiate and carry on conversations to exchange information and express opinions about related topics.

Chinese 3

(The Department)

Chinese 3 is designed to help students solidify their grasp of grammar and vocabulary. The emphasis is on increased ease and accuracy in speaking Chinese and on reading comprehension. Students are expected to give oral presentations about topics such as schools and places in China. The topics include weather, dining, asking for directions, school life, etc.

Chinese 4

(The Department)

In addition to introducing more vocabulary and grammatical points, Chinese 4 concentrates on more complex sentence structures and paragraphs. Intensive study increases the students' command of linguistic structures and functions and gives them a firmer grounding in speaking and writing more idiomatic Chinese. Students learn to discuss and write more fluently and at greater length on the geography of China, the relationships between parents and their children, and the differences and similarities between Chinese medicine and Western medicine.

Chinese 5

(The Department)

Students learn to express their personal views and exchange opinions about the social issues introduced in Chinese 4 in more complex language. They complete exercises like responding to e-mails and writing personal letters, reading complicated signs, public announcements, and newspaper clippings, as well as giving presentations and conducting interviews in more fluent and accurate Chinese.

Chinese 6

(The Department)

Students continue to study more probing texts that reflect the many facets of contemporary Chinese society, family values and Chinese literature. China's strengths and problems are revealed through analysis, explanation and debate. Some lessons deal with crucial social and intellectual concerns in current China. Students continue to hone their overall abilities in speaking, reading and writing in Chinese.

Chinese Conversation

(The Department) (2x per week)

Through the use of various practical scenarios, this course offers an opportunity to gain confidence and facility in speaking more idiomatic and spontaneous Chinese. By enlarging vocabulary and improving oral/aural skills, students gain fluency in discussions about daily life, education, politics, food, travel, and so on.

Japanese

Japanese 1

(Otsue)

The first year of Japanese focuses on building students' foundations in the language. While students take in the two phonetic systems, hiragana and katakana, and some kanji characters, they learn basic grammar including distinctive aspects of the language such as use of markers. Numerous patterns that are needed to construct sentences to function in various social situations are also introduced. Additionally, through extensive examinations of history, philosophy, and the arts, students continuously explore Japanese culture and traditions from ancient periods to the current "pop" trends. Each year, students have face-to-face exposure to various Japanese artists.

Japanese 2

(Otsue)

The second year continues from the first with grammar, but adds an emphasis on composition—students begin writing weekend journals. They continue to build their foundation in the language including distinctive aspects such as measurement words for various objects, equipment, animals, machines, etc. Students continue to learn to function in various social situations including ones in which they are required to use keigo or honorifics.

Japanese 3

(Otsue)

The third year continues the emphasis on developing all four skills of speaking, listening, writing, and reading, and build on what they have learned in the previous years. In the second half of the semester, a number of complex sentence patterns and formulaic expressions are introduced. Students are provided with extensive training to enhance their communication skills, putting emphasis on spontaneity and accuracy. Creative writing exercises are embedded in grammar exercises. The listening comprehension materials include real life dialogues. New kanji and kanji vocabulary are introduced on a daily basis.

Japanese 4

(Otsue)

The fourth year builds on the foundation from the third, but explores reading more extensively. The reading materials include manga style texts, stories, cultural episodes, etc. and include a number of new and old kanji. Students continue to build up their vocabulary.

Japanese 5

(Otsue)

The fifth year continues with an emphasis on reading, but features texts with more complex syntax and advanced kanji vocabulary in both the formal and the informal styles. Readings cover a wide range of topics including Japanese inventions, social hierarchy, traditional arts and Zen, etc. Students will further their understanding of Japanese society and culture through discussions on history and current social issues. In addition, students will learn to express their opinions and thoughts in the formal style of writing with stronger command of the language. In order to facilitate students' fluency, more sentence patterns, formulaic expressions, idioms, and use of onomatopoeia are introduced

Japanese Conversation/Composition

(Otsue) (2x per week)

Students further develop their abilities to express themselves effectively, and also explore the culture via various mediums. Students are given ample time to discuss topics like cross-cultural issues, cultural and current events, etc. On a regular basis, students are asked to conduct research and give oral presentations on a topic of their choice. As they develop their presentation skills, students learn to construct cohesive paragraphs when working on both spoken and written tasks.

CLASSICAL LANGUAGES

Greek

Greek 1

(The Department)

This course introduces students to the rudiments of Ancient Greek. Memorization of forms, vocabulary and syntax are stressed in order to facilitate the reading of unadapted Greek texts as quickly as possible. By the year's end, students will have a strong command of basic syntax and will be prepared to learn complex syntax in Intermediate Greek.

Intensive Ancient Greek

(The Department)

This is a fast-paced, intense course that introduces the essential morphology and syntax of Ancient Greek. The systematic acquisition of forms and vocabulary complement the learning of simple and complex syntax. As the name of the course indicates, this is an intense experience, but one that enables students to read Ancient Greek texts in the original by the end of the year.

Greek 2

(The Department)

This course features review of material from Greek 1 and continues to round out the students' knowledge of Greek forms and syntax. In the second semester, students will refine their skills through translation of selections from a variety of authors, including Herodotus, Plato, and Aristophanes, and will explore the different styles and expressions employed by each. The course is intended to provide students with the skills and confidence to move on to more intensive exploration of specific Greek texts. **Prerequisite(s):** Greek 1

Greek 3

(The Department)

A pure translation course, this class focuses on writings that concern the conflict between rational and irrational on individual and societal levels. We read from Plato and Euripides, the possibly delving into the world of comedy. Students gain an advanced understanding of syntax and familiarize themselves with prose and tragic constructions. **Prerequisite(s):** Greek 2 or Intensive Ancient Greek

Greek 4: Homer, The Odyssey

(The Department)

In this class we will read one of the most influential poems in world history in the original Greek—*The Odyssey*. *The Odyssey*, at its heart, is a poem about coming home, not only from war, but also from wandering. It is a story that contains within it many different, overlapping stories. As we seek to develop command of Homeric Greek, we will explore a selection of these stories. Some of these will be Odysseus's stories—like the stories of the Lotus Eaters, the Sirens, and the island of the witch Circe. Others will belong to other heroic arcs like the coming of age of Telemachus, the loyalty of Penelope, the aftermath of the *Iliad*, the return of Helen, and Achilles in the Underworld. Still other stories will take us beyond the world of heroes to explore broader questions about the nature of justice (in peace and war), the roles of different women in the poem, the question of violence and exclusion, the place of storytelling, and, of course, what it means to come home. In the spirit of the text itself, we will take each episode as it comes, and let the lessons from one lead us on to the next. And the next. And the next. **Prerequisite(s):** Greek 3

Greek 5/6: One Thousand Years of Greek Writing

(Mason)

Greek speakers have been writing alphabetic Greek for almost 3,000 years. In this class we will survey the first millennium of that writing, from roughly 750 BCE to 250 CE. We will begin with Nestor's cup and the Dipylon inscription, two of the oldest surviving epigraphs in alphabetic Greek, and end our adventure with the works of Greek language writers living during the height of the Roman Empire. Our tour will take us chronologically century by century (mostly), will include both poetry and prose, and will, just as it did for the speakers

of Greek who produced them, find us in many places in the (ancient) Mediterranean. We will read widely, including the works of both men and women, and will endeavor to come to some general conclusions about Greek writing while honoring the specific circumstances (historical, literary, personal, etc.) that situate each writer's life (if known) and work. The questions we ask will largely be inspired by the interests of the class, but at least as a start we will begin to think about the novelty of writing – its relationship to the spoken word and the extraordinary move to write something down. What did it mean, for example, for someone to scratch writing onto a piece of pottery? On a slab of stone? Or into bedrock? Who is the audience, who is the speaker, and does that speaker have a “voice”? From there we will read some lyric poetry and think about larger (perhaps) contexts—the social and political worlds reflected in, and created by, lyric poets and poetry. As we continue reading through the years, we will chart our journey as the class sees fit, but we will be sure to connect with as diverse and varied writing as we can. So, we will surely visit the Ionian Greeks and marvel at the explosion of Greek prose in the 5th century emanating from what is now the western coast of Turkey. Likewise, we will spend some time in Rome, first with the writings of Polybius in the 2nd c. BCE, and then Dionysius of Halicarnassus, in the 1st c. BCE—historians both writing about Rome, in Greek. On our way we may examine some inscriptions from Hellenistic Athens, we will read the lyric poems and fragments of some women writers such as Anyte and Melinno, and we will for sure read medical and philosophical texts. Matthew wrote about Jesus, in Greek. And Pausanias about his travels in the Mediterranean. We will find that writers of Greek wrote about nearly everything—in a sense, they wrote their worlds. It would take a lifetime (or more) to read everything written in Greek that survives to us from these first thousand years. Our goal will be to connect with a dozen or so writers and see if we can develop a richer, more complex understanding of the ancient Mediterranean than a focus on one place or time (no matter how marvelous) can achieve.

Our survey could include, but will not be limited to: Inscriptions (from the 6th c. BCE to the 3rd c. CE); Alcman; Sappho; Alcaeus; Herodotus; The Hippocratic Corpus; Aspasia; Anyte; Melinno; Polybius, Dionysius of Halicarnassus; Matthew; Plutarch; Aelius Aristides; Galen; Lucian; Pausanias; and Achilles Tatius. **Prerequisite(s):** Greek 4

Latin

Latin 1

(The Department)

This course introduces the student to the basics of Latin forms and syntax. Memorization of forms and syntax is stressed in order to facilitate the reading of Latin literature as quickly as possible. Readings are selected from Cicero, Caesar, Martial and others. The course also covers background material on mythology, history, and Roman life.

Latin Poetry, Prose, Drama & The Novel

(*The Department*)

Designed as a bridge between the introductory Latin course and specialized electives, this course emphasizes facility in reading and translating Latin authors, studying the literary forms we read, and using textual evidence to gain insight into life in the ancient world. Authors include Cicero, Ovid, Plautus, Sallust, Livy, Catullus, Horace, Caesar, Vergil, and others. The course also intensively reviews Latin grammar and syntax.

The Aeneid: Vergil and The Latin Epic

(*The Department*)

The Aeneid is a poem with everything in it. Famously, it represents a distinctively Roman contribution to the tradition of epic poetry inaugurated in the ancient Mediterranean by the *Iliad* and the *Odyssey* of Homer, but that is only the beginning. And this course is the end of the beginning.

Whereas in our introductory Latin courses (and even in PPDN) we focus on developing the linguistic skills required to read Latin texts in the original, in this course, these skills become the foundation for a broader, deeper, and grander journey—learning not only to translate, but to truly read. Reading, naturally, requires us to pay attention to contexts. This includes the social and political context of Vergil's own day—the world of the early Roman Empire. It includes formal contexts like meter and rhetorical technique, and it also includes the literary context that infuses Vergil's text with allusions ranging from Homer, to Hellenistic poetry, to early Latin verse, and even to Greek Tragedy. Arguably, however, the most important context to consider in this course is the context of the individual reader. You.

The reason for this is simple: throughout its two-thousand year history *The Aeneid* has hung precariously balanced, at times even ambiguously, between the competing claims of different contexts. We have a tendency to think of the “canon” as a place of fixed meaning, but in fact it is always a place of dispute and change. Indeed, what perhaps began as a work of imperial poetry in the court of Augustus became, in the hands of St. Augustine, an object of devotion second only to the Bible. In the hands of Servius, it then became a philological treasury, while at the same time it became in hands of early Christian poets, the raw material for hexameter “remixes”, chronicling the heroism of the risen Christ. In the Middle Ages Vergil becomes Dante's guide in Hell. In early Modern England, Aeneas sings opera. For the Romantics Vergil is an icon of the heroically isolated poet. The story continues.

Even into the 20th-century Vergil's layered text continued to unfold, and not always in ways that are easy for us to celebrate. On the one hand, *The Aeneid's* influence on T.S. Eliot's probing, grief-stricken reflections on the global tragedy of worldwide war may move us to reverent appreciation, but then how do we make sense of the fact that, on the other hand, Vergil's text was—and has always been—in the hands of others, an affirmation of empire at all costs? How can we connect the disturbingly decontextualized use of *The Aeneid* on the great stone wall of the 9/11 Memorial to the private experience of Helen Keller, who read the poem in early Braille?

Since at least the time of Hadrian, *The Aeneid* has been imbued with the power to predict the future (the so-called, *sortes vergilianae*). Its incredible history, however, reminds us that the future is always being written in the present moment, which is why, ultimately, it occupies the place of honor which it does in the Classics curriculum at Saint Ann's. This is the context, and the spirit, in which we present it to you. At the heart of *The Aeneid* are not only the gates of war, but also the bells of change, waiting upon the next set of readers to be rung.

Prerequisite(s): Latin Poetry, Prose, Drama & The Novel

Latin: Another Antiquity

(Connaghan)

The poetry of Late Antiquity is beautiful and brilliant, unsettling and disorientating. In this period the poetical forms feel comfortable and thoroughly classical. However, as in a dream, where all is familiar and yet not quite, something is off-kilter, the forms before the eye are the same and somehow uncannily and gloriously different. In class we will enter the dreamscape of the poetry of Late Antiquity where Rome has become a city of the imagination.

Late Antiquity is a time of sweeping social, political, and cultural change. It is a time of upheaval and yet of surprising continuities. Nowhere is this better seen than in the poetry of the period; a poetry immersed in the traditions of classical poetics yet birthed in a heady mix of social, racial, religious and cultural identities. It is a time of transformation with all of the challenges this brings both to those living through it and to us as we attempt to make sense of it.

Our authors, both female and male, will be drawn from Africa, Spain, Gaul, and Italy. These authors are obsessed with tradition and intertextuality, with innovation and finding their own voice. We will attempt to establish an aesthetics both to understand this poetry in its own right and to help us see its complex relationship to classical poetry. We will read poets of breathtaking talent, of momentous importance, of literary and intellectual delight. These will include Ausonius, Proba, Juvenius, Ennius, Prudentius, Paulinus of Nola, Claudian, Sedulius, Dracontius, Boethius, Maximianus, Venantius Fortunatus.

We will move into territories and times where such things as the canon are left behind, where new eyes and ears are required, where our sensibilities will be challenged and changed

Prerequisite(s): Vergil

Latin: The Declines and Falls of Rome

(Siebengartner)

Like all who came before them and have followed, the Romans wondered about the deepest origins of the world and its creatures and wove stories about them using both the threads of earlier thought and their own unique additions. They pondered what those first generations of humankind were like, sometimes—like Ovid in his *Metamorphoses*—hewing closely to Greek myths of the “Ages of Man,” the Golden Age of Saturn, full of easy, peaceful living and abundance giving way to Silver, Bronze, and Iron Ages as the innovations of seafaring, weaponry, and agriculture burst their insularity and bring different cultures into contact, often

violently. Others, like Lucretius in his *De rerum natura*, almost reverse this process, replacing the image of early man's innocent purity and simplicity with one of primitively painful and grueling struggle, gradually improved upon by cooperation and technological advancement. We will begin this course with these narratives, considering their literary backgrounds, their function in the broader contexts of the works in which they appear, and how they often say more about their authors' own social, cultural, and historical milieus than their beginnings. Inevitably, we'll compare how our own contemporary versions of these age-old, ever-repeated debates about the good ol' days relate: chalkboards or SMART boards? Notebooks or iPads? Legos or Fortnite?

In addition, we will read the many accounts of pivot points in Roman history at which authors claim the sturdy *virtus* of old Rome bent towards luxury and moral corruption. Was it, as Livy claims, when Manlius Vulso returned triumphant and booty-laden from conquests in Asia in 187 BCE? Or maybe, according to Sallust, it was at the end of the Third Punic War in 146 BCE, when, "first, lust for money, then lust for power, grew," (*primo pecuniae, deinde imperi cupido crevit*). Wherever they locate the moment, it is one at which *metus hostilis* (foreign threat) recedes, only leaving room for indulgence, personal gain, and, ultimately, civil strife. Perhaps, then, as many writers suggested, it all started when Romulus first slew Remus, and Rome was forever cursed.

Finally, we will survey how authors link temporal and spatial change, overlaying contemporary landscapes with images of earlier stages of development, whether beautifully untouched, or roughly uncultivated. Vergil's Evander, centuries before Romulus and Remus are born, can show Aeneas a Capitoline hill that was "once scraggly with rough brambles" (*olim silvestribus horrida dumis*); Augustus claims to have found a city of brick and left it marble. Propertius, meanwhile, gives us Veii, once the gilded seat of Etruscan power, now occupied by lonely shepherds and farmers: "they reap their harvests in your bones" (*in vestris ossibus arva metunt*); Lucan has Caesar trampling over the ruins of Troy, heroic remains underfoot.

While these stories of change and decline might seem like downers, we shall, I hope, find comfort in knowing that there have always and forever been good ol' days. That, dare I say, we have always been yearning to make ourselves great again. In the creativity, poignancy, and beauty of these narratives, we will see that we're both always and never perfect, that the past always is as full of lessons, models, and inspirations as regrets. **Prerequisite(s):** Vergil

Latin: Tacitus

(Kingsley)

A chronicler of the horrors of tyrannical Rome, expert largely because he was a careerist of unnatural talent, Tacitus wrestled his life into his literary material (sometimes by indirection, while professing the strictest neutrality) and composed immortally dense works of political psychology. Finding tragedy and rot at the highest echelons, crystallizing blame (and its foil, praise) in his historical writings, Tacitus gives unforgettable front-row testimony on the emperors and their times. In a Latin quite un-Ciceronian, his rhetorical modes communicate righteous, critical mercilessness in acute observation and a "systems"-minded orientation. Dramatic tensions between the center and the periphery, between the old and the new,

between survival and martyrdom are the intractable conditions through which republicans, stoics, women, the lower classes, provincials, foreign tribes, and ex-slaves defined themselves or defended their ways against the centripetal forces of wealth and power in the unitary executive at Rome.

In this class, we will read the corpus, trying to dwell at length in this one writer's cranium. We'll likely go chronologically, from the *Germania* (an ethnography later to become central to the teleological lies of Himmler and Hitler), the *Agricola* (further romanticizing of non-Romans, and also his father-in-law), the *dialogue de Oratoribus* (questions on the relative political flexibility—that is, willpower exercised verbally—in times of peace or of chaos), to the *Histories* on the Flavians and the *Annals* on the Julio-Claudians (where we get the nastiest Nero and the badass rebel queen Boudicca).

Come for the damning epigrams (*solitudinem faciunt, pacem appellant*—make a desert and call it peace), and stay for the Christians and Jews, the quixotic hero liberators, the rank and complicit aristocrats. Let us think with Tacitus about how one responds to threats, how one can conceive a historiography in real time, and just how much strife underpins individual ethics and clan membership. His voice is distinctive—exciting and fun, if hard—and his writing has had world-historical consequences. **Prerequisite(s):** Vergil

Additional Courses

Introduction to Linguistics

(*The Department*) (2x per week)

This class will introduce students to the study of human languages. We will ask big questions—what is language, how does language work in the brain, the body, and society, and what, if anything, can we learn about humanity by considering human languages? We will explore topics in linguistics, from grammar (phonetics, morphology, syntax, etc.) to sociolinguistics, historical linguistics, lexicography, second language acquisition, and computational linguistics. Our focus will in part be determined by student interest. This class will be conducted mostly as a workshop and homework will be limited. That said, students will be invited to give presentations on topics that particularly compel them. No knowledge of Greek or Latin is necessary.

ROMANCE LANGUAGES

French

Accelerated French

(The Department)

This course is offered to students who have successfully completed at least two years of another Romance language, and whose experience with language learning enables them to proceed at a faster pace in assimilating the usages of French. This course emphasizes aural/oral proficiency as well as written skills.

French 1

(The Department)

This course is for students who are new at learning a Romance language, and for those who need one more year to solidify their knowledge and usage of the fundamentals. Emphasis is placed on sentence structure and oral expression. Students acquire elementary conversational skills, and vocabulary is learned through texts and review exercises. Web-based interactive exercises and activities help students practice and retain the material. Special attention is given to accurate pronunciation.

French 2

(The Department)

Students entering this level already possess fundamental skills of grammar and expression (as described in French 1). This course is designed to foster continued development in each of the four language skills: speaking, writing, reading, and aural comprehension. A variety of materials are used: a textbook and workbook to reinforce grammar and vocabulary, and short readings to encourage class discussion and serve as samples of written text. Audio materials are used in class to improve listening comprehension skills. Accurate pronunciation is stressed.

French 3

(The Department)

In French 3 the objectives are to reinforce the students' command of basic grammatical concepts and to stress the idiomatic use of French. We place an emphasis on the assimilation of all major grammatical structures. Readings such as Saint Exupéry's *Le Petit Prince* or Sempé and Goscinny's *Le Petit Nicolas* are used to expand vocabulary and provide topics of discussion. We consider questions of content and form. Topics of class discussion serve as the basis for composition writing. At the end of this course, students should be able to speak and understand French with relative ease and to write coherently.

French 4: French Language & Culture

(The Department)

This course exposes the students to a variety of materials, textual as well as audio-visual, and emphasizes communicative skills through conversation, short writing assignments and hands-on activities. Cultural themes pertaining to life in the French-speaking world are presented through French-language films, short readings, songs and other appropriate material. After a careful elucidation and practice of the linguistic elements necessary for exploring these themes, students are able to express themselves on the various topics introduced.

French 4: French Language & Composition

(The Department)

This course is designed to consolidate previously-acquired language skills and enable students to enjoy increasingly complex literature. While emphasis is given to class discussion and writing to improve active command of the language, it is through reading texts of various literary genres that the students will review grammar and start producing critical and creative writing. The authors studied may include, but are not limited to, La Fontaine, Maupassant, Deharme, Camus, Sartre, Lahens, and Miano.

Contemporary Topics in French Literature and Film

(The Department)

Designed for students who have successfully completed French 4 and are interested in gaining increased fluency in oral French, this two-semester course explores contemporary topics in the French-speaking world through literature and film. One semester is dedicated to reading and discussing works by contemporary French writers. Students are required to read an average of five to ten pages per night and to keep up with the new vocabulary introduced. While the emphasis is on oral expression, students are expected to write summaries, character and plot analyses, as well as short essays, on a regular basis. The other semester is dedicated to the viewing and discussing of films addressing topics such as education, politics, relationships, gender, race, and the environment. Each week students come to class having watched the film assigned over the weekend and ready to discuss it. Through activities such as oral presentations, dubbing, writing film reviews, dialogues and character studies, students will expand their vocabulary and improve their communication skills. Special attention will be paid to idiomatic expressions and the way French is spoken in everyday life. By the end of the year, students should have refined their aural and expressive abilities and gained a greater awareness of some aspects of the contemporary Francophone world.

Modern and Contemporary Literature in French

(The Department)

Open to students who have successfully completed French 4. The literature studied in this course provides a comprehensive overview of writers and literary movements in France and the French-speaking world from the early nineteenth century to the present. Through the works of authors such as Balzac, Nau, Desbordes-Valmore, Baudelaire and Flaubert in the nineteenth century, and Proust, Césaire, Beckett, Duras, Ben Jelloun, and NDiaye in the twentieth, the course aims to stimulate students' interest in both classic and contemporary French letters. Class discussions and oral reports help students to develop their skills in oral expression. Frequent writing assignments, both expository and creative, help students to solidify and refine their skills in written expression.

17th and 18th Century French Literature: Classicism and The Enlightenment

(The Department)

Open to juniors and seniors who have successfully completed the Modern and Contemporary Literature in French course. We begin at the golden age in France, a time of belief not only in the divine right of kings but in the divine itself. Inherent in such beliefs was the idea of the absolute—absolute power, absolute reason, and, by extension, the “absolute” work of art. In literature, perfection becomes the rule, and prescriptions for achieving it are devised. Corneille, Racine, and Molière are recognized as major craftsmen. By the 18th century, cracks begin to appear in the bastion of Absolutism. Writers known as *les philosophes* declare war on heretofore sacrosanct tenets, with words for weapons. The French Revolution begins as a conflict of ideas eventually exploding into insurrection. “On est tombé par terre, c’est la faute à Voltaire; le nez dans le ruisseau, c’est la faute à Rousseau.” Authors are chosen from those above and from the following: Pascal, Madame de Sévigné, Madame de la Fayette, La Bruyère, La Fontaine, La Rochefoucauld, Beaumarchais, Diderot, and Montesquieu.

Advanced Readings in French Literature

(The Department)

For students who have completed all other French electives. Works are selected based on students' interests and literary background.

French Conversation

(The Department) (2x per week)

Offered to juniors and seniors, and to sophomores with permission of the department chair, this class helps students use their acquired vocabulary and expand it to express themselves more fluently. Through a variety of verbal games, paired activities, and oral reports, students build their oral/aural skills and use them in a context of informal conversation on topics such as politics, education, fashion, everyday life, or other subjects of interest to the group.

Spanish

Accelerated Spanish

(The Department)

This course is offered to students who have successfully completed at least two years of another Romance language, and whose experience with language learning enables them to proceed at a faster pace in assimilating the usages of Spanish. This course emphasizes aural/oral proficiency as well as written skills.

Spanish 1

(The Department)

This course is for students who are new at learning a Romance language, and for those who need one more year to solidify their knowledge and usage of the fundamentals. Emphasis is placed on sentence structure and oral expression. Students acquire elementary conversational skills, and vocabulary is learned through texts and review exercises. Web-based interactive exercises and activities help students practice and retain the material. Special attention is given to accurate pronunciation.

Spanish 2

(The Department)

Continuing the study of grammar and building vocabulary, students read and discuss short stories relevant to Spanish culture and begin to express more sophisticated ideas in writing.

Spanish 3

(The Department)

Grammatical concepts are further reviewed and reinforced at this level. Students are introduced to more literary texts, poetry, and to articles on culture and current events in Latin America and Spain.

Spanish 4: Language & Culture

(The Department)

This course exposes students to a variety of materials, textual as well as audio-visual, and emphasizes communication skills through conversation, short writing assignments and hands-on activities. Cultural themes pertaining to life in the Spanish-speaking world are presented through Spanish language films, short readings, songs, and other appropriate materials. After a careful elucidation and practice of the linguistic elements necessary for exploring these themes, students are able to express themselves on the various topics introduced.

Spanish 4: Language & Composition

(*The Department*)

This course is designed to consolidate previously-acquired language skills and enable students to enjoy increasingly complex literature. While emphasis is given to class discussion and writing to improve active command of the language, it is through reading texts of various literary genres that the students will review grammar and start producing critical and creative writing. The authors studied may include, but are not limited to: Allende, Borges, Cortázar, García Márquez, Sábato, García Lorca, and Neruda.

Literature and Visual Arts in 1940s Latin America

(*Montalva*)

This course is designed for students who have successfully completed Spanish 4. This class will focus on a variety of Latin American authors from the 1940s whose works are seen as precursors to the literary boom of the 1960s. We will begin by considering the distinct cultural foundations of Latin American literature (aboriginal, Spanish, African) and some important foundational texts (the *Popul Vuh* and the chronicles of de las Casas, El Inca Garcilaso de la Vega and Guaman Poma). Then we will turn our attention to the *negrismo* movement and the *real maravilloso* (the marvelous real) which began to flourish in the first half of the 20th century in works by Guillen, Olivella, Asturias, Carpentier, and Fuentes. Students will also learn about the Latin American visual arts of the period and about the relationships that writers had with artists such as Xul Solar, Wilfredo Lam, and Frida Kahlo. Students will be asked to research, write and make oral presentations about these and other artists of the period, and to explore the interrelationships between the literary and visual arts. By the end of the year students will have developed a good sense of the artistic forces that helped shape contemporary Latin American culture and national identity.

Creative Writing in Spanish

(*Martin-Basas*) (2x per week)

Leer es cubrirse la cara y escribir es mostrarla. (To read is to cover one's face. And to write is to show it.)

— Alejandro Zambra, *Formas de volver a casa*

Designed for students who have completed Spanish 4, this course will operate like a writing workshop and thus requires a commitment to writing frequently in Spanish. Students will prepare a piece of writing in Spanish for every class, which they will share with their fellow students. Commenting upon each other's work in Spanish will be an essential component of the class. Students will get grammatical and literary input from both teacher and peers. They will read and discuss short fiction and poetry and then "try on" the different narrative voices in their own writing. We will take inspiration from recognized contemporary and classical writers in Spanish such as Roberto Bolaño, Valeria Luiselli, Gabriel García Márquez, Cristina Fernandez Cubas, and Luis Sepúlveda, among others.

20th and 21st Century Literature in Spanish

(The Department)

The prose and poetry studied in this course provide a comprehensive view of 20th and 21st century Hispanic letters. Through the works of Unamuno, Martín Gaité, Matute, and García Lorca (Spain), and of Fuentes, Borges, Bolaño, Restrepo and García Márquez (Latin America), and poetry from both regions, the course aims to stimulate the students' interest in contemporary Hispanic literature and expand their knowledge of language and culture. Short novels by contemporary authors such as Zambra and Vásquez introduce students to the present literary trends in a Latin America that lived through dictatorships, economic crises, and drug wars. Excerpts from movies that explore said conflicts are also watched and discussed.

Advanced Readings in Spanish

(The Department)

For students who have completed all other Spanish electives. Works are selected based on students' interests and literary background.

Spanish Conversation

(The Department) (2x per week)

For juniors and seniors who have completed at least Spanish 3, this course develops communicative proficiency. Placing special emphasis on practical vocabulary and enhancing interactional use of the language, we try to build each student's self-confidence and facility in speaking Spanish.

MATHEMATICS

Required Courses

Algebra 1 (8th Grade)

(The Department)

In Algebra 1, students learn to generalize the laws of arithmetic and perform the four operations on variable expressions. They develop their ability to model and solve word problems by assigning variables to unknown quantities and determining the precise relationship between constant and variable terms. Students apply the laws of equality in order to solve a wide variety of equations and proportions. In the process of graphing the solution sets of linear equations on the Cartesian plane, students gain familiarity with the concepts of slope and intercept. They find simultaneous solutions to systems of equations and apply factoring in order to find the roots of quadratic equations. All of these activities promote both arithmetic and algebraic fluency.

Geometry (9th Grade)

(The Department)

In Geometry, we study the world of points, lines, and planes. We cover topics that include the analysis of congruent and similar triangles, the Pythagorean Theorem, angle sum and area formulas, and theorems concerning the relationship between chords, secants, and tangents of a circle. We solve problems and explore geometric situations intuitively; we also investigate geometry as a formal system, where we begin with a small set of postulates and then build up a Euclidean geometric system by deductively proving further results. With this balance, we uncover mathematics the way it often plays out historically, where bursts of intuition drive knowledge forward, and then formalization solidifies known results into a cohesive whole.

Computational Fluency (9th Grade)

(The Department)

In this once-per-week course, students apply their mathematical knowledge of arithmetic, algebra and geometry to a variety of problems written in the format of questions presented on the mathematics sections of the ACT and SAT. These problems are organized into thematically related units. By reviewing key topics, students in this course will bolster their mathematical vocabulary and their understanding of both concepts and applications. By working on problems in a multiple-choice format, students will practice applying their mathematical knowledge to standardized mathematics tests.

Algebra 2

(The Department)

Students come to Algebra 2 after having had a year of Geometry, and this knowledge is applied on a regular basis. The Cartesian plane provides a setting for examining transformations such as reflection, translation, and scaling. Parallel and perpendicular lines are analyzed using the concept of slope. Functions are examined both algebraically and graphically, as are systems of equations and inequalities. Students also work in a purely algebraic setting, solving equations, manipulating algebraic expressions, working with higher-degree polynomials, expanding binomial powers, and examining rational expressions. The challenge of solving quadratic equations leads to such techniques as factoring, completing the square, the quadratic formula, and the discovery of the complex numbers.

Sequential Electives

Trigonometry

(The Department) (Fall semester)

Beginning with trigonometric functions and triangle solutions, we move on to identities, equations, angle formulae, and the practical applications thereof. Last, we cover the graphs of all the trigonometric functions including inverses and period, amplitude, and phase shifts. In conjunction with the spring semester course Analysis, this course is a prerequisite for Calculus. **Prerequisite(s):** Algebra 2

Analysis

(The Department) (Spring semester)

This course is a rigorous approach to polynomial and exponential functions; sequences and series; vectors; and some analytic geometry. Emphasis is on the mastery of proofs and creative applications to practical problems. This course is a prerequisite for Calculus. In conjunction with the fall semester course Trigonometry, this course is a prerequisite for Calculus.

Prerequisite(s): Algebra 2

Calculus

(The Department)

This is a rigorous calculus course with heavy emphasis on proofs, derivations, and creative applications. Limits, derivatives, integrals, and their technical applications are covered. This course will include an early use of transcendental functions and will require a working knowledge of trigonometric, exponential, logarithmic, and rational functions. **Prerequisite(s):** Trigonometry/Analysis

Additional Electives

Advanced Problem Solving

(The Department) (2x per week)

This course is designed for students who love solving math problems, and it is especially appropriate for students intending to take part in the school's math team. We focus on mathematical topics not typically covered in the standard curriculum. Topics such as number theory and modular arithmetic, polynomials, geometric loci, probability, functional equations, algebraic and trigonometric identities, geometric inequalities, divisibility, three dimensional geometry, complex numbers, recursions, infinite series, quadratic forms, and abstract algebra are explored through a series of problems, often selected from various mathematical contests. The problems in Advanced Problem Solving tend to focus on clever tricks and creative thinking beyond what is typically required in a classroom. Through problems, the objective of the course is both to be more familiar with said clever tricks and also to have wider exposure to mathematics beyond our standard curriculum. We meet twice a week, once to work on problems and a second time to go over the problems together as a class. This schedule is occasionally altered when we tackle a math contest as a class. **Prerequisite(s):** none

Further Explorations in Calculus

(The Department) (Spring semester—same period as fall semester course Techniques in Integral Calculus)

In this course, we will take ideas from calculus and use them as stepping stones towards extensions and explorations in more advanced areas. For example, we will delve deeper into the convergence and divergence of sequences and series, leading us to a discussion of the Taylor and Maclaurin Series. We will study how the concept of infinitesimals leads to exciting results in physics and harmonic analysis, as well as offer insight into the local behavior of various curves that we may have taken for granted. Using infinite series, we will take on a formal study of real analysis, working with concepts that may span continuity, completeness, and cardinality. Along the way, we will continue to explore advanced integration techniques. We may examine special functions and number sets, such as the Weierstrass function, the Bernoulli numbers, and the Cantor set. We may use the idea of volumes of rotation as a way to begin talking about repeated integration and multivariable calculus. **Prerequisite(s):** Calculus, Techniques in Integral Calculus

Geometry II: Modern Elementary Geometry

(Totten) (Fall semester—same period as spring semester course Non-Euclidean Geometry)

This course will concern itself in great part with what is called modern elementary geometry. Since the Renaissance, and especially in the last two centuries, there has been great development and expansion of the work of Euclid and the ancient Greeks. Our study will begin with the many figures associated with the triangle: orthic and medial triangles, the Euler line, the Fermat and Gergonne points, the Feuerbach circle, excircles and Simson lines. Special topics regarding circles—the power of a point, the radical axis, harmonic division and Apollonian

circles—will be covered, and will lead into an introduction of transformational geometry with an emphasis on Steiner inversion. Throughout the course there is considerable use of compass and straightedge constructions, which invite our hands to help see what the mind at first may not. **Prerequisite(s):** Geometry

The History of Mathematics in Theory and Practice

(Andrus) (Spring semester—same period as fall semester course Linear Algebra)

This course begins with the origin of numbers and the number system, tracing its pre-historical roots to the civilizations of Ancient Egypt and Mesopotamia. We will explore the workings of the Babylonian sexagesimal system, and look at its impact on our current ways of measuring angle and time. We will also explore the creation of the earliest calendars through observations of the lunar and solar cycles, and the mathematics of various non-Western cultures. The course will follow the development of a deductive system of geometry in Ancient Greece, and the emergence of algebra. The course concludes with investigations into modern mathematical topics: non-Euclidean geometries, the development of modern algebra, and the emergence of probability and statistics.

Linear Algebra

(Aroskar) (Fall semester—same period as spring semester course History of Mathematics)

Linear algebra is the common denominator of mathematics, with uses in pure as well as applied branches of mathematics. In itself, it is a profoundly enriching field of study that has also developed into a universal tool. While linear algebra is broadly the study of structure-preserving operators on linear (vector) spaces, these concepts are extremely useful in a variety of disciplines ranging from physics and engineering to economics and computer science. In this introductory course, we will study matrix algebra and learn to solve linear systems in several variables. There will be an emphasis on topics useful in other disciplines and various applications will be discussed. We will also aim to gain a deeper understanding of abstract vector spaces and linear transformations by exploring interesting examples and examining isomorphic structures. Proficiency in concepts and skills from Algebra 2 will greatly benefit students taking this course. **Prerequisite(s):** Geometry

Mathematical Art

(The Department) (2x per week)

Mathematical art making has a proud and gorgeous tradition: Mayan temples and Arabic palaces, the drawings of M.C. Escher, the paintings of Bridget Riley and Odili Donald Odita, the stories of Stanisław Lem, the instruction-art of Sol LeWitt, the algorithmic music of Laurie Spiegel, Steve Reich, the data-porn of Ryoji Ikeda—the list goes on and on. In this class we will make drawings and sculptures, write poetry and prose, build synthesizers and sound installations, compose music and enact performance art: whatever medium we pick, we will have the subtle, fascinating curves of mathematics as our live model.

This class will run as a studio. The only prerequisite will be a firm commitment by each

student, no matter what previous experience they have, to engage in serious art-making in a variety of media. Periodic presentations of new mathematics or mathematical art pieces will be offered to students as points of inspiration, but an independent curiosity and creative energy is vital! Gallery shows and informal performances will dot the year, but the meat of the class will be the machinations of our brains as we let the beauty of mathematics pour over our hearts and into our art.

Non-Euclidean Geometry

(Aronson) (Spring semester—same period as fall semester course Geometry II)

One of the postulates of Euclidean geometry states that through a point not on a given line there is exactly one line parallel to the given line. This postulate, known as the Euclidean parallel postulate, seems intuitively unassailable. For what would it mean to say that this postulate is false—either that there are no parallels to a line from an external point, or there are multiple parallels? And both of these options seem, at least at first glance, patently absurd. As it turns out, however, these alternatives to the Euclidean parallel postulate do not lead to absurdity but to different geometries that are just as consistent as Euclidean geometry. This course begins with a close look at the Euclidean parallel postulate and then turns its focus to the main ideas of the two general types of non-Euclidean geometry: hyperbolic geometry (in which the sum of the angles of a triangle is always less than 180° , but not fixed) and elliptic geometry (in which the sum of the angles of a triangle is always greater than 180° , but not fixed). We will also discuss the philosophical consequences of these non-Euclidean geometries. **Prerequisite(s):** Geometry

The Science and Math of Music

(Kandel/Neeseaman)

(See Interdisciplinary Studies)

Techniques in Integral Calculus

(The Department) (Fall semester—same period as spring semester course Further Explorations in Calculus)

In this class, we will continue the exploration of calculus with advanced integration techniques, such as integration by parts, partial fractions, and trigonometric substitution. We will study applications such as arc length, perimeter, measurement of surfaces, areas of regions on polar coordinates, and differential equations. We will reexamine integration with a more rigorous treatment than we took in Calculus, formally producing proofs of results that employ Riemann sums. **Prerequisite(s):** Calculus

Statistics

(Cross)

They use statistics to decorate their articles. They use statistics as a club in the battle for what they believe intuitively to be correct. That is why [they] often believe that you can prove anything with statistics, an obscene and ludicrous position, but one which is the natural outgrowth of the way that they themselves use statistics. What I wanted to do was teach people instead to use statistics as a sword to cut toward the truth.

– Bill James

In this class, we will design and perform experiments, play and study card games, analyze and visualize data, build models, run simulations, summarize data, and write chunks of code (absolutely no prior programming experience is expected). We'll see how probability underlies our understanding of science, grapple with uncertainty, and become fledgling data scientists. This class will be partially project based including a substantial (individual) end-of-the-year project of your choosing.

Independent Study in Mathematics

(The Department)

Students work one-on-one with a mentor on a focused research project. Topics are to be determined by interest and inclination of the student. **Prerequisite(s):** Students must submit a research proposal to the department chair by June 1 to be considered for Independent Study in Mathematics. Proposal guidelines can be picked up in the High School Office or in the Mathematics Department.

MUSIC

All music courses meet two periods per week unless otherwise noted.

Performance Study and Ensembles

The Music Department will offer the following large ensembles based on student needs and interests. It is recommended that students interested in large ensembles choose two. Please consult with your current instrumental teacher if you need to know more about any group. The Music Department is committed to helping students thrive in our ensembles. Students enrolled in any ensemble are required to practice regularly outside of class. The Music Department provides additional support to individual students by offering a Music Resource Room where students can practice during the school day, and we offer a wide-ranging list of private lesson options for those students who wish to support the ensemble experience by studying privately.

Large Ensembles

Brass Choir*—(horns, trombones, trumpets)—Pickering

Chamber Orchestra*—(strings and winds)—Baeza/Woitun

Consort*—(bass, cello, viola, violin, winds)—Gilbert/Eanet

High School Chorus—Asbury

Jazz Performance—Elliott/Coe

Wind Ensemble*—(bassoon, clarinet, flute, horns, oboe, saxophone, trumpets)—Henderson

*requires audition/approval of director

Bach Ensemble: The Study of the Vocal and Instrumental Chamber and Solo Music of J.S. Bach and His Contemporaries

(Gilbert/Williams)

We will work on many aspects of Baroque interpretation, performance practice, style, ornamentation, tempi, the relationship and interdependence of words and music, and any other topics that come up in the rehearsal and preparation of repertoire. We will explore Bach and his contemporaries from the bottom up, paying close attention to the power and influence of the bass line in these great musical works. Keyboard players will learn how to interpret and realize a figured bass and will learn how to play the portative organ. Limited to advanced vocalists and instrumentalists. **Prerequisite(s):** permission of the instructor

Brass Choir

(Pickering) (3x per week)

The Brass Choir is an ensemble for advanced brass players. Musical and technical skills are cultivated through the study and performance of major brass ensemble compositions representing a wide variety of styles. The Brass Choir will perform in multiple settings during the year including assemblies, choral/instrumental concerts, and graduation. Brass Choir will also be combining and collaborating with Consort, Chamber Orchestra, and Chorus to perform major orchestral works. Ensemble members are encouraged to take private lessons/seek outside practice assistance. **Prerequisite(s):** permission of the instructor

Chamber Orchestra

(Baeza/Woitun) (3x per week)

A plucked clarinet? A bowed flute? A violin that uses reeds? A cello with leaking pads? Have you buzzed your viola yet? Something is upside down! Chamber Orchestra is an ensemble where woodwind, brass, and string instruments learn how to play together and enjoy the rich world of sound that they create. Instrumentalists prepare to play in keys utilizing up to four sharps and flats. Chamber Orchestra draws repertoire from art music extending from the Renaissance to today. We will also be combining and collaborating with Consort, Brass Choir, and Chorus to perform major orchestral works. A conducted ensemble, where the individual is cherished and challenged with music suited to each player, this group meets for one double period plus one sectional period each week. Students in Chamber Orchestra are encouraged to take private lessons/seek outside practice assistance. **Note:** An audition is required for any student enrolling in a large ensemble for the first time.

Chamber Players

(The Department)

Historically, chamber music has been the pastime of the aristocracy, yet it is as democratic as music-making can get! For students interested in the challenge of chamber music performance, Chamber Players groups (including piano ensembles) are organized based on enrollment. Duos, trios, and quartets will be coached once a week. Because of the skills required to perform chamber music, students are strongly encouraged to take private lessons/seek outside practice assistance. **Note:** An audition is required for all students who will be participating in the chamber music program for the first time. Students presently participating will be placed at an appropriate level.

Consort

(Gilbert/Eanet) (3x per week)

The Consort is a group of mixed winds and strings for advanced players. This ensemble performs without a conductor and will participate in all instrumental concerts during the year. The Consort works closely with a director in rehearsal. Students learn the art of section leading and ensemble playing through the study of repertoire that spans all periods. Consort

will also be combining and collaborating with Brass Choir, Chamber Orchestra, and Chorus to perform major orchestral works. The Consort will rehearse for one double period and one single period each week. **Prerequisite(s):** permission of the instructor

High School Chorus

(Asbury)

High School Chorus is open to anyone who loves to sing. The chorus sings repertoire from a variety of genres and styles, spanning 500 years of Western music. Chorus will also be combining and collaborating with Consort, Brass Choir, and Chamber Orchestra to perform major orchestral works. No previous singing experience is required.

Jazz Performance

(Coe, Elliott) (3x per week)

Students will perform compositions from the huge jazz repertoire, spanning the major styles of jazz from swing to post-bop. Each combo will consist of a rhythm section and front line. All instrumentalists are welcome. There will be opportunities for large group arrangements as well. We will explore approaches to jazz improvisation through the study of harmony, scales, instrumental technique, and arrangement. Combos will have opportunities to perform in our jazz concerts and more informally in assembles throughout the year. Students should demonstrate an ongoing engagement with their instruments, willingness to improvise, and good reading ability. **Prerequisite(s):** Jazz Techniques (or the equivalent, as determined by the instructors). Students in this class are encouraged to take private lessons/seek outside practice assistance.

Jazz Techniques

(Coe, Elliott)

A class in jazz improvisation and ensemble playing. Instruction in basic scales and chords provides a vocabulary for improvisation. Students are introduced to the jazz repertoire. All instrumentalists and vocalists are welcome. **Note:** Interested students should prepare an audition demonstrating a grasp of major and minor scales and chords. Students in this class are encouraged to take private lessons/seek outside practice assistance.

Jazz Guitar Ensemble

(Coe)

This ensemble performs a variety of music arranged for guitars and percussion. The repertoire includes jazz standards, modern jazz compositions, and original music. Ensemble members improve their reading, composing, accompanying, and rhythmic skills. Members should be very comfortable reading music and charts. **Prerequisite(s):** permission of the instructor

Percussion Ensemble

(Lazzara)

This ensemble studies and performs 20th and 21st century music specifically composed for percussion instruments. Additionally, pieces transcribed from other sources are studied.

Prerequisite(s): Middle School Percussion 2 or permission of the instructor

Vocal Study and Ensembles

(Clark) (3x per week)

Vocal study at Saint Ann's is comprehensive. Our goal is to build better singers, as both soloists and choristers. Proper breathing, vowel production, diction, and basic singing techniques will be the foundation of our study. Art songs (in English, Italian, French, and German) and repertoire from the American musical theater and opera will be studied and performed in solo concerts. Additionally, singers will join together to explore the rich and broad canon of western choral music in various voice combinations. Performance opportunities include choral concerts, the spring voice recital, and the musical theater workshop. **Note:** There is no audition required. Students in Vocal Studies/Ensembles will also participate in High School Chorus.

Wind Ensemble

(Henderson)

The Wind Ensemble combines woodwind and brass instruments. We develop musical and technical skills by studying compositions from a wide variety of styles, composers, and time periods. Students are encouraged to take private lessons/seek outside practice assistance.

Prerequisite(s): permission of the instructor

Instrument Instruction

Nascent Musicians

Is it ever too late to learn an instrument? The Saint Ann's Music Department doesn't think so! If you are interested in learning a musical instrument please let your grade advisor know when you are registering for classes. The Music Department will work to accommodate your request.

Advanced Guitar

(Coe)

This course is designed to enhance performing skills on the guitar through the study of popular, jazz, and classical pieces. **Prerequisite(s):** Guitar 1 or permission of the instructor

Double Bass

(Langol)

This course is designed for the beginning and intermediate double bass player. The course work focuses on developing performing skills and good double bass playing technique through the study of recognized method books, classical pieces, popular music, and jazz. The students are provided an opportunity to focus on skills and repertoire specific to their instrument through the study of solo and ensemble literature with the goal of playing in an ensemble setting. Tone production, technique development, basic bowing technique, and maximally effective practice strategies are the focus of class assignments. Prior string playing experience is a plus. **Prerequisite(s):** permission of the instructor is required

Percussion: The Drum Set

(Lazzara)

This class explores the role of the drummer in popular music. We study and execute techniques that helped define this music, and we listen to recordings of the classic drummers.

Advanced Percussion Techniques

(Lazzara)

This course explores percussion techniques for performing ensembles as well as solo playing. Timpani, 4 mallet vibraphone, drumset, and solo snare drum will be studied.

Prerequisite(s): permission of the instructor

Theory, Composition, and Music Technology

Theory & Composition 1

(Elliott)

This course offers an exploration of the fundamentals of notation, rhythm, harmony, and melody. Students gain a deeper understanding of all musical styles. We train our ears, develop musicianship skills, and study the evolution of the system of tonality used in most musical cultures. Computers and MIDI are used in composition projects.

Advanced Composition/Electronic Composition

(Elliott)

This course covers the study of harmony and voice leading, form, counterpoint, notation, style, and instrumentation, including ear training and musicianship. We will analyze the works of the masters to gain understanding of compositional techniques. Students will work on composition projects using notation software. Compositions for acoustic instruments and electronic media are encouraged. **Prerequisite(s):** Theory and Composition 1, or equivalent and permission of instructor

Music & Computers 1

(Langol)

This class explores the use of electronic keyboards, computers, and software in making music reflective of various musical idioms. Our focus is on understanding the bigger concepts around making music with current music technology in contemporary musical idioms. This class is for the student with no experience or a beginning knowledge of using music technology. In addition to advancing skills as music technologists, the students will be exposed to fundamentals of music theory and various compositional methods as required. Project work will apply these ideas as well as the musical desires of each student. Previous experience with composition is desirable, though not necessary.

Music & Computers 2

(Langol)

This advanced level class continues to explore the ideas covered in Music & Computers 1, while solidifying skills established through previous music lab experience. We explore the use of electronic keyboards, computers, and software in making music reflective of various musical idioms. Included in this course work is a deeper exploration of various musical concepts as well as the possible application of compositional methods to the creative process. A detailed look at basic synthesis and sound design as well as a sharply focused look at effects processing is part of the class discussion. **Prerequisite(s):** Music & Computers 1 or middle school Music Lab experience, and permission of the instructor

Music Scoring for Multimedia

(Langol)

This class targets the ideas around electronic music composition specifically for film, dance, puppetry, theater, and animation. Open to students with advanced skills, an interest in performance/composition, and a facility with music making software, this workshop/class allows students with experience in MIDI and sound processing to realize their creative ideas using the myriad tools of the music lab. Software technology enables composers to achieve unprecedented variety and richness in manipulating recorded sound to create unique compositions. The possibilities are practically limitless. The developing of listening skills and musical analysis are employed in the course work and these become an important part of utilizing compositional methods and style. **Prerequisite(s):** Music lab experience, facility on an instrument, and permission of the instructor

Music Literature

History of Western Music

(Elliott)

Through its evolution since the Middle Ages, western art music has established the language of all familiar musical genres from plainchant to popular song. A style emerges, flourishes, grows amazingly complex, and finally topples, rendered obsolete by the genius of the next artistic generation. Students will explore the major forms and genres from the plainchant to Symphony, sonata to opera. We will hear incredible music, find the reflection of the past in the present, and explore new ways to understand musical language. We will take advantage of the exciting musical life of New York City to inspire our journey.

Jazz History

(Elliott)

Jazz and blues are among America's greatest cultural achievements, exports to the world community that give powerful voice to the American experience. Born of multi-hued society, this music unites people across the divides of race, religion, and region. Jazz history explores freedom, creativity, and the American identity at home and abroad. In this course, we will learn about the development of jazz since its origins at the turn of the 20th century. We will encounter colorful personalities and amazing artists, taking a look at their specific contributions to the music in an effort to understand the stylistic evolution of jazz. Trips to major cultural institutions will complement our extensive listening and learning activities.

Modern Music: The 20th and 21st Centuries

(Elliott)

A revolution in musical thinking took place in the 20th century that would lead to decades of remarkable innovation and creativity in the composition of art music. These developments would inspire musicians of all genres and styles. The advances in technology that define the 20th century provided remarkable potential for sound explorers to invent entire new worlds. We will study the great musical artists of the last 120 years, more or less, from Stravinsky and Schoenberg to today's most innovative musical thinkers.

Opera

(Clark)

The extravagant art. We will look at opera from the ground up, from Monteverdi through contemporary works. Class work involves libretto reading, audio listening, and DVD watching. We will take occasional forays into the scandalous lives of the great composers and opera stars. Class participation includes three daytime trips to the Metropolitan Opera and some written work. (And maybe even some HD Broadcasts!). There is no need to be afraid of opera anymore!

RECREATIONAL ARTS

Basketball

(The Department)

This course will prepare the students for both the physical and mental aspects of basketball, and is open to all skill levels. Students will learn basketball vocabulary, explore strategies, and raise their overall basketball IQ. Students will have a chance to implement their skills in half and full court games during class time.

Challenge Course

(The Department)

Students are faced with challenges through group activities and will set individual as well as collective goals. Team work, leadership, and trust building are major components of this class. We will explore horizontal and vertical climbs on our climbing wall and learn various climbing and belaying techniques. The course may include a three-day camping trip which includes rock climbing and a ropes course.

Fencing 1

(Balboa)

This class, covering the fundamentals of fencing, is open to beginners and those with a limited background in fencing. Students learn basic fencing movements and strategies.

Fencing 2

(Balboa)

The class stresses conditioning, competitive bouts, and advanced fencing techniques.

Prerequisite(s): at least one year of fencing and permission of the instructor

Flag Football

(Schirrippa)

This course introduces the rules and fundamentals of flag football. Emphasis is placed on proper techniques of throwing, catching, offensive and defensive concepts, and teamwork. Students will work through skill drills and learn strategies for playing in game situations.

Floor Hockey

(Schirrippa)

This is an enjoyable and exciting class for all skill levels. Students improve hand-eye coordination and knowledge of the game through drills and games. All hockey fans will enjoy this course.

Karate 1

(Magnes)

Students learn the basic punches, kicks and blocks of traditional karate, combining these techniques in the practice of forms and freestyle sparring. Some self defense applications are covered, although the primary emphasis of the course is on karate as a sport and martial art. A gi (karate uniform) is supplied by the school.

Karate 2/3

(Magnes)

In this class we cover material for the color belt ranks, with increased emphasis on free fighting and street defense. **Prerequisite(s):** a minimum of one year's training in the Saint Ann's martial arts program

Parkour Fitness

(Benney/Bolton)

Parkour is the physical discipline of training to overcome any obstacle within one's path by adapting one's movement to the environment. This class will incorporate both the technical aspects and the physical rigor of Parkour to create a challenging and adventurous workout. Perfect for students interested in gymnastics, dance, and athletics, this "boot-camp" style of exercise class will focus on upper body strengthening, cardiovascular endurance, balance, and agility. It will take place in the 10th floor apparatus room and gym, and at various outdoor locations depending on the weather.

Physioball Fitness

(The Department)

Using large physioballs, this class teaches different exercises designed to increase flexibility, enhance coordination, develop strength and improve cardiovascular fitness. The emphasis is on core (abdominal and back) strengthening and conditioning.

Pilates Conditioning

(Lattimer)

The Pilates method of body conditioning is a unique system of stretching and strengthening exercises developed over ninety years ago by Joseph Pilates. It strengthens and tones muscles, improves posture, enhances flexibility and balance, and unites body and mind.

Racquet Games

(Stevenson)

Racquet games is a course for all skill levels. The units will include badminton, pickleball, and table tennis, depending on gym availability. Beginners learn the games by working on fundamental stroke technique; more advanced players polish their skills while improving game strategy. All students participate in exciting singles and doubles matches.

Running

(The Department)

A course to help people with little or no running experience; experienced runners are also welcome. Stretching and cooling down exercises are taught, along with techniques to improve form and increase speed. Weekly runs vary in distance and intensity. Running routes change from week to week.

Sports and Games

(The Department)

If you enjoyed your MS “Gym/Park” class, then this class is for you. A variety of sports and physical activities will be offered. Based on the availability of indoor and outdoor facilities, you will play games like Capture the Flag, Dodge ball, Ultimate Frisbee, soccer, whiffle ball, basketball, and volleyball. Individual fitness activities may be offered in the fitness room as well.

Table Tennis

(Carr, Stevenson)

Table tennis is one of the fastest growing sports in the United States. Join this class to speed up your hand-eye coordination and to learn how to play this enjoyable game.

Tap

(Howard)

This class teaches rhythmic tap technique, working with complex foot rhythms that lead to improvisation. The body attitude is grounded (closer to the ground), like African dance, as opposed to the lifted attitude of the Broadway tap style. Traditional and contemporary works are learned.

Urban Cycling

(Benney/Carr)

Get outside. Ride a bike. See Brooklyn from a new vantage point. This full-year class will emphasize safe cycling and group riding procedures. Students will learn basic bike maintenance in addition to building cardiovascular endurance. Students should already feel comfortable

riding a bike. Bikes and helmets will be provided, or students may provide their own equipment. **Note:** All bikes must have hand brakes.

Ultimate Frisbee

(Benney)

Ultimate offers a fun, exciting alternative to traditional sports. Students incorporate throwing, catching, and teamwork into a framework of speed and finesse.

Weight & Fitness Training

(Nardiello)

This course introduces the student to the merits of weight and fitness training. Both free-weight and machine work are incorporated into each personally designed workout. Other areas to be explored include flexibility (through stretching) and the value of aerobic training.

Yoga 1

(J. Zerneck)

This course introduces the ancient discipline of personal development that balances body, mind, and spirit. Students learn a series of physical postures and proper breathing as well as meditation and other practical methods for relaxation that promote health, alleviate stress, improve skeletal alignment, and increase muscular strength and flexibility.

Yoga 2

(J. Zerneck)

In this class we begin to explore more vigorous yoga sequences, breathing techniques, and styles of meditation. Different styles of yoga will be introduced including Ashtanga, Bikram, Vinyasa, and Anusara. **Note:** This course will be either a single or double period depending upon student schedules. **Prerequisite(s):** one year of Yoga and permission of the instructor

Interscholastic Sports

(The Department)

The recreational arts requirement may be fulfilled through full-season participation as a player on a junior varsity or varsity team. Emphasis is placed on developing and fostering athletic standards of excellence through participation and competition. All team sports require a significant commitment to practice and game schedules. Saint Ann's is a member of the Athletic Conference of Independent Schools (ACIS), and the girls' teams also belong to the Athletic Association of Independent Schools (AAIS). Our cross country and track teams are members of the Private Schools Athletic Association (PSAA). The fencing team is a member of the Independent School Fencing League (ISFL). Teams include baseball, basketball, cross-country, fencing, gymnastics, soccer, softball, squash, track, and volleyball.

SCIENCE

All courses meet for a full year unless otherwise noted.

Biology Courses

Biology

(The Department) (required)

Biology is the scientific extension of the human tendency to feel connected to and curious about all forms of life. It takes us to the wet, wild world inside a cell, and nudges us to take a close look at the stripes of a zebra or to plunge down to the dark regions at the bottom of the sea where albino crabs move with unhurried pace over the soft, cold mud. This course covers vital topics in this field such as cytology, genetics, biochemistry, taxonomy, evolution, botany, and ecology. This is a dense, grand tour of the most definitive aspect of this planet.

Prerequisite(s): none

Advanced Biology

(Kaplan)

This is an intense and rigorous immersion in a comprehensive study of biochemistry, cell biology, genetics, botany, evolution, and anatomy and physiology. Lectures and discussions are supplemented with occasional in-depth labs, and articles from journals such as *Nature*, *Science*, and *Scientific American*. The only way to cross the ocean of information, enjoying the fast pace and laboratory work, is to be a bonafide biophile! **Note:** Students are expected to have a thorough grasp of ninth grade biology topics. The class meets one seminar period each week in addition to regular class time. **Prerequisite(s):** Biology and Chemistry

Animal Behavior

(Zayas)

Do you like animals? Do you want to know how they have evolved to behave the way they do? This course is an introduction to the fields of ethology, the branch of biology concerned with the mechanisms and evolution of behavior in wild animals, and comparative psychology, the study of general behavior patterns across species. Students will investigate how complex behaviors such as sociality, communication, territoriality, aggression, mating, and learning have evolved across many species. We will explore both how and why animals behave the way they do.

Lessons will be presented through a combination of lectures, discussion, labs, and field trips. As a student in this course, you will learn and practice a variety of observational methods and data analysis techniques both in the field and in the lab. During the second semester, students will work on an independent project exploring a question in animal behavior which will result in a written assignment and/or presentation to the class at the end of the year.

Prerequisite(s): Biology

Marine Biology

(Richards)

Come explore life under the sea in this comprehensive full-year course! We'll consider a range of marine ecosystems—such as salt marshes, coral reefs, hydrothermal vent communities, and kelp forests—and discuss the environmental pressures that have influenced the organisms that have evolved to live there. The emphasis during the first semester will be on seaweeds, marine plants, and invertebrate sea creatures. During the second semester we'll turn our attention to marine vertebrates—bony fish, reptiles, birds, and mammals. Participants have the option of immersing themselves in a week-long expedition to the Newfound Harbor Marine Institute in Florida during spring vacation. **Prerequisite(s):** Biology

Chemistry Courses

Chemistry

(The Department)

This is a broad, sweeping, fast-paced survey course introducing students to the fundamental principles of chemistry, and to the basic techniques a chemist uses. Topics include stoichiometry, atomic and molecular theory, basic atomic and molecular structure, and gas laws, and may also include thermodynamics, chemical equilibrium, and acid-base chemistry. Students develop facility working with calculators and become intimate with the Periodic Table. Laboratory work is an integral part of the course, both in illustrating principles presented in lectures and in providing experience conducting qualitative analysis. **Prerequisite(s):** none

Advanced Biochemistry: Drugs and Poisons

(Radoff)

Have you ever wondered why cyanide can kill? How does cocaine affect your brain? What about how platinum can be used to fight cancer? In this class, we will be looking at the chemical interactions of these (and other) bio-reactive molecules with your cells. Biochemistry is a very broad subject, and by necessity, we will only be able to cover a portion of the material. That said, this is a fast-paced course, intended for the science-lovers among us. We will cover traditional biochemistry topics like biomolecular structure, enzyme function, and metabolism as well as modern biological and biochemical techniques. Reliable access to an internet-enabled computer will be extremely helpful, as we will be using online databases and applications to help us in our study. We will also be reading scientific journal articles in this class. **Prerequisite(s):** Biology and Chemistry

Advanced Chemistry

(Velikonja)

Advanced Chemistry is designed to give students the experience of an intensive college-level course in which they will hone their ability to think critically about chemical phenomena. We will discover why some chemical reactions happen while others don't, how quickly reactions happen and how far they will proceed (thermodynamics, kinetics, and equilibrium). We will also revisit, and explore in greater depth, some of the topics from first year Chemistry including stoichiometry, gas laws, and bonding. Additionally, we will discuss applications of chemistry such as electrochemistry, buffer systems and solubility. The rapid pace of the course requires independent learning and preparation on the part of the students and weekly labs add to the time commitment. Advanced Chemistry is for those who seek a deeper understanding of matter, relish wrestling with equations, and who find chemical reactions exocharmic. **Prerequisite(s):** Chemistry

Transition Metal Chemistry: Color, Reactivity, and Applications in Art

(K. Fiori)

Have you ever stared at the center of the periodic table and wondered when you are ever going to get a chance to learn about these metals? Have you ever wondered why rubies are red and sapphires are blue even though their chemical compositions are nearly identical? Have you ever wanted to understand how pigments and glazes get their intense colors? These questions and many others will be investigated in this course. We will explore the unique properties and reactivity of these often ignored metals. Weekly labs are guaranteed to be colorful. We will make our own pigments and paints, make models depicting the structure of minerals, and explore the acid-base and redox properties of transition metal complexes. This course will cover many topics not discussed in Chemistry or Advanced Chemistry.

Prerequisite(s): none

Physics Courses

Physics

(The Department)

This course provides a systematic introduction to the main principles of classical physics such as motion, forces, fields, electricity, and magnetism. We emphasize the development of conceptual understanding and problem solving abilities using algebra and trigonometry. Familiarity with trigonometry is highly helpful, but not required. The class includes a laboratory component. **Note:** open to sophomores, juniors, and seniors, or others with permission of the instructor

Astronomy

(Kandel)

This course will provide a rigorous tour of the objects and events that comprise the Universe. We will study the formation of stars and planetary systems, the interaction between galaxies and supermassive black holes, and the cataclysmic physics of the first few moments following the Big Bang. We will dabble in xenoscience, the study of extraterrestrials; we'll discuss necessary and sufficient conditions for life, and means of detecting—and eventually exploring—exosolar habitats. We will peruse theories of the size, structure, and ultimate fate of the Universe, and discuss multiverse theories that spring from quantum mechanics, inflation theory, and even more exotic philosophical riffs. “Hard” sci-fi (science fiction that relies on plausible science) will be utilized to vivify concepts and catalyze debates. Students will emerge with knowledge of the mind-boggling diversity of the contents of the Universe, as well as familiarity with the underlying laws of physics, and a sense of how science progresses in the face of seemingly intractable problems. For example, we may study the red supergiant, Betelgeuse, tracing its evolution—and eventual explosion and collapse—while noting the methodological breakthroughs that allow us to tell such a bizarre (and true!) story. **Prerequisite(s):** none

Physics: Mechanics and Relativity

(Kandel)

Mechanics and Relativity is a physics course that emphasizes deep problem solving, along with the philosophical and historical dimensions of the subject. Because we focus our efforts on mechanics (though we briefly discuss thermodynamics, electromagnetism, and optics), we can go into far greater depth. Students strive for a sturdy grasp of physical theories, utilizing diverse modes of thinking: qualitative reasoning, pure intuition, rigorous analysis. We consider the big questions: Where is the Earth in relation to the cosmos, how is it moving, and do its local laws generalize to the Universe? There are wonderful stories behind all of these, in which theories rise and fall, and human beings struggle to overthrow the mental constraints of their forebears. We study the astronomers of the Ancient Greeks, the Copernican Revolution, and the beautiful contributions of Galileo, Newton, and Einstein. In all of these realms, we not only tackle daunting problems, but we bring attention to the problem-solving process itself, to gain insight into our own learning processes; and we consider the wider philosophical implications. For example, does the unprecedented accuracy of Newtonian predictions threaten our belief in free will? Does the very concept of Laplace's demon imply that the future is predetermined? We employ mathematical methods to describe trajectories, orbits, and the strange physics within a spinning spaceship. By the end of the year, we are forced to question many of our deepest assumptions as we tackle the paradoxes of Special Relativity and the implications of the Big Bang model! **Prerequisite(s):** none

Analytical Physics

(Pelzer)

This second-year physics course builds on the material from a first-year Physics course with an emphasis on deeper, more complex problems, and covers new topics such as fluid dynamics, optics, electricity and magnetism, and particle physics. The course focuses on problem solving and mathematical methods. **Prerequisite(s):** Physics

Electricity and Magnetism

(The Department)

This course is an in-depth, calculus-based, proof-driven study of oscillations, waves, electric fields, magnetic fields, and radiation. Purpose: Derive the speed of information.

Prerequisite(s): Analytical Physics and Calculus. **Co-requisite:** second-year calculus

Introduction to Quantum Mechanics

(G. Smith)

It turns out that our fundamental physical reality is exceedingly strange. For example, on the microscopic level, there are no trajectories of particles. Actually, there aren't particles either, at least not in any conventional sense. Whatever these "particles" are, there are no certainties associated with them, only probabilities that in some cases can be very bizarre. If our everyday world behaved quantum mechanically, a roller coaster could get from one side of a hill to the other even if it couldn't make it over the peak, or a car might skitter around ceaselessly if someone tried to fit it into a tight parking space.

In this class we will seek to understand these and many other fascinating aspects of quantum mechanics. We will delve into a range of topics, including the Bohr Model, eigenvalues and eigenvectors, the Schrodinger Equation, the Heisenberg Uncertainty Principle, and angular momentum. We will also consider both the experiments and the theoretical insights that contributed to the development of quantum mechanics in the early 20th century.

Quantum mechanics relies on advanced mathematical techniques, including aspects of linear algebra and multivariable calculus. A significant amount of class time will go toward developing these techniques so that we can effectively apply them. Our mathematical explorations won't be completely rigorous, but a keen interest in getting into the weeds, so to speak, would be a huge plus. **Note:** This class will serve as a prerequisite for Electricity and Magnetism. **Prerequisite(s):** Physics, Trigonometry

Additional Courses

Environmental Science

(Reed)

You've heard about the CLIMATE CRISIS. But what does it really mean? How do we numb ourselves to the problems we know are around us? In this course, we will break down the relationship between humans and the planet and shift our lens to CLIMATE RESILIENCE. In this solutions-oriented course, topics will include climate basics, energy, resources (water, soil, food, air), and biodiversity, with space to explore topics that are itching at the back of your brain and making you anxious to act. Expect a rigorous mix of lab experiments, policy investigation, research projects, occasional tests, and fieldwork. You will emerge on the other side of this course with specific lab skills as well as a better understanding of the politics and economics of sustainability and environmental justice. **Prerequisite(s):** Biology

The Science and Math of Music

(Kandel/Neeseman)

(See Interdisciplinary Studies)

Sex: A Historical and Biomedical Exploration of Human Reproduction

(Levin/Schragger)

(See Interdisciplinary Studies)

Sustainable Design

(Pelzer)

Far more than any species on the planet, humans use the resources of the Earth to purposefully create environments in which to live, work, and play. In Sustainable Design, we will examine the details of how buildings are created, and how waste, water, food, electricity, materials, and air all are distributed through them and the cities and countryside where they dwell. We will address the following core questions: Are our habits and ways of living sustainable? What does sustainability truly mean? What ways of living and building styles can we create to work with environmental surroundings to maximize efficiency and sustainability?

This course will be structured as a combination of lectures and group discussions. Students will then incorporate what they have learned into weekly assignments exploring energy, heating and cooling, waste, water, and food systems in cities, and how these systems manifest in individual homes. Additionally, students will embark on a long-term projects in which they will be challenged to design structures (for urban and rural locations) to maximize sustainability.

Independent Science Research

(The Department) (1x per week)

The Independent Science Research Program grants students the opportunity to design experimental strategies to explore personally perplexing questions of science: What would happen if...? Why is it that...? How does...? Research objectives are as unique and varied as the investigator. Topics are multidisciplinary, ranging from biology and chemistry to the physical fields.

Independent Science Research is a cooperative endeavor between a student or several students and their chosen mentor. Saint Ann's science teachers, as well as auxiliary research investigators, serve as advisers. Students will be matched with potential mentors based on mutual research interests and expertise. Research work proceeds at a pace stipulated by the project as well as the ambition of the research team. Research groups are expected to meet regularly, i.e. every week. After completing a year of exploration, students summarize their projects in a formal research paper. In the spring, discoveries are made public through a poster session and oral symposium. **Note:** This course bears one half credit. **Prerequisite(s):** Students **MUST** submit a research proposal to the Science Department by June 1 to be considered for approval by the department. Proposal guidelines are available in the Science Office and HS Office.

SEMINAR

The high school seminar program is a unique series of courses offered by teachers in addition to their regular teaching load. The seminars are double periods at the end of the day, during which students explore shared intellectual and creative interests. Keep in mind that theater rehearsals and athletic practices are often scheduled during this time of day as well.

Advanced Architecture & Design

(Rumage)

This course explores a variety of architectural/design problems in greater depth than in previous Architecture & Design courses. In order to develop skills in 3D problem solving, model making is a major component of this rigorous course. To enter this advanced course, students are required to have completed Introduction to Architecture & Design 1 and 2, or to have gained permission from the instructor. Each student is also required to be skilled in presenting design considerations in plan, section, elevation and axonometric projection drawings.

The Art of Debate and Rhetoric

(Kingsley/Mason)

The Debate and Rhetoric seminar meets as a single House once a week in the late afternoon seminar period. We break up into smaller committees to debate and vote on resolutions, practice speaking in various formats, arrange impromptu and prepared intramural debates in both large and small houses; and participate as individuals and as a team in the Princeton Model Congress in November and other Model Congresses. The House is largely self-governing, on the premise that the secret of free speech is respect for difference of opinion, and rule by majorities—democracy—depends on the assent of minorities. **Note:** Students who take this seminar should not commit to more than one season of an interscholastic sport with practices or games that conflict with class meetings. Enrollment may be limited.

Asian Pop Dance

(Gu)

In this class students will learn various dance techniques and choreography for a number of Asian pop dances. Each class we will have a warm-up, and then learn Asian pop dance choreography from trending songs. Students will also learn to enhance their performance confidence by polishing steps and expressions.

Colloquium Latinum (Conversational Latin)

(Siebengartner)

This seminar is—you guessed it—about speaking Latin, about actively using this language, just as one would any modern language and just as is done today by small, strange, wonderful, and miraculously growing groups of enthusiasts the world over. We will have two goals, on the one hand to develop confidence hearing, comprehending and creating Latin in conversation with each other, on the other to improve our ability to read Latin texts with greater ease and accuracy by means of our active engagement with the language. To achieve this, we will proceed through carefully constructed, increasingly complex weekly exercises, gradually building comfort and confidence, developing strong core vocabularies, and solidifying our foundations in grammar and syntax. We will discuss our favorite music, critique works of art, interpret literature, debate big ideas, play games, and shoot the breeze, all in Latin. You'll be terrified, you'll love it, and your Latin will thank you for it. **Prerequisite(s):** Beginning Latin 1 and 2 or High School Latin 1

Comedy 303/404 (Formerly Sketch Comedy)

(Kandel)

Learn valuable skills for today's workplace! That's right, at no extra charge! Move beyond the ordinary! Embrace the unknown! Be unbearably annoying in a safe environment! Move beyond the place beyond the ordinary—and then beyond even THAT! Learn to manipulate people without threats, using merely your own facial expressions! Talk the talk AND walk the walk! Master neuro-social signalling and impress your parents' friends!

Fire Works

(Klein/Sullivan) (Fall semester)

In this art seminar, we explore the idea of transformation, the shift of materials from one state to another. In particular, we will look at two materials that rely on transformation by fire in the art process: porcelain and metal. In the studio, we will use porcelain and metal to make work that is sculptural, functional and poetic. And along the way we will explore the concept of shape—of shapes shifting, changing—with a special awareness to the ways in which the artist affects the object, summons it, shifts it from what it is to what it becomes.

*as being available
to any shape that may be
summoning itself
through me
from the self not mine but ours.*

—From “Poetics,” by A.R. Ammons

The Harold: An Introduction to the Basics of Long-Form Improvisation

(Zerneck)

Long-form improvisation is a performance in which a group of people mutually creates inter-connected scenes, on the spot, from a single audience suggestion—this type of performance piece is known as “the Harold”. Originated 30 years ago by Del Close, and perpetuated over the years by some of the greatest names in comedy - from Bill Murray and John Belushi to Tina Fey and Amy Poehler—long-form has grown to become one of the purest, most useful, and most rewarding forms of improvisation today. As the work compiled by the aforementioned performers can testify to, long-form has also proven to be an essential first step in the process of producing sketch comedy. The benefits of Harold training go far beyond performing, however, and can prove useful in all walks of life.

High School Literary Magazine

(The English Department)

The High School Literary Magazine is created by a board of students and faculty advisers whose goal is to find and publish excellent high school writing. The Board (about eighteen students selected by the English Department and the Head of the High School) meets once a week during a seminar period to discuss and select poetry and prose. In addition, board members prepare all selections for layout and, in April, help compose the magazine. Because the work is heaviest in February, March, and April, students should expect to give several extra hours a week during this period.

High School Mentoring

(Friedrichs/Garber)

High school mentoring is a program for juniors and seniors interested in working with middle school students.

Interested students complete a letter of interest and attend a series of trainings and check-ins throughout the year in order to participate. The mentors then meet regularly in small groups, along with a health teacher, to plan monthly sessions for 8th graders. These sessions occur in the 8th graders’ regular health classes and offer an opportunity for the younger students to hear from a fellow teen who is not so far removed from their own experiences.

During the sessions, mentors cover everything from their memories of middle school to navigating social situations and friendships, and dealing with social media. They provide an ear for the middle schoolers who may have questions and concerns they don’t want to share with a teacher, and they make an effort to engage with the younger students around school. After each session the mentors debrief with a health teacher about the class.

Interested students should contact Ellen Friedrichs prior to registering.

The Math Behind Finance

(Pershan)

About thirty years ago, math took over finance. This wasn't just a revolution in the tools used for trading—it also changed what got traded and who made money on Wall Street. Financial products became more complex. Mathematicians and mathematics became an integral part of the financial industry. Many of these mathematicians made fortunes, but some of them also created crises.

This course is about this story, told both through financial journalism and mathematics that helps us understand it. (We'll aim for about 50/50.) You don't have to have any special mathematical background or any knowledge of finance to join us—you'll learn those along the way through reading and solving problems in class.

There are big questions raised by the new role that mathematics plays in finance. Can you ever be morally responsible for *creating* an equation, or only for how you use it? Has this influx of wealth changed what it means to be a mathematician? And, besides for mathematicians, who else benefits from the new way that finance is done? You'll leave our course with new questions to think about and new ways to think about them.

Mock Trial

(Hill/Heller)

The Mock Trial Seminar is designed to teach students about the legal trial process and the skills needed to be effective courtroom advocates. The seminar operates on a “learn by doing” principle, in which students actively practice techniques of effective persuasion. The skills of thinking on one's feet, preparing arguments and analyzing fact patterns are emphasized. The first semester is devoted to learning and perfecting courtroom rules in order to prepare the students for the New York State Bar Association Mock Trial Competition against other NYC schools in the spring. Students work on practice cases to gain facility with preparing direct and cross examinations, making objections, introducing evidence, and learning trial procedure. Attendance and engagement are critical to forming a cohesive team for going to trial. Although the seminar is first semester only, extra meeting times during the beginning of the second semester in late January and February will be required as the competition approaches.

Model UN

(Anderson)

The United Nations was established in the aftermath of World War II, when the world lay at the nadir of destruction, to prevent future tragedies. It's singular goal (essentially, to save humanity from itself) is so broad as to make the organization laughable in the eyes of many of the world's more jaded cynics. And yet, in the last 75 years, there has been no additional period of widespread, inter-state conflict. The Universal Declaration of Human Rights has been a guidepost that has increased worldwide quality of life through application of soft-power and economic pressure. The Security Council defused the Cold War. UN Peacekeepers, while known for several tremendous failures, have also ushered in the state of South

Sudan and keep a close watch on the simmering conflicts between India and Pakistan; Israel, Syria, and Lebanon; and within Libya. The UN has a track record of doing the most good that it is politically capable of and even its most shocking moments of impotence are only that: the UN has never committed an atrocity.

This Seminar will encourage students to engage with many of the UN's inherent contradictions (how do you enforce international law while respecting state sovereignty) without losing the idealism that made it such an appealing post-war prospect. We will spend much of our time in class representing large and small state actors in lively, parliamentary debate on topical global issues. Some research will be expected of the students in the class in order to best imitate the real challenges facing UN delegates.

Students will also get the opportunity to take on a large role organizing the SAMUN conference. Our time will be dedicated to planning committees and crises, writing background guides, and organizing non-debate, periphery events (including dances, lunches, fundraisers, and opening and closing ceremonies). By the end of the year you will be able to say that during your time in High School you helped to organize a full-fledged conference for hundreds of middle school attendees!

New Narratives

(Da Silva)

This seminar explores creative nonfiction as genre that has the potential to reconstruct and reaffirm personal and cultural narratives with an emphasis on race and sexuality. In a time when individual and collective histories are often distorted and sometimes erased, the world is re-evaluating its relationship with creative nonfiction, seeing it now as a vehicle to understanding this particularly intricate landscape. From essay and poetry all the way to music and performance, we will explore the poetic and often political space that creative nonfiction can occupy.

Moving from the 60s through the present, we will look at different manifestations that the genre allows for while investigating its role in larger cultural contexts. Examples include selections from James Baldwin's *Notes of a Native Son*, Audre Lorde's *Sister Outsider* and works from Kiese Laymon, Claudia Rankine, Maggie Nelson, Ta-Nehisi Coates, Joan Didion, Solange, and Kendrick Lamar. As we delve deeper into these materials, you will have many chances to experiment with their various forms yourself. This seminar is geared toward helping you all figure out what creative nonfiction can do for you as you try to make sense of the world, as you try to create art, and as you try to construct your own narratives.

Orientalism, Nationalism, and Post-Colonialism

(Flaherty)

How did the nations of today—their impermeable borders, sacred anthems, and proud flags—come into being? Not by destiny. Perhaps by accident, shenanigans, bursts of heightened emotion, and long planning and hard fighting.

What was the conceptual framework, the rendering of others, that lay at the heart of colonialism's ruthless efficiency? How did some of the great modern empires dissolve, and what has emerged from their long reign of subjugation? How have new nations been constituted out of the violent strictures of colonialism, and whose tools are deployed to take down the old house and erect a new one?

This course will hold a trifecta of seminal texts as its touchstone and inspiration—Edward Said's *Orientalism*, Benedict Anderson's *Imagined Communities*, and Gayatri Spivak's *Can the Subaltern Speak?*—as we examine these questions. We will bring in all manner of music, literature, and visual arts. We will look at how the Romantic and liberatory impulse in the arts—from Beethoven's symphonies to Thomas Mapfumo's chimurenga music, from Latin American revolutionary poetry to South Asian painters (re)claiming modernism—sparked movements, asserted presence, and formed new realities in Europe, Asia, and Africa.

We will also look long, as reactionary impulses, environmental crisis, and formerly subject people grabbing agency with both hands scrambles our current world, calling into the question the very idea of a nation state. The great Russian poet Joseph Brodsky spoke of how the 19th century “had us for a future.” What future will we bequeath?

The course requirements are energy and engagement—nothing more, but nothing less.

“The People United Will Never Be Defeated”—Activism and Community Organizing Today

(D. Smith/Pickering)

Our work will be grounded in a study of activism in America by drawing from major social reform movements including LGBTQIA rights, Black Lives Matter, and the Women's Rights movement. Course content covers principles of grassroots organizing, game planning, coalition building, meeting protocols, rapid response, and more. We will gain a deeper understanding of government at the local, state, and federal levels. Based on student interests and passions, we will create and implement at least one civic action each semester.

Markers, posters, clipboards, and other materials are provided. Students should plan on wearing well-soled shoes.

Philosophical Problems

(Aronson)

From its beginnings in Ancient Greece, Western philosophy has attempted to ask and answer the big questions that underlie our lives and our relationship to the world—questions that from the philosophical point of view are always with us, even if we are not always conscious of them. For instance: What is knowledge and how do we obtain it? What is the nature of reality? What is truth? Do we live in a deterministic world or is there free will? Does God exist? Is there, in fact, something that we can call mind or soul as distinguishable from brain or body? What is art? This course considers how, in each of the above cases (as well as others), a variety of philosophers—some ancient, some modern, some still alive—have dealt with these

inherently thorny issues. There are no prerequisites other than a desire to think hard.

Pilot School

(Roam)

“Cessna niner-niner-zero-eight-golf is departing from runway one-eight.” Licensed pilot Mike Roam is offering ground school for future aviators. We’ll fly the x-plane simulator program, practice maneuvers and navigation, study maps and charts, memorize emergency procedures, and practice our radio calls. Landing is important, of course, but there are many other things to learn including the physics of flight, the power of weather, and the rules of the sky. Both of my parents are licensed pilots and flight instructors—Mom often flew a plane with the same tail number as Amelia Earhart’s plane—and we encourage all young people to visit the sky.

Poetry Writing Workshop

(Skoble)

Poetry is a craft as well as an art. Poems don’t happen, they are made. In this workshop we learn how to use the tools of poets. We take poems apart to see how they work, and we put things together to see if they work. Construction and experimentation, exploration and imitation are the processes we use to help us create poems. The poetry workshop is open to all, including dancers, thespians, musicians, athletes and astrophysicists. We meet one double period each week to share our efforts, to read and discuss, and, of course, to write.

Come and join in to trail the steps of these “giants” as they follow their individual quest for freedom and personal expression.

Preschool Seminar

(Fuerst and Preschool Teachers)

“*What a surprise!*” the Fog Man exclaims when two children arrive at his door on Fog Island in the book by Tomi Ungerer. “*What brings you here? Who are you?*” We will discover what brings you to the preschool as you play in the classrooms and get to know these children and their teachers and the enchanted place they inhabit. “*Anyway, whoever you are, come inside and be welcome.*”

The Ram Seminar: Creating Your Student Newspaper

(Goldberg/Forsythe)

“Freedom of the press is not just important to democracy, it is democracy.”

—Walter Cronkite

The Ram has been the student voice of Saint Ann’s for more than twenty years. During that time it has covered major school milestones, shared student and faculty opinions, offered off-the-beaten-path dining suggestions, and been a shared touchstone during surprise assembly delivery times. If you are interested in learning about journalism, from story generation and reporting to writing and editing, or you want to flex your cartooning, photography,

or computer skills, please join us for our weekly seminar meeting. Besides putting together the current issue and planning future issues, we'll look at what other news outlets are doing, participate in peer editing, and conduct writing workshops. Come and find a new venue for your passion for writing, engage in spirited debates about what is newsworthy, and be a part of capturing what makes Saint Ann's yours for posterity.

Note: This seminar is required for all Ram senior staff: editors-in-chief, associate editors, and staff writers. Occasional contributing writers and editors can attend on an as-needed basis or as they desire.

Radicalism and Dissent in America

(Tompkins)

This seminar will explore the ideology, languages, and politics of radicalism and dissent in American history from the Gilded Age to the 21st century. We will consider a range of movements and issues, including: the critiques of wealth, inequality, and monopoly power in the last quarter of the 19th century; the Populist movement and the recurring manifestations of populism in American politics down to our own time; the rise of socialism in America and its transformation into democratic socialism in the 1960s; the long and continuing battle for racial equality and civil rights; dissenters who fought for gender equality, free speech, environmental protections, and LGBTQ rights; other poets, seekers, dreamers, and organizers of the left and the right who catch our interest and deserve our attention for the impact that they have had on our society, politics and culture.

Student Internship in Technology @ Saint Ann's

(Forsythe)

This elective will allow students to explore the realm of Information Technology in an educational environment. While the primary focus is on technical support, students will also learn how to manipulate and work with large datasets in database and spreadsheet applications, become familiar with network and wireless protocols and architecture, and work towards eventually being able to perform certain technical support tasks, under the supervision of the Technology Department staff. Students will gain a practical skill set acquired in a hands-on learning process, and will aid their peers and instructors in the use of technology at Saint Ann's. This will require one to two periods per week, scheduled in periods where the student and their mentor are mutually available.

Tongues of Angels: Literature of the World's Religions

(Townsend)

The literature of the world's religions, both foundational documents and mystical writings, are all efforts to put into words what cannot be put into words: the encounter between the human and the divine. Extraordinary passages about how God talks to Abraham, Jesus talks to his followers, Muhammed discourses with Allah, Arjuna learns from Krishna, Buddha achieves enlightenment, Zoroaster is taught by the Ahura Mazda, and so on, all work to

portray human/divine interaction - and all also, therefore, to provide windows into the similarities and vast differences between religions. At a minimum, we will read selections from the Hebrew Bible (Judaism), the Christian Bible, the Qu'ran (Islam), the Bhagavad Gita (Hinduism), the Life of Buddha, and the Avesta (Zoroastrianism). We will also explore individual experiences of the divine in selections from the Zohar, Teresa of Avila, Rumi, Mirabai, Dogen, Lao Tzu, Maimonides, and others. The wonders and conflicts of these religions will also open to us the problem of language: the limits of what it can express, and the efforts to break through those limitations. Please note that all reading will be done in class - there will be no homework.

The seminar will be taught by Craig Townsend, Episcopal priest, former Saint Ann's School English teacher, and holder of a Ph.D. in the study of religion.

Yearbook: Send the Story of Your High School Life to Your Future Self

(Giraldo)

Through imagery and book design, students will create a historical document that will encapsulate this very special time at this very special school. Photographers, illustrators, animators, and filmmakers will work together to communicate what you would like to document about this flash of time. Open to juniors and seniors. **Prerequisite(s):** two years of photography or portfolio review

THEATER

All classes meet one double period per week unless otherwise noted.

Acting

(Barnett, Lamazor)

This professional-caliber acting class emphasizes character study, acting technique, breathing, vocal, and relaxation exercises. Time is devoted to movement exercise, sense memory, and to improvisation, games and storytelling. Also, we will explore and read plays aloud together in class. Ensemble work is encouraged and developed. Scenes and monologues focus on discovering the individual actor's personal relationship to the role and to the text. Actors learn how to break down scripts and understand beats and actions. There are opportunities for performing scenes and monologues, geared toward the individual actor's needs and desires. We may have visits from special guest artists and workshop leaders, and we may take trips to see exceptional productions around town. Ibsen, Shaw, Stoppard, Wilson, Brecht, Mamet, Nottage, Genet, Churchill, Williams, Shepard, Howe, Lorca, Kushner, Hall, Wilder, Jacobs-Jenkins, Fornes, Ionesco, Ruhl, Wilde, Shakespeare, Washburn and many more fascinating friends await you. Experience the joy of playing great roles! All acting class students participate in the Scene Marathon, which is presented in our theater. Come and participate in the extraordinary! **Note:** Scene rehearsals with partners often take place outside of class time.

Acting Intensive

(Lamazor) (4x per week)

Same description as above, except that this class may work on collaborative playwriting/performance or musical/movement projects, film projects, or full length plays, in addition to scenes and monologues. Students may direct scenes or projects on occasion. There may be several performances at different sites over the course of the year. Imagination, empathy, humor and love are our guiding forces. In this time period, in which technology is so heavily relied upon as the means of communication and self-expression, this class focuses on "being here" and being passionately "present" as artists, humans and authentic inter-actors! This class functions as a true, joyful "company" of actors! All Acting Intensive students participate in the Scene Marathon, which is presented in our theater. We may take trips to productions of note and have guest workshops! Bring your focus, verve, dreams, and goodness to your art!

Prerequisite(s): open only to advanced students with the permission of the instructor

African Dance

(Jackson, Mackall)

African Dance is an exciting survey of the techniques and traditions of dances from the African Diaspora with a special emphasis on the dances of West Africa. Classes are accompanied by live drumming. **Note:** Participation in the High School Dance Concert, an essential element of this class, requires attendance at weekend and after school rehearsals.

Costume Production

(Bevans, Chae-Lawrence, Shand)

Come explore costume design and construction, as you create personal projects and help build the costumes for the High School productions. All experience levels are welcome in this class, as assignments will offer a range of technical difficulty. In addition to focusing on construction techniques, students will have the chance to explore other topics such as fashion design, the intersection of art and costume, and Costume history. Each year the High School Costume students take a trip to explore a certain costume or fashion-related exhibit. Past trips have included excursions to The Fashion Institute of Technology's museum, a guided tour of the Garment District, a backstage tour of the costume shop at the Metropolitan Opera, and a Broadway matinee. There will be some opportunities to help design and coordinate pieces for the High School Playwriting Festival, the High School Film Festival or the High School Dance Concert under the guidance of the instructor. Welcome to the world of costume at Saint Ann's! **Note:** Costume Crew participation for a minimum of one play or dance concert is required.

Dance 1

(The Department)

The class focuses on developing students' individual choreographic voices through improvisation and the creation of short movement studies. Class begins with a warm-up that integrates different techniques from ballet to African dance to yoga. Students are exposed to different choreographic approaches through attending performances and studying video. In addition, they have the opportunity to work with professional choreographers, learning pieces, and taking direction. Dances developed both individually and collaboratively with the class are performed during the year. Those developed in association with the instructor are eligible for performance in the student dance concert, for which original costumes may be designed or assembled by students. Both new and experienced dancers are welcome.

Dance/Choreography 2/3

(The Department)

This class studies dance technique, improvisation, and composition to create expressive dance pieces, exploring movement and drama through solo, duet and group forms. Modern dance technique leads to improvisational work and short studies to explore movement textures and qualities. We work with directing multiple bodies in space, using partnering techniques and

weight exchange to convey emotional meaning, and studying formal compositional elements such as symmetry, tension, dynamic use of space, costume and environments. Diverse dance styles, uses of rhythm, and music from many traditions are investigated, and students have the opportunity to learn pieces and take direction from professional choreographers. Dances developed in association with the instructor are eligible for performance in the student dance concert, for which original costumes may be designed or assembled by students. There are field trips to notable performances. **Prerequisite(s):** Dance 1 or permission of the instructor

Dance/Choreography 4

(Jackson)

We continue our study of dance technique, improvisation, and composition. Emphasis is placed on the development of the individual artistic voice through complex, expressive dances incorporating solo and group aspects, examination of multimedia techniques, and the use of juxtaposition and collage to expand dramatic possibilities. Each student undertakes a research project supporting the creation of his or her own dances. The Lincoln Center Library for the Performing Arts provides a resource for our study of diverse music and the integration of costuming, language, and props or sets into our dances. Students have the opportunity to learn pieces and take direction from professional choreographers. Dances developed in the class in association with the instructor are eligible for performance in the student dance concert, for which original costumes may be designed or assembled by students. There are field trips to notable performances. **Prerequisite(s):** Dance 1, Dance/Choreography 2/3, and permission of the instructor

High School Puppetry

(Asbell) (1x per week)

This class is open to all current and former puppetry students. If you have never taken puppetry before, now is a good time. All skill levels are welcome. Individual projects of your choosing may include: building rod puppets, hand puppets, marionettes, body puppets, masks, and creating puppet shows. Join in the Puppet Parade!

Moving Image 1

(The Department)

This class concentrates on the study of film as a two dimensional art form that moves, focusing on the dynamics of screen space and the language of cinema. Working with 16mm film equipment, the class emphasizes the basics of film emulsions, lenses, light readings, and editing. Students develop ideas into well-structured screen narratives, and then each student writes a one page treatment for a short silent film. Working individually or with a production partner, students storyboard, produce, direct, and edit their treatment into a 16mm black & white film. This is a non-linear course requiring constant participation and much out-of-class work. **Note:** This class is open to sophomores, juniors, and seniors.

Moving Image 2

(The Department)

With continuing emphasis on two-dimensional design and the language of cinema, this class focuses on digital video production and electronic editing, producing sync-sound narrative projects. Students are introduced to sound recording technology, and the aesthetics of the sound image—writing dialogue, directing actors, recording location sound, and layering sound images during editing. The class produces four, seven-minute screenplays developed during the screenwriting component of the class. Students are divided into production teams to storyboard, cast, produce, direct, shoot and edit these team projects. **Prerequisite(s):** Moving Image 1 and permission of the instructor

Moving Image 3

(Dobski)

This is a course in advanced film production and color cinematography. Students shoot 16mm color negative film, transfer the images to high definition video, and then edit electronically, producing a three-to-five minute work with a complete soundtrack, including an original score. **Prerequisite(s):** Moving Image 1 and 2 and permission of the instructor

Ninth Grade Videography

(Mirabella-Davis, Oppenheim)

This two-semester workshop reflects the structure of an auteur HD video production class. Students will intensively study all aspects of filmmaking and videography including camera direction, directing the actor, lighting for color, screenwriting, interview techniques, editing, and sound design. In the second semester each crew of three will write, cast, and independently shoot an HD, color short film. In this burgeoning age of technological advancement, digital filmmaking has emerged as one of our era's principle forms of expression, fiction, and broadcast. The goal of this course is to give students the skill sets to tell their own stories in a new and accessible format. **Note:** This class is open to freshman only.

Performance Art

(Barnett)

In this class, we cultivate an improvisational technique that encourages personal storytelling, spontaneity, and abstract thinking. There is a unit on autobiography and a unit on interactive site-specific theater (performances, 'happenings,' or installations set outside the traditional stage). Past work has taken place in a stairwell, a park, and on a street corner; pieces have taken the form of a scavenger hunts, dance parties, and games. Students work individually and in groups. Through trips and lively discussions the class learns about the role of performance in history and contemporary culture. Given the role of technology in art (and life!) today, this class is also a time to 'disconnect,' and to explore the impact that live performance can have on both the audience and the artist. This is a course for students with or without previous experience in improvisation. It is class for visual artists and dancers interested in

working with text, and writers wanting to transform their ideas into physical life. The class also benefits anyone who is nervous when speaking in public.

Play Production

(Kaluza/Smith/Wyron)

Each member of a production staff, from the director to the stagehand, has specific duties and skills. Students in this class learn techniques for running a smooth and professional show, taking on the responsibilities for our theatrical productions. Topics covered are construction, maintenance and set-up of props, reading and taping-out scale ground plans, writing cues, calling light and sound cues, and more. This is a course for advanced tech students committed to our theater and productions. Students with an interest in stage management, props mastering, as well as light, set, and sound design are encouraged to enroll and to deepen their experience of backstage life; the vital, unseen, component of the theater. **Note:** All students are required to work on at least one production which will require time outside of class.

Prerequisite(s): One year of Technical Theater, or permission of the instructors

Playwriting

(Exavier, Posner)

This course explores the elements of playwriting that make it a three-dimensional living art form. Through weekly exercises and assignments, we approach the playscript as a blueprint. The course culminates in a festival of staged readings of the students' plays. In addition, students explore the work of contemporary playwrights by analyzing and discussing their texts, ultimately compiling a list of "fellow travelers"—playwrights whose work each student feels drawn to in content and form.

Playwriting Intensive

(Exavier, Posner)

Playwriting intensive is an investigation into playwriting strategies, movements, and motivations. Plays will be approached from all angles. Students should have experience writing plays, and an eagerness to sharpen their commitment to the craft. In addition to exercises, there will be an emphasis on reading and discussion. From the study of contemporary plays, to theoretical texts, from tragedy to comedy, this intensive workshop encourages students to challenge their preconceptions, and grapple with wide-ranging theatrical concepts. The workshop culminates in a festival of new work, which is the last major theater production of the year. The festival requires a major commitment of time and energy during the final three weeks of school. **Prerequisite(s):** At least one year of High School Playwriting and permission of the instructors

Shakespeare Workshop

(Reardon)

Get ready for Will the Bard in all his glory...from sonnet to soaring soliloquy. The workshop begins with learning and performing a sonnet, then proceeds to monologues, on to scenes, and finally—at year's end—we bring it all together in two performances; one at school and one at Manhattan's Drama Book Shop (called "Will and Friends from Brooklyn"). Those friends may include revenge tragedians like Marlowe and Middleton and the later Restoration Comedians, but it is mostly Shakespeare. In this workshop, you will experience the joy of playing Shakespeare and gain a trust and ease of performing the playwright's blank verse as if it were your native tongue. You will also use all your other talents from singing to skills with musical instruments both modern and old fashioned. And in our scene studies, everyone plays a leading role.

Technical Theater

(Kaluza/Wyron)

An introduction to stage carpentry and other theatrical craftsmanship, Technical Theater is both a practical and a theoretical course. Carpentry, electrics, audio, and effects lectures act as groundwork for hands-on experience with power tools, lighting equipment, and sound gear. Students work side-by-side with their teachers, developing basic stage construction skills, building flats and platforms, creating props, and painting. Stage etiquette is adhered to in this productive environment. We encourage and welcome students who wish to extend themselves further to apply for a position on a production running crew which—it should be noted—will require time outside of class.

HUMANITIES COURSE PERIODS

Period C (English)

The Art of Hell (*Avrich*)
From the Iron Tsar to the Man of Steel
(*Aronson/Mellon*)
How to Be Bad (*Spencer*)
Literature of Disorientation (*Darrow*)
Magical Realism (*Bodner*)
Writing the Revolution (*Mooney*)

Period C (History)

Art History: Parthenon to the Present (*Kapp*)
From the Iron Tsar to the Man of Steel
(*Aronson/Mellon*)
Midwifery in the 17th Century (*Wang*)
Modern East Asia (*Kang*)
School and Society (*Goldberg*)

Period D (English)

Fact and Fiction (*Donohue*)
From the Iron Tsar to the Man of Steel
(*Aronson/Mellon*)
A House Divided (*Chapman*)
Literature and Memory (*Fodaski*)
Literature of the Middle East and Beyond
(*Bosworth*)
Tragicomedy (*Khoury*)

Period D (History)

African-American History (*Johnson*)
Christendom in History and Ideology
(*Deimling*)
Custer Died For Your Sins (*Bertram*)
The Enlightenment, For & Against (*Rutter*)
From the Iron Tsar to the Man of Steel
(*Aronson/Mellon*)
New York City History (*Swacker*)

Non C/D: Lift Every Voice: Transnational Blackness and the Making of a Diaspora (*Mackall*),
Sex: A Historical and Biomedical Exploration of Human Reproduction (*Levin/Schragger*)

SCIENCE COURSE PERIODS

Period A

Biology
Chemistry
Physics
Advanced Chemistry
Animal Behavior
Astronomy
Introduction to Quantum Mechanics
Sustainable Design

Period B

Biology
Chemistry
Physics
Advanced Biochemistry
Analytical Physics
Environmental Science
Marine Biology
Physics: Mechanics & Relativity
Transition Metal Chemistry

Non A/B: Electricity and Magnetism, Sex: A Historical and Biomedical Exploration of
Human Reproduction, Independent Science Research

TBD: Advanced Biology, The Science and Math of Music

HUMANITIES RANKING WORKSHEET FOR RISING JUNIORS AND SENIORS

Section 1:

	Period C	Period D
1st Choice		
2nd Choice		
3rd Choice		

Section 2:

Humanities Ranking			
1		4	
2		5	
3		6	

Helpful Hints:

Each line of section 1 must include an English and History class; one that meets in C period, and one that meets in D.

- NO REPEATS (i.e. you may not list the same class twice)
- Every class you choose must be a class that you are prepared to take, it is possible that you will receive any course you list.
- In section 2 rank all courses listed above in order of overall preference. Don't worry about what period it meets or which department it is in.

[illegible]

[illegible]

[illegible]

Dear High Schoolers,

All art is at once surface and symbol.

Those who go beneath the surface do so at their peril.

—Oscar Wilde, *The Picture of Dorian Gray*

If we are to believe Mr. Wilde, then the pages of this book are riddled with danger, for every class on offer will lead you deep down one rabbit hole or another, never content to let you simply gaze across the surface of a subject. The works of art that you create—be they painted in oil or executed mathematically—may be of surface and symbol, but your engagement with all that you do will surely plumb the depths.

Welcome to a year of great peril, indeed.

Love,

Chloe

MINIMUM

GRADUATION

REQUIREMENTS

Arts	Four courses in the arts, preferably at least one in art, one in music, and one in theater
Computer	No requirement, but students are encouraged to become comfortable with usage and applications of the computer
English	Four years
History	Four years
Language	Four years of language study
Math	Four years, including Algebra 1, Geometry, and Algebra 2
Rec Arts	One course or the equivalent, or one interscholastic sport, per year
Science	Three years including one year of biology and one year of physical science

HIGH SCHOOL

COURSE CATALOG

2019-2020

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ART

All classes meet one double period per week unless otherwise noted. **Note:** Although the descriptions for many of the art electives are general, it is the teachers' prerogative to be more specialized in their individual approaches. For instance, the painting and painting/drawing courses have several sections taught by different teachers in the department. Each teacher guides the curriculum through personal aesthetic passions and interests, while taking into consideration the experiential and technical abilities of each student in the class.

Animation

(Tokmakova)

Over the course of the year, each student will produce an animated film. Collaborations are also welcome. Students will write a script or explore a more abstract approach to storytelling, creating their own unique sets and characters from clay, paper cutouts, found materials, or drawings. We will use traditional stop-motion techniques to shoot our films frame by frame, using Dragon Animation software. During the editing stage everything comes together. The images can be layered or manipulated, and the soundtrack, including dialogue, music, audio effects, or narration can be added. No previous experience necessary.

Introduction to Architecture & Design 1

(Rumage)

This course introduces and explores some of the basic drawing systems used to communicate three dimensional architectural ideas within two dimensional formats (elevations, floor plans, isometric and axonometric). Students progress from representing simple three dimensional forms to drawing self-designed architectural structures and subsequently translating their architectural plans into scale models constructed from chipboard and a variety of materials.

Introduction to Architecture & Design 2

(Rumage)

This course is an extension of Introduction to Architecture and Design. The course will broaden the exploration of architectural concepts and model making, allowing students to gain greater confidence and fluency, while applying the various projection and mechanical drawing systems to specific design problems. This is an excellent course to prepare for the more rigorous Advanced Architecture and Design seminar. **Prerequisite(s):** Introduction to Architecture & Design

Advanced Architecture & Design

(Rumage)

(See Seminars)

Introduction to Digital Photography

(The Department)

This is a photography course that explores image making through an entirely digital format. Along with using digital cameras, the course relies on the computer to refine and manipulate images that are then produced through a digital printer. No photography experience is necessary.

Advanced Digital Photography

(The Department)

Advanced Digital Photography builds on the ideas presented in Introduction to Digital Photography. Students will explore how to nuance their images to move beyond the real—to understand how to use light to generate a variety of visual, psychological, and conceptual effects. Class assignments pursue alternate approaches to the organization of information: maps, diagrams, indexes, and encyclopedias. Over the course of the year, two separate portfolios of photos will be generated (one for each semester). We will draw inspiration from master manipulators (such as Hiro, Jeff Wall, Thomas Demand, Ryszard Horowitz and Philippe Halsman), as well as more experimental images found in print advertising. A solid understanding of how to use an SLR camera in manual mode is required. **Prerequisite(s):** Introduction to Digital Photography

Drawing

(The Department, Sassoon)

In this class we investigate ideas about visual communication, using a variety of media and surfaces. Observation, perception, composition, and the language of mark-making are stressed. Students will work from still life, works of the Old Masters, models, and other sources. Using materials like pencil, charcoal, pastel, ink, watercolor, colored pencils, marker, and transfer techniques, we will explore line, tonality, volume, and texture, as we gain rendering skills toward development of an expressive personal vocabulary.

Failure: Art, Philosophy, And Criticism

(G. Smith) (3x per week)

This course explores failure not as a negative outcome, but as the natural backdrop for creative endeavors in contemporary society. Students explore the shape of this failure through two intertwined tracks. In the first, students will engage in a range of art projects, focusing primarily on video, drawing, and collage. Assignments might include creating a self-portrait, making a video from found footage, presenting a manifesto, or collaborating to create a zine. As the year progresses, projects will become increasingly open-ended, and students will be encouraged to follow their own interests.

As with any creative endeavor, failure is part of the art-making process. But as we complete our projects, other routes of entropy, lack, and absurdity will creep in. For example, how to talk about what we've made? Can we make judgments? Expanding our stage a bit, who decides which points of view are valid, and how? This leads us to our second track of the course, where students will also consider failure from a philosophical and political angle. Through readings and discussions, students will consider how concepts like absolute truth or religious certainty have become difficult to latch onto. Even the boundaries between common pairings such as true/false, right/ wrong, individual/community, or male/female, have become foggy. Where do these concepts come from, and why do they no longer seem entirely sound? Or do they in fact retain their power? This ambiguous failure of the authority of absolutes is a main focus of the course. Students' art projects will be in dialogue with these discussions, and will also be guided by short readings by authors such as Plato, Aristotle, Nietzsche, Cage, de Beauvoir, Goodman, Jameson, Halberstam, Preciado, and Svenonius. The ultimate goal is for students to develop their own understanding of, and artistic response to, the tangled grey areas between purported absolutes and certainties. **Note:** This class will meet one single period and one double period per week. No prior art-making experience is assumed.

Figure Drawing

(Hillis, Tokmakova)

This class involves drawing from the live model and includes anatomical exercises that will explore the skeleton, muscles and organs to convey an understanding of forms and shapes that make and influence our positions and motions. A goal within each drawing session is an attention to anatomy and proportion and to ways of describing contour and form through the study of light, shadow and movement.

Figure Drawing with Extensive Study of the Head and Facial Expression

(Arnold) (4x per week)

In this course students will learn to draw the human figure from a live model, both dressed and nude. From short movement sketches to longer studies of a still model, students will explore the figure, including special studies of its hands and feet, using china ink, graphite, charcoal, oil sticks, etc. We will pay particular attention to the head. Students will learn to depict the head proportionally, from different angles, and in three dimensions. Drawing from a live model as well as from classical sculptures, they will learn to depict individual facial characteristics, creating a portrait. During the second semester, students will be ready to make stylized portraits (e.g. caricatures, cartoons, and anthropomorphized animals) as well as various realistic expressions. We will also explore drawing groups of interacting figures. This course will be demanding, requiring stamina, dedication, and a desire to learn how to draw realistically. Previous drawing experience is desirable but not necessary. **Note:** This class will meet two double periods per week.

Painting

(Hillis, Lee, Tokmakova)

This course is an exploration, through a variety of painting media, of pictorial construction, color, composition, and conception.

Painting Intensive

(Bellfatto, Keating) (4x per week)

See Painting. Offered in an intensive format of two double periods per week. **Prerequisite(s):** permission of the instructor

Painting Nature from Life

(Arnold)

Representational art requires intense focus and concentration. Drawing and painting the natural world from life is a powerful aid to increasing visual skills. In this class students will draw and paint mushrooms, flowers, and plants, as well as various small animals. Throughout the course students will explore many techniques—watercolor, oil paint, pen and ink. We will also look at great artworks focused on nature by da Vinci, Audobon, Rubens, Van Gogh, O’Keeffe, and others.

Painting & Drawing

(Hillis, Keating)

An exploration of pictorial life—how drawing begins, its development, manifestation and transmutation. An alchemical approach to picture making: experimentation with content in a variety of styles and media toward the development of a personal vision.

Photography 1: Basic Camera and Darkroom Techniques

(Giraldo)

Learn to capture and share your view of the world through the lens of traditional black and white photography. In addition to class discussions and critiques, students learn the basics of composition and visual communication through slide show presentations of well-known and lesser-known photographers, assignments to be completed outside of class, and in-class exercises in the analog photographic process. Students will learn on 35mm manual cameras and black and white film.

Photography 2\3: Personal Style and Advanced Darkroom Techniques

(Giraldo)

Already equipped with the basics of the analog photographic process, students will learn techniques in documentary photography, portraiture, and methods to develop personal style. Darkroom practice will include the use of new materials such as Fiber-based Silver Gelatin and Medium Format Negatives. **Prerequisite(s):** Introduction to Photography, or equivalent experience in black and white photography and darkroom developing, as determined by the instructor

Printmaking

(Lee)

This is a broad course that combines various screen printing techniques with relief printing (linoleum, woodblock, and intaglio techniques). The premise is to evolve imagery from an understanding of the character of these processes.

Printmaking: Posters

(Lee)

This course is devoted to silkscreen design and production. A historical survey of poster designs includes: Japanese 19th century playbills, Polish circus posters, Mexican revolutionary leaflets, rock posters of the sixties, and more. This course works with the Theater Department to produce the posters for all school productions throughout the year. Various printing techniques are explored. We will also print T-shirts and fabric.

Ceramic Sculpture

(Bellfatto)

Not a pottery course. We explore basic clay building techniques such as coil, slab and pinch-pot to generate functional and non-functional sculpture. Various surface treatments are investigated: stain, slip, paint, and glazes. Students develop a body of work reflecting an eclectic variety of sources and themes: personal, historical, geometric and organic form, human and animal figure, narrative relief, and architecture.

Sculpture

(Reid IV)

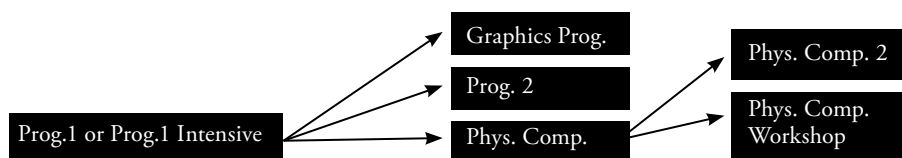
This class is an introduction to the rendering of three-dimensional form. We will focus on building ideas from conception to completion. Students begin projects by drafting a sculpture plan to serve as a construction blueprint throughout the process. Each project focuses on a different fabrication method: carving (subtractive), armature construction (additive), molding and casting (replicative). Joinery techniques such as physical and superficial connections, lap joints and butt joints are studied and implemented. Projects will be created using a wide selection of materials, including but not limited to: soap, concrete, modeling clay, chip-board, and wax.

COMPUTER

We are surrounded by science fiction—portable computers, artificial intelligence, 3D printing, electronic games, online journals, instant reference books, genetic sequencing, cameras everywhere, nanotech, increasingly massive datasets—constant innovation with data processing, design, number crunching, and computer science. Our courses show students how to be more than just consumers or users: they will be independent creators on computers, able to control and help shape the tools of today and tomorrow. Using software that runs similarly on Mac, Windows, Unix/Linux, and tablet computers, our courses teach a range of topics including programming, graphics, circuitry, web, spreadsheet analysis, logic, and other skills that are useful for doing everything from analysis to artwork. Classes are full year and meet twice a week unless otherwise noted. Visit tinyurl.com/sacc2020classes for more information about any of these classes.

No Prerequisites

Classes After Prog. 1



3D Modeling and Printing

(The Department)

3D printers are personal fabrication tools that are a part of an evolving modern world of technology that allows students to become producers, inventors and artists. Students will create, design, invent and prototype while efficiently and inexpensively taking their digital designs into the real world. Students will be able to easily understand the strengths and limitations of their work and will be encouraged to modify their designs, thereby participating in an iterative engineering design process. Students will learn various 3D modeling techniques and explore several 3D modeling software tools and packages.

Graphics Programming

(Roam)

Let's write programs that can draw 3D computer graphics (houses, robots, landscapes): let's try to build our own "sketchup" or better. Once we complete a brief introduction to matrix multiplication, we can start shading, rotating, and animating objects that we have designed. Our programs read and process text files that contain descriptions of 3D graphic objects and display the resulting 3D objects from arbitrary viewpoints. For advanced students, projects include the construction of race car and airplane games with first person and chase plane viewpoints. **Prerequisite(s):** Programming I or permission of the instructor

Physical Computing 1

(The Department)

Learn how to interact physically with a computer without using the mouse, keyboard or monitor. Move beyond the idea that a computer is a box or a system of information retrieval and processing. Using a microcontroller, a single-chip computer that can fit in your hand, write and execute interactive computer programs that convert movement into digital information. Work with components such as resistors, capacitors, diodes and transistors as well as integrated circuits. Through lab exercises and longer creative assignments learn how to program, prototype and use components effectively. Control motors and interpret sensor data, as well as explore advanced concepts in interface, motion and display. **Prerequisite(s):** some programming experience or permission of the department chair

Physical Computing 2

(The Department)

Students combine theory and practice to interface microcontrollers and transducers. We learn how to make devices respond to a wide range of human physical actions. Building on previous knowledge acquired in Physical Computing 1, we build projects from schematics, make programs based on class examples, and make interfaces talk to each other. Topics may include: networking protocols and network topologies; mobile objects and wireless networks of various sorts; digital logic building blocks and digital numbering systems. Students are involved in short production assignments and final projects, and create a digital portfolio to document their work and research. **Prerequisite(s):** Physical Computing 1 or permission of the instructor

Physical Computing Workshop

(The Department)

Creating interactive work relies on building a relationship between the object and the viewer. By gathering information in the form of input, processing that into meaningful data, and outputting that contextually, new forms of engagement and interaction with an audience can be established. This class is for students who have prior experience with Physical Computing and would like the opportunity to develop their own project and spend time researching,

testing, prototyping and documenting it. **Prerequisite(s):** Physical Computing 1 or permission of the instructor

Programming 1

(The Department)

Explore the science and art of computer programming. For students who want to create and modify their own computer software, this course uses the high-level programming languages Java (an internet-savvy version of C++) and Livecode (multimedia coding tool) to introduce the basics of computer control and interactive web sites. We use loops, variables, procedures, input, output, and branching decisions (with Boolean logic) to control graphics, sounds, and information. Expect to work with Java using the “Processing” tool to create animated color graphics that respond to key and mouse movement.

Programming 1 (Intensive)

(The Department) (4x per week)

Explore the science and art of computer programming. Learn important problem-solving and design strategies like modularization and iterative design which can apply to both programming and non-programming environments. This intensive, four periods per week class is for students who want to master fundamental programming concepts which include loops, variables, procedures, input, output, conditionals and data structures. Assignments will allow students to control graphics, sounds, and data while also encouraging them to think creatively, reason systematically, and work collaboratively.

Programming 2

(The Department)

A continuation of Programming 1, for students who are becoming more confident in their ability to combine data types and complex computer routines. We use Java and Python (internet-savvy relatives of C++) and other languages to look more deeply at object-oriented programming: class definitions, inheritance, methods, fields, arrays, and collections. Large projects include writing an interactive, animated project with control windows and graphics.

Prerequisite(s): Programming 1 or permission of the department chair

ENGLISH

Western Literature & The Essay (9th Grade)

(The Department)

The backbone of the ninth grade English course is formed by modern European and American literature, with Shakespeare, Sophocles, and poets from all periods in permanent residence. Freshmen vigorously air their responses to literature, hone their essay skills, and experiment creatively throughout the year. Grammar and vocabulary exercises reinforce reading and writing skills.

Poetry, Drama & The Novel (10th Grade)

(The Department)

Sophomores encounter increasing demands on the quality of their thinking and writing, while we provide a widening background in the Western classical tradition and in modern voices. Across the year students examine several genres in depth. The first term typically concentrates on drama and poetry, the second on short forms and the novel. Authors include Shakespeare and Faulkner, Camus, O'Connor, and Baldwin. In an additional class period each week, small groups of six to ten sophomores practice their analytic skills and work on individual writing problems.

Junior/Senior Electives

The Art of Hell

(Avrich)

Through me you pass into the city of woe:

Through me you pass into eternal pain:...

Abandon hope all ye who enter here.

—written on the gates of Hell from *Dante's Inferno*

The mind is its own place, and in itself

Can make a Heav'n of Hell, a Hell of Heav'n.

—Satan, from John Milton's *Paradise Lost*

Why do creative minds make masterpieces out of Hell? Throughout the history of literature and the arts, Hell, the dark landscape of human sin, of crime and punishment, of everlasting doom, has inspired some of our greatest imaginative works. The characters we meet in the fiery pit are seductive, rebellious, innovative and, unlike the angels, psychologically complex. We relate to the soulful Dante, wandering the infernal urban ghetto, and to Mil-

ton's fallen archangel Satan, charred but not undimmed. Besides, great sinners tend to be great talkers. As we know from the movies, the villains always get the good lines.

In this course, we will take a tour of *The Inferno*, Dante's concentrically circular city of progressively sinful and ghastly souls. We will also ponder Milton's majestic masterwork, *Paradise Lost*, Shakespeare's resonant, nihilistic *King Lear*, and T.S. Eliot's woebegone, world-weary *Waste Land*. Student art and multimedia projects will accompany expository and creative writing, tasteless musicals, theatrical performances, and tableaux vivants.

Fact and Fiction

(Donohue)

What do we mean when we say that a work of fiction is realistic, or when we praise a non-fictional work for being "as gripping as any novel"? Why do people sometimes complain of fictional events, which by definition never happened, "That would never happen"? How do our minds process fictional narratives differently from nonfictional ones, and what happens when the text doesn't tell us which mode to read it in? Can fiction depict reality as well as journalism can? What do we even mean by "reality," and how might it ever be rendered by marks on a page?

In this elective we investigate the relation between fact and fiction. Many of our readings will be nonfiction: Joan Didion's *Slouching Toward Bethlehem*, James Baldwin's *No Name in the Street*, Katherine Boo's *Behind the Beautiful Forevers*, and a few theoretical and even polemical texts about the nature of fiction and reality (including David Shields's maddening *Reality Hunger* and philosopher Colin Radford's "How Can We Be Moved by the Fate of Anna Karenina?").

About half our readings will be fiction, but everything will have some complicated relationship with fact. James Baldwin's fiction shares many concerns with his nonfiction, but can his short stories do things that Baldwin's essays cannot? Vladimir Nabokov's *Invitation to a Beheading* creates a fictional world in which some things are "true" but others are "not." Virginia Woolf's *Orlando* might "really" be about Vita Sackville-West. Henry James considers the ethics of truth-telling in *The Liar*. Karl Ove Knausgaard's *My Struggle: Book 1*—which may or may not be a novel—rounds out our year.

We'll also read some lyric poems, divided into poets who wear fictional masks and others who seem to insist on the "reality" of their poems' projected selves. And we'll look at a few excerpts from authors who originally claimed their work was true, but were later forced to admit that they'd made things up.

From the Iron Tsar to the Man of Steel: Russian History and Literature

(Aronson/Mellon)

This course is an examination of approximately 125 years of Russian history and literature that takes us from Nicholas I (our Iron Tsar) to Joseph Stalin (born Joseph Jugashvili—our

Man of Steel), and from Pushkin to Akhmatova. Starting in the time of the Decembrists (the dissident Russian Army officers who planned the overthrow of Nicholas I, and the namesake of the indie rock band; it all comes together), we will trace the development of the history and literature of Russia side by side as it weathers most of the 19th century and half of the 20th century. Our narrators for this journey will include but will not be limited to: Pushkin, Tolstoy, Lermontov, Figs, Stone, Tooze, Dostoyevsky, Turgenev, Akhmatova, Bulgakov, Gerwarth, and Lenin. We will also be looking at the art, music, photography and film that comes out of this period. This course is interdisciplinary in nature, and will count towards both History and English elective credit, so expect lots and lots (and lots) of reading and many types of writing assignments, including two major essays. Expect as well to immerse yourself in a world both strangely familiar and thoroughly compelling in the way that it contrasts with American and European history and literature. **Note:** This class will meet four double periods per week and grant both English and History credit.

A House Divided

(Chapman)

A house is a place where you negotiate identity, assemble and lose property, and sit down for meals. A house is a web of relationships, an instrument to reckon time and growth, a crucible of beliefs and rebellion. It's a place where memory is a member of the family.

In this course we look at houses, tangible and intangible, where walls thicken or fall down flat. Colliding at fault lines of race and gender, age and status, people and cultures can calcify or become something new. We'll watch some defend their certainties to the grave, marvel when others walk through walls or get caught climbing them. With Morrison and Sebald we'll see emigrants, shadowed by the enormity of slavery or the Third Reich, fight ghosts to reclaim lost homes and families. With Douglass and Gilman we'll storm barricades that say No Entrance or remain trapped inside them, failing to find the exit. We'll try to understand how rebuilding a soul can explode or transform a family, a society, a culture.

Probable authors and texts include: Toni Morrison's *Beloved*; W.G. Sebald's *The Emigrants*; Frederick Douglass's autobiography; Charlotte Perkins Gilman's "The Yellow Wallpaper"; Marilynne Robinson's *Housekeeping*; James Baldwin's *The Fire Next Time*. Possible authors include, among others: Mohsin Hamid; Maxine Hong Kingston; Lynn Nottage; Kazuo Ishiguro; Harold Pinter; Emily Brontë; Shakespeare (*King Lear* and *Julius Caesar* are in the running).

How to Be Bad

(Spencer)

We've all heard a familiar refrain from supervillains and evil Disney critters: Oh, it feels so good to be bad! Getting down with your bad self generates great pleasures and sometimes great art. Others act "bad" out of ideological commitments—*Crime and Punishment*'s Raskolnikov justifies his heinous crime by appealing to the philosophical idea of the "extraordinary man." And yet others are "bad" because they fail to keep up with the times, because they adhere to "backwards" politics or cling to "outdated" identities. Whatever the case, "badness" is more than one pole on the moral spectrum: it is also about *style*.

This course will track characters who tend towards making the “wrong” choices—consciously. Why does one decide to be bad, and how does one remain a baddie in the face of compulsory goodness? We’ll move beyond the impasse of the moral relativism debate and instead treat “badness” as a set of *stylistic* practices. We’ll think about “badness” as encompassing an array of techniques that require cultivation and which can lead to self-individuation, especially in the face of a toxic political or social climate. To frame our thinking, we’ll read excerpts from Nietzsche on good, bad, evil, and the self, as well as a handful of trans and queer theorists on identity formation.

Readings will vary depending on what people have already read, but our big read will be Fyodor Dostoevsky’s *Crime and Punishment*. Other likely texts include *The Immoralist* (Gide), *Querelle* (Genet), *Trumpet* (Kay), *Savage Theories* (Oloixarac), *My Year of Rest and Relaxation* (Moshfegh), *Confessions of a Mask* (Mishima), excerpts from *Stone Butch Blues* (Feinberg).

Literature and Memory

(Fodaski)

There is so little to remember of anyone—an anecdote, a conversation at table. But every memory is turned over and over again, every word, however chance, written in the heart in the hope that memory will fulfill itself, and become flesh, and that the wanderers will find a way home, and the perished, whose lack we always feel, will step through the door finally and stroke our hair with dreaming, habitual fondness, not having meant to keep us waiting long.

—Marilynne Robinson, *Housekeeping*

Writing is an aid to memory, but how does memory affect, inform, and shape writing? This course will explore the ways in which certain authors make use of memory to propel their narratives. We will look at both the uses and influences of memory in texts, and the ways in which memory is uncovered through narrative devices. We will almost certainly examine works by Marcel Proust, Virginia Woolf, Toni Morrison, and William Faulkner, among others, paying close attention to the varying conditions and differing contexts within which these authors’ characters remember. How do various historical ruptures (World War I in Woolf, the fall of the Old South in Faulkner) affect memory?

The books we will choose from may include: *Swann’s Way* (the first volume of *Remembrance of Things Past*), *Mrs. Dalloway*, *Sula*, *The God of Small Things*, *The Sound and the Fury*, and William Maxwell’s *So Long*, *See You Tomorrow*. Other possible authors include W. G. Sebald, Willa Cather, Luis Borges, Zora Neale Hurston, Mohsin Hamid, and James Baldwin. We will take frequent breaks from prose to examine related issues in poetry as well. Finally, we may venture into nonfiction, with forays into *The Memory Palace of Mateo Ricci* and Frances Yates’s *The Art of Memory*. Alongside our focused reading, students will be expected to complete frequent writing assignments, both expository and creative. Some of the issues of memory and narrative that come up in our discussions will be explored through writing exercises, and we will occasionally imitate what these authors do in our own writing. An essay on each book will be required, and a final project on some aspect of memory in writing will complete the year.

Magical Realism

(Bodner)

What do ghosts, psychics, and telepathy have to do with colonial histories and postcolonial politics? Welcome to magical realism: a genre that weaves elements of fantasy into otherwise realistic settings—and exposes mechanisms of oppression in the process.

In this course, we will engage with many magical realist texts and a couple films, as well as the distinctive sociopolitical histories that each work (subtly or not so subtly) addresses. We'll begin with Gabriel García Márquez (*One Hundred Years of Solitude* or *Of Love and Other Demons*), Jorge Luis Borges (*Ficciones*), and Isabel Allende (*The House of the Spirits*), three Latin American authors who popularized the genre. What did Márquez mean when he said that “surrealism comes from the reality of Latin America”? Why does magical realism flourish in a place rife with dictatorships and political corruption?

With this foundational understanding, we'll move on to explore magical realist authors from other parts of the world. Likely texts include Salman Rushdie's *Midnight's Children*, Mikhail Bulgakov's *The Master and Margarita*, Téa Obreht's *The Tiger's Wife*, Angela Carter's *The Bloody Chamber*, and Toni Morrison's *Song of Solomon*. In other words, we'll deal with everything from a museum of female monsters and a vodka-drinking black cat to British colonialism in India and racism in the American Midwest. How do these writers capture the realities of social injustice through seemingly fantastical stories?

See or Seem: Literature of Disorientation

(Darrow)

You Are Here promises the X on the map.

The authors we read in this course will challenge each word of that sentence—

You. A sustained sense of self might give way to ephemeral passion, social pressure, institutional corruption, romantic fluctuation, family geometry, cultural influence, faulty memory, vivid imagination, location migration, lack of agency, unexpected incident, intoxication, or even (temporary?) insanity. Is there a discernible pattern of traits, ideas, feelings, or experiences that shapes a knowable you?

Are. “All that we see or seem // Is but a dream within a dream,” suggests Edgar Allan Poe.

Here. Experiments in quantum mechanics have demonstrated that atomic particles can exist in two places at once, simultaneously. You are made of atomic particles. Do the math. Also: If you're in an Uber, but also on your phone, and missing a friend, and thinking about next year... where exactly are you?

We will examine how authors have captured life's ubiquitous disorientations through devices of character, plot, setting, point of view, style, and symbol. We'll unpack the interior, social, political, natural, and supernatural tensions that frustrate our sense of clarity or alignment.

We'll break free from Aristotle's Unities in favor of Dickinson's "Success in Circuit lies." We'll zig and zag, get lost and (maybe) found.

Authors of longer works being considered include Margaret Atwood, James Baldwin, Charlotte Bronte, Joseph Conrad, Philip K. Dick, Fyodor Dostoevsky, William Faulkner, Maxine Hong Kingston, Kazuo Ishiguro, Branden Jacobs-Jenkins, Tony Kushner, Suzan Lori-Parks, Harold Pinter, Cormac McCarthy, Toni Morrison, Tim O'Brien, Flannery O'Connor, Marilynne Robinson, Jean-Paul Sartre, William Shakespeare, Jesmyn Ward, and Virginia Woolf.

Tragicomedy

(*Khoury*)

Admittedly, the term is an inelegant one. Lumping together two seeming opposites, it implies a lazy blurring of categories and distinctions. The writer who introduced the word to English, Philip Sidney, seems to have intended these connotations. In *An Apology for Poetry* (1595) he describes the disturbing popularity of recent plays that are "neither right Tragedies, nor right Comedies" but "mungrell Tragy-comedie"—works of art that fail to achieve the proper "commiseration" of the former or the "right sportfulness" of the latter. His argument, and Aristotle's before him, is that pity and humor don't mix: we can't laugh properly at subjects we care about or care much about subjects at which we're made to laugh.

Shakespeare is poking fun at the same trend when Polonius touts the readiness of the players to perform something "tragical-comical-historical-pastoral." But many of Shakespeare's own final plays reject clear categories, doing away with any last-act crescendo of marrying or burying, delivering comic and tragic elements in equal measure, even simultaneously. Whether to laugh or cry becomes a slipperier, more subjective question.

This course might begin with a Shakespearean tragicomedy before moving on to more recent heirs to the tradition, exploring along the way two other branches of the tragicomic: the less forgiving wit of satire and the gallows humor of the absurd. We will read many (but not all) of the following:

Shakespeare	<i>The Tempest or Twelfth Night</i>
Swift & Pope	Essays, poems, and short excerpts from <i>Gulliver's Travels</i>
Jane Austen	<i>Pride and Prejudice</i>
Gustave Flaubert	<i>Madame Bovary</i>
Vladimir Nabokov	<i>Invitation to a Beheading</i>
Branden Jacobs-Jenkins	<i>Gloria and An Octoroon</i>
Jackie Sibblies Drury	<i>Fairview</i>
Denis Johnson	<i>Jesus' Son</i>
Zadie Smith	<i>On Beauty</i>
Samuel Beckett	<i>Waiting for Godot</i>

Writing the Revolution: 20th Century Literature of Protest and Dissent

(Mooney)

All literature is protest.

—Richard Wright

All literature might be protest, but not all protest is literature.

—James Baldwin

Boycotts, marches, petitions, riots, and guerilla attacks—these are the modes of protest that defined some of the greatest social shifts of the 20th century, from the campaign for Indian independence from the British Raj to the US civil rights movement. But what about poems, novels, short stories, and essays? What is the role of literature in social protest movements? Writers across the globe have put their skills to political use--have raged, lamented, reasoned, and provoked--yet the relationship between literary art and politics is complex. Are art and protest compatible aims? Where is the line between artistic expression and propaganda? And can a work of literature--the creative act of one individual--impel broader social change?

These are the questions we'll consider as we read examples of 20th century and modern protest literature, loosely defined as works of creative expression that identify and interrogate social ills--and, sometimes, point the way toward a better future. We'll study each work for its literary qualities and for its engagement with the social conditions that inspired it. We'll read works from key 20th century movements: South African anti-apartheid, Latin American anti-authoritarian, US labor rights and civil rights, women's liberation, anti-war, and queer justice. We'll also look at contemporary work connected to modern movements against police brutality, structural racism, and gender discrimination. Likely authors include John Steinbeck, James Baldwin, Richard Wright, Michael Herr, Audre Lorde, Nadine Gordimer, Julia Alvarez, Allen Ginsberg, David Wojnarowicz, Tony Kushner, Lynn Nottage, and Claudia Rankine.

Wrestlers, Dreamers, and Wanderers: Literature of the Middle East and Beyond

(Bosworth)

We begin with a reading of *Gilgamesh* and a selection of poems, prose, or drama deriving from that epic (Komunyakaa and Garcia's *Gilgamesh, a Verse Play*) or building on its central theme of the human wrestling with nature: *The Leviathan Cycle* or Gardinier's *The New World*, or Roy's remarkable novel, *The God of Small Things* or, for that matter, Shakespeare's *King Lear*. We examine also a more harmonious link to the natural world as expressed in the Koran or antediluvian biblical passages. Of note, early on, will be the back-and-forth of influences: the discovery of Western modernism in 20th century Cairo, for instance, and the self-centric writings it helped to generate. Also of note is the tendency of certain Arabic-language writers, at some point in their careers, to seek specifically Arabic inspiration. What results?

Onward, next, to the Middle-Eastern dreamers. We begin with Jacob's dream of a celestial ladder and the Joseph cycle in the Hebrew scriptures. We address dream interpretation in the

Koran and, perhaps, in Ferdowsi's epic *Persian Book of Kings* and Afghan-American novelist Hosseini's *The Kite Runner*. We will return repeatedly to the Middle-Eastern region with its modern Arabic, Farsi, Turkish, and Hebrew poets and prosers: Palestinian poets Darwish or Saadawi, or Lebanese poet Khoury-Ghata, or the first-generation Israeli poet Bialik, or present-day prosers Keret, Kashua, and Castel-Bloom. What is specific to a time and place? What is universality? What is Orientalism? What is usable in these notions?

Finally we turn to a study of the wanderer in the Middle East and beyond. We read in Had-dawy's translation of *The Arabian Nights* and *Nights*-inspired works such as Mahfouz's novel *The Journey of Ibn Fattouma*, Khoury's novel *Gate of the Sun*, and contemporary feminist retellings. We contrast these with the sequestering of women in Djébar's *Women of Algiers* in *Their Apartment* and her questioning of gender roles in the aftermath of revolution. If, by year's end, our larger questions remain unanswered, surely we will have learned to phrase them more meaningfully.

A term paper and a twenty-five-page portfolio of each student's collected creative writing will be assigned.

HEALTH

9th Grade Health

(The Department) (Spring semester)

9th grade health focus on substance use, sexuality, consent, and adjusting to the high school experience. We will explore how we make health-related decisions, discuss prevention as a cornerstone to wellness, and examine contemporary issues in health.

10th Grade Health

(The Department) (Fall semester)

10th grade health is interdisciplinary in focus and weaves in voices from around our school community in order to closely address issues of sexual and reproductive health, mental health, technology, and eating disorders, among other topics. The class focuses on the practical application of physical and mental health principles.

11th Grade Health

(The Department) (Fall semester)

This class looks at health as both a personal and social issue. Weaving in current events, media, and recent research, 11th grade health does a deep dive into mental health and tries to help students navigate their increasing independence as they prepare for adulthood. This class also explores controversies in public health and covers the wide range of viewpoints proffered on hot button issues while asking students to think critically about these issues themselves.

High School Mentoring

(Friedrichs/Garber)

(Please see Seminars)

HISTORY

World History: The Age of Revolutions to the Present (9th Grade)

(The Department)

This course covers the 19th and 20th centuries. From revolution to globalization, from industrialization to decolonization, we explore these and other themes in a global context. We emphasize intellectual histories along with political and social changes. Throughout the year, students learn to think critically and work with diverse primary and secondary sources to create both analytical and research-based essays.

U.S. History (10th Grade)

(The Department)

This course examines the origins and development of the United States from a variety of perspectives including race, class, and gender, providing the students opportunities for in-depth investigations of key moments and themes in U.S. history. In their final year before entering into the elective program, students continue to hone their skills as critical thinkers, readers and writers with a greater emphasis on historiography.

African-American History

(Johnson)

This course will cover African-American history from chattel slavery and the Atlantic Slave Trade to 2000. The class will focus on the social, cultural, political and economic circumstances that arise from the 17th-21st centuries. We will use *Freedom on My Mind: A History of African Americans with Documents* as our main textbook for the purpose of contextualization. There will also be an emphasis on primary sources to magnify the voices of African-Americans that are often ignored in the larger and more popular narratives of American history. Some of the narratives we will explore include African-American labor unions during the 1940s, such as the Brotherhood of Sleeping Car Porters, the social activism of women like Fannie Lou Hamer during the 1960s, and the political activism of lesbian authors like Audre Lorde and Pat Parker. In addition to regular reading and written work, this class will culminate with a final research paper.

Art History: Prehistory to the Present

(Kapp)

Art is the lie that enables us to realize the truth.

—Pablo Picasso

This class will put the “history” in art history– the Parthenon as summation of the classical ideal, Chinese landscapes as the realization of an aesthetic tradition unrelated to western conventions, Ai Weiwei or Kara Walker as the epitome of artist-activists – driven by the belief that to place a work in context is to see it more deeply.

More than just a survey of artistic styles, this course will equip you with the knowledge and skills to analyze any work of art (as well as other visual phenomena) you encounter. As we explore artistic traditions from around the globe, you will learn how art communicates, how it reveals something about the society and culture that produced it, and how it has been interpreted over time. Why did prehistoric people venture deep into darkened caves to create imagery on the walls? What did people make of these paintings when they were first discovered in the 19th century? How is the “strangeness” of much of modern art a response to the strangeness of life in a modern, industrialized world? More generally how do changes in artistic styles reveal (or conceal) changes in political, economic, and social relationships?

You can expect frequent writing assignments (often based on works of art from New York City museums), philosophical debates, and an array of creative projects. Readings for the course will include primary sources and scholarly essays by art historians and critics whose ideas have transformed the way we see and talk about art, aesthetics, and identity such as John Berger, Susan Sontag, and Linda Nochlin. The final project will be an in-depth study of a contemporary artist of your choosing.

Christendom in History and Ideology

(Deimling)

This is a history of Christianity and the Christian church in the social and political context of the societies in which it developed and became dominant. First we'll study Christianity itself: Jesus of Nazareth, the New Testament and other contemporary primary sources, the evolution of doctrines and institutions, persecution, conversion, legalization. Special emphasis will be placed on the cultural and intellectual context of Hellenistic Judaism and rival Roman religious and philosophical systems. We'll look at Latin and Byzantine Christianity and explore the idea of “Christendom” as a response to the collapse of the western Roman Empire and the Muslim military conquests of the formerly Christian Middle East. The Crusades, the Ottoman conquest of southeastern Europe, and the end of institutional unity in the sixteenth century will be covered. With God's help, we will also get to the modern period, and look at Christendom as a still-viable ideological alternative to nationalist, racial, liberal individualist, and socialist identities.

“Custer Died For Your Sins”—Indigenous Peoples’ Histories of Turtle Island

(Bertram)

We will center this class on the perspectives, narratives, and histories of the peoples and nations of Turtle Island – dubbed North America by settler colonialists – from before their discovery of Europeans to the present day. We will include explorations of pre-Invasion culture groups like the Mississippians, the Maya, and the Mexica; initial patterns of interaction with settler colonialists in México, Werowocomoco (where Jamestown was settled), and Wabanahkik (where Plymouth was settled); resistance against Euro-American expansions across the continent; the issue of genocide; and the persistence, preservation, and survivance of Indigenous cultures throughout the centuries.

To do this, we will examine a wide variety of source materials for this course, ranging from primary materials like waniyetu wowapi, ledger books, treaty documents, and other Indigenous narratives, to extant artifacts produced by the various nations of Turtle Island, secondary academic literature, contemporary Native writing, commentary, film, art, and performance. Students will be expected to commit to semi-regular excursions to museums in the area, and will write analytical research papers over the course of the year. Most readings will be in translation, though some may be multilingual, and weekly writing assignments will be expected.

The Enlightenment, For & Against

(Rutter)

Many of the central concepts of modern liberal democratic societies—equality before the law, government by consent, the distinctive value of each human life—were invented or refined in the Enlightenment, that is, in the second half of the 18th century in France, England, and Germany. Two traditions in particular, Kantianism and utilitarianism, articulated the new moral thinking of the age, turning their backs on traditional Christian and Greek ethical thought and aiming to approach ethics as a matter of pure principle, a science of concepts. So how has that worked out?

This is a philosophy class. Our first goal will be to lay out the premises of Kantian and utilitarian moral arguments, assessing their strengths and weakness on their own terms. Our second goal will be to ask whether the world conceptualized and created by the Enlightenment has proved to be a good and just one. Here we will consider the empirical arguments of Steven Pinker and his critics.

Our third subject, and the centerpiece of the spring term, will be the Counter-Enlightenment: the work of thinkers like Rousseau, Nietzsche, Foucault, Bernard Williams, and Alisdair MacIntyre who have raised doubts about the conceptual underpinnings of the Enlightenment and about its consequences for human societies and human souls. Finally, we will ask whether contemporary social justice movements—MeToo, Black Lives Matter, trans rights—are best understood as descendants of the Enlightenment or as critics of it.

From the Iron Tsar to the Man of Steel : Russian History and Literature

(Aronson/Mellon)

This course is an examination of approximately 125 years of Russian history and literature that takes us from Nicholas I (our Iron Tsar) to Joseph Stalin (born Joseph Jugashvili—our Man of Steel), and from Pushkin to Akhmatova. Starting in the time of the Decembrists (the dissident Russian Army officers who planned the overthrow of Nicholas I, and the namesake of the indie rock band; it all comes together), we will trace the development of the history and literature of Russia side by side as it weathers most of the 19th century and half of the 20th century. Our narrators for this journey will include but will not be limited to: Pushkin, Tolstoy, Lermontov, Figes, Stone, Tooze, Dostoyevsky, Turgenev, Akhmatova, Bulgakov, Gerwarth, and Lenin. We will also be looking at the art, music, photography and film that comes out of this period. This course is interdisciplinary in nature, and will count towards both History and English elective credit, so expect lots and lots (and lots) of reading and many types of writing assignments, including two major essays. Expect as well to immerse yourself in a world both strangely familiar and thoroughly compelling in the way that it contrasts with American and European history and literature. **Note:** This class will meet four double periods per week and grant both English and History credit.

Lift Every Voice: Transnational Blackness and the Making of a Diaspora

(Mackall)

(See Interdisciplinary studies)

Midwifery and Gender Politics of the 17th Century

(Wang)

The Art of Midwifry is doubtless one of the most useful and necessary of all Arts, for the...well-being of Mankind.

—Jane Sharp, *The Midwives Book*, 1671

The birthing room and the science of childbirth has long been the setting of some of history's most breathtaking dramas. From succession crises to changelings, the closely guarded secrets of the birthing room have determined the rise and fall of empires. In 17th century Europe, only the midwife and mother would be privy to these secrets. In a world dominated by powerful and wealthy men, midwives utilized the birthing room as a center of rebellion, running this all-important space for women, by women. This course primarily aims to examine the powerful consequences that emerged from England's birthing rooms in the 17th century, the shifting rules surrounding female-coded bodies, and most importantly, the fight for control over the all-important birthing-room narrative.

The subject of gender is central to our studies. Strict gender roles were essential to maintaining the hierarchy of the time, while those who dared to break them were punished harshly. The midwives we study will, in their own ways, risk it all to redefine the barriers of gender, medicine, and education. We will examine the lives of a few notable midwives including Alice Culpeper (wife of famed apothecarian Nicholas Culpeper), Jane Sharp, the first woman

to publish an English midwifery treatise, and Elizabeth Cellier, a Catholic midwife who would narrowly escape being hanged for treason before going on to propose the first Royal Midwives' Hospital. The far-reaching effects of the English Civil War, the Interregnum era, the return of the monarchy and a fractured England's attempts to put itself back together again will serve as a backdrop to the constant drama of the birthing room, as will England's expansion across the Atlantic Ocean. We will also examine, whenever possible, the practices taking place at this time in other parts of the world, including Continental Europe, Africa, and the Muslim world.

This course, while it will incorporate relevant secondary sources, will rest solidly on a primary source base of midwifery treatises, medical writings, and pamphlets of the era. We will read about surgical tools of the time, methods of remedying breech births, monstrous births, devil children, common childhood diseases, different pharmaceutical remedies, and gruesome murderous stories with midwives as the starring villains. Expect to hone your skills of primary source analysis and become quite familiar with reading in Old English. Writing will be assigned frequently and there will be a major research project in the course of the class.

Modern East Asia

(Kang)

This course will examine the histories of China, Korea, and Japan from the mid-19th Century to the present. Investigating how each country experienced the struggles of independence and hegemony within the realm of a changing new world order, we will examine a number of events and ideas that emerged in the 20th century. While each country developed its own national identity and experience, their overlapping experiences also shape their individual paths. Moreover, while Asia was certainly a distinct arena for major changes in the global order, we will inevitably consider the role that the Cold War played in shaping these countries' national identities. In addition to the political, economic and social influences on the histories of these countries, we will further look at the emerging cultural impact and products of their experiences. Viewing and examining art, feature films and music, we will assess the cultural manifestations of the formation of these modern states. Readings will include a number of secondary and primary resources, including memoirs. Be prepared to read carefully and write regularly. Also be prepared to watch a number of documentary films and listen to various podcasts. Assignments will include essays, debates and research.

Readings/assignments will include: Jung Chang's *Wild Swans*, Jonathon Spence's *Search for Modern China*, Victor Cha's *Impossible State*, Andrew Gordon's *Modern History of Japan*, Mori Ogai's *The Wild Geese*, Guy Delisle's *Pyongyang*, and Min Jin Lee's *Pachinko*. We will also view a number of documentary and feature films, including those by Zhang Yimuo, Bernardo Bertolucci, and Akira Kurosawa.

New York City History

(Swacker)

New York City History is designed to provide a broad overview of our city. The course will examine the entire history of New York City from the Dutch colonial period (1625-1664), through the English period (1664-1783), and up to the present. The history of the city will be examined from different perspectives: economic, spatial, immigration and demography, religion, ethnicity, politics, and the arts (including architecture and popular culture). The course will go beyond the period of master builder Robert Moses (1930s-1960s) to include the building boom and population growth of the past thirty years. An area of general emphasis will be large public projects: water service through reservoirs and aqueducts, bridges, canals, roadways, subways, airports.

School and Society: History of American Education

(Goldberg)

What are schools for? Who should go to school and at what age? Are public schools vehicles for democracy or tools of state indoctrination? Do private schools undermine the goal of equal opportunity, or are they the natural expression of a national ethos of liberty and choice? What is the goal of a college education? Should everyone get one? How are schools products of the society we live in, and how is society a product of our schools? What characterizes a “good” school? Do we even need school at all?! This course on the history and philosophy of education in the U.S. traces the different answers people have given to questions like these over the past four centuries. Ever since the Puritans, aiming to equip every child with the ability to read the Bible, passed a 1647 law mandating a public school in every town of fifty families, generations of Americans have placed extraordinary faith in the school as a vehicle for progress and a panacea for all that ails society. Of course, this nation has never been of one mind when it comes to definitions of progress, much less diagnoses of society’s ailments...and so schools have not only been sites of reform but sources of intense social conflict over questions of race, gender, sexuality, national identity, and the relationship between individual rights and state authority.

Topics will include: the origins and evolution of public schools; the influence of religion and religious activism; the efforts of black Americans and other minority groups to attain educational access and equality; the rise of progressive education and vocational programs in the early 1900s; the impact of 1960s and 1970s social movements such as the counterculture and second-wave feminism on curriculum and pedagogy; the history of higher education, including HBCUs and women’s colleges; the Back to Basics campaigns of the 1980s; and the history of educational alternatives, including homeschooling. Most of the readings will be taken from the original writings of educational theorists and advocates, to be supplemented with book chapters and scholarly journal articles. This is also a writing-heavy course, so expect weekly response essays, several research-based assignments, and a major thesis-driven paper in the spring. The class will be run seminar-style, with an emphasis on discussion.

Sex: A Historical and Biomedical Exploration of Human Reproduction

(Levin/Schragger)

(See Interdisciplinary Studies)

Independent Research in History

(The Department) (1x per week)

The Independent Research in History program enables students to explore a historical topic in depth over the course of the school year. Working with a mentor from the department, students will identify the significant historical questions raised by their chosen topic, and pursue them by various research techniques, and through the use of a variety of sources and documents. Students will meet one period a week in class, and once a week with their individual mentors throughout the year.

Each research project may be the work of up to two students. The expectation is that students will develop their research into a significant formal historical essay, to be presented at the end of the school year in a symposium. Papers may be accompanied by a supplementary presentation of research in another medium.

To be considered for Independent Study in History, students need to submit a substantial research proposal to be considered for approval by the department. This proposal should be submitted to the History Department by June 1.

Note: Preference will be given to juniors and seniors. The maximum enrollment for this program is 16 students.

INTERDISCIPLINARY STUDIES

Lift Every Voice: Transnational Blackness and the Making of a Diaspora

(Mackall)

Since they were first brought to the Americas in the 16th Century, people of African descent have organized themselves across ethnic and national boundaries to form families, to build communities, and to advocate for their human rights. In this course, we will consider the forces behind the development of the international movement to abolish the transatlantic slave trade, Pan-Africanism, Négritude, Africana Feminisms, and other transnational movements as well as their social, cultural, and historical implications.

We will center the voices and scholarship of people of African descent in our course materials—which will include primary historical documents, personal narrative/memoir, poetry, narrative fiction, scholarly writings, and multi-media materials—and, in keeping with the traditions of Sankofa, we will consider the contemporary implications and historical antecedents of this history.

Students will be expected to read independently and respond to the course materials in class discussions, regular short response essays, and a substantial culminating project, which might include written research, oral presentation, performance, or other creative expression.

Note: This course may be taken for Interdisciplinary credit by freshmen and sophomores, and it may be taken for either History or Interdisciplinary Studies credit by juniors and seniors.

The Science and Math of Music

(Kandel/Neeseman)

Why is it so difficult to tune a guitar, even (*especially?*) with an electronic tuner, and *impossible* to perfectly tune a saxophone? Why do all cultures have music/dance? What makes that catchy “hook” become an “ear worm,” something you’ll remember forever? How does the orchestra choose its instruments and stage layout; how does your favorite band? What’s the connection between the geometry of a space, and the music that will be performed there? Why do you prefer one pair of headphones to another? How does music evoke emotion and stoke memory? What is the “loudness war” in popular music—and how do reverbs, compressors, and distortion work, physically and mathematically? How are mp3s made? How are tubas made? What is the significance of the shape of the human ear? How are music and spoken language interconnected, in terms of their origin, structure, and social function?

In this course we will study the acoustics of musical instruments, from drums to trombones

to electric guitars. We'll analyze popular tracks using audio-engineering software, and compose our own "ear worms." We'll listen to songs and jams from around the world, and discuss the evolution and cognition of music itself. Ideas from physics, mathematics, and neuroscience will not only be discussed, they'll be *experienced*. We'll study simple instruments, such as the didgeridoo and dan moi (students will receive basic versions of these), and we'll examine our own learning processes. We'll ponder the musical aspects of Infant-Directed Speech. We'll tinker with pieces of equipment and software that expose the mathematics and science behind music and acoustics. We'll encounter compelling theories of the origin of language, the near-universality of certain scales/intervals/harmonies, the myriad connections between music and language, and the effects of music on the nervous system. There will be regular, substantial problem sets, and students will undertake individualized research projects. (No formal experience with music is needed, only appreciation and curiosity.)

Note: This course may be taken for Interdisciplinary Studies, Math, or Science credit.

Sex: A Historical and Biomedical Exploration of Human Reproduction

(Levin/Schragger)

This course, taught as a collaboration between the History and Science Departments, will intertwine women's history with the study of reproductive physiology, genetics, and bioethics. The major themes of the course will be taught from alternating historical and biological perspectives.

We will begin with the study of the anatomy and physiology of pregnancy and an examination of the historical impact of reproductive rights on women's roles in society and the workplace. This will be followed by a discussion of the hormonal mechanisms and historical evolution of birth control along with the study of sexually transmitted infections, including an in-depth exploration of the HIV/AIDS epidemic. Students will also examine more current issues relating to the biological, ethical, and historical aspects of modern reproductive technologies, including the science and legislation around in vitro fertilization, preimplantation genetic testing, surrogacy, cryopreservation of eggs, and more. Finally, the class will learn about sexual differentiation as it relates to notions of gender and how intersex and transgender rights have evolved in recent years.

Readings will include selections from *The Feminist Promise: 1792 to the Present* (Stansell), *All the Single Ladies* (Traister), and *Feminism in Our Time: The Essential Writings, World War II to the Present* (Schneir). Students will also watch documentary films and read articles from newspapers and magazines (*The New York Times* and *The New Yorker*), scientific journals (*The New England Journal of Medicine*, *Nature*, and *Science*), chapters from biology textbooks, the novel *Middlesex* (Eugenides), and the autobiography *My Own Country* (Verghese).

Note: This course is offered to juniors and seniors only, and may be taken for History, Interdisciplinary Studies, or Science credit.

“Who Lives, Who Dies, Who Tells Your Story?” Pop Culture and Historical Memory in America

(Oppenheim)

Pop culture shapes our ideas of what is normal and what our dreams can be and what our roles are. Politics, of course, decides how the power and the money in the country is distributed. Both are equally important, and each affects the other.

—Gloria Steinem

How has pop culture defined how the story of America has been told? In this class we will study examples of American popular arts and entertainments of the 19th, 20th, and 21st centuries, placing them in historical, cultural, artistic, and critical contexts. Instead of approaching these materials as idle diversions to be consumed and discarded, we will consider them as works that have helped shape the narrative of how different moments in American History are remembered. We will observe events through the lenses of novels, plays, films, and visual images. We will examine how the memory of different events, from the Revolutionary War to World War II, have been shaped as much, if not more, by the popular culture pieces they inspired than by accounts from those who experienced them.

The fall semester will begin with an in-depth examination of Ron Chernow’s biography “Hamilton” and Lin-Manuel Miranda’s Broadway adaptation thereof. We will then pay special attention to the racial stereotypes and appropriations in popular forms of entertainment arts from P. T. Barnum and his “sideshows” to *Uncle Tom’s Cabin* to films such as “Gone With the Wind” and “Birth of a Nation.” We will pay special attention to the portrayal of women in these pieces as well.

Students will be asked to submit regular responses to lectures, workshops, and other course materials, and these responses will come in both written and creative forms. There will be one research paper and a final project in which students will be asked to create (using primary source documents) a short film, play, podcast, or other creative work about a moment/event in American History that remains yet to be examined in popular culture. Guest lecturers and workshops on related topics will be a regular component, and topics may include The Art of Propaganda Posters, Hamilton and Historical Memory, The Lost Cause and Popular Culture, Hollywood and World War II, and the WPA. Texts will include: *Hamilton* (Chernow), *Confederates in the Attic* (Horwitz), *Abe Lincoln in Illinois* (Sherwood), *P.T. Barnum: America’s Greatest Showman* (Kunhardt), *Five Came Back: A Story of Hollywood and the Second World War*, *Civil War and Popular Culture* (Gallagher), *Popular Culture in American History* (edited by Jim Cullen), *Dance Floor Democracy: The Social Geography of Memory at the Hollywood Canteen* (Yellin), *The Crucible* (Miller), and more to be determined.

Note: This course may be taken for Interdisciplinary Studies credit.

CLASSICS & ASIAN LANGUAGES

ASIAN LANGUAGES

Chinese

Chinese classes at all levels are aimed at developing communication skills in listening, speaking, reading, and writing. Our goal is to lay solid foundations in language form and accuracy for students, which can help students use Chinese to exchange information and to communicate their ideas. We first start to introduce Pinyin, the four tones, characters, and basic sentence structures. Gradually, we more intensively study grammar, vocabulary, and different topics while reading more authentic materials. In addition to developing language skills, the courses endeavor to increase students' awareness and understanding of Chinese-speaking cultures. The integration of language learning and culture is strongly emphasized. Both traditional and simplified characters are introduced according to the interest of the students. We use *Chinese Made Easy Book 1* for the first year of Chinese, and continue with the four volumes of *Integrated Chinese*. A connected storyline in *Integrated Chinese* about a diverse group of students strings together all of the dialogues and narratives throughout each volume.

Chinese 1

(The Department)

This course is an introduction to the Chinese language, with an emphasis on pronunciation —Pin Yin and four tones. At the same time, students study radicals, stroke orders, characters and basic sentence structures. Chinese songs, poems, and rhymes are introduced.

Chinese 2

(The Department)

The review of Pin Yin and tones continues throughout the year with an emphasis on the use of Chinese to discuss related topics both orally and in writing. Students study more grammar, sentence structures and vocabulary. The topics include school life, subjects, shopping, making an appointment and transportation. Students are encouraged to initiate and carry on conversations to exchange information and express opinions about related topics.

Chinese 3

(The Department)

Chinese 3 is designed to help students solidify their grasp of grammar and vocabulary. The emphasis is on increased ease and accuracy in speaking Chinese and on reading comprehension. Students are expected to give oral presentations about topics such as schools and places in China. The topics include weather, dining, asking for directions, school life, etc.

Chinese 4

(The Department)

In addition to introducing more vocabulary and grammatical points, Chinese 4 concentrates on more complex sentence structures and paragraphs. Intensive study increases the students' command of linguistic structures and functions and gives them a firmer grounding in speaking and writing more idiomatic Chinese. Students learn to discuss and write more fluently and at greater length on the geography of China, the relationships between parents and their children, and the differences and similarities between Chinese medicine and Western medicine.

Chinese 5

(The Department)

Students learn to express their personal views and exchange opinions about the social issues introduced in Chinese 4 in more complex language. They complete exercises like responding to e-mails and writing personal letters, reading complicated signs, public announcements, and newspaper clippings, as well as giving presentations and conducting interviews in more fluent and accurate Chinese.

Chinese 6

(The Department)

Students continue to study more probing texts that reflect the many facets of contemporary Chinese society, family values and Chinese literature. China's strengths and problems are revealed through analysis, explanation and debate. Some lessons deal with crucial social and intellectual concerns in current China. Students continue to hone their overall abilities in speaking, reading and writing in Chinese.

Chinese Conversation

(The Department) (2x per week)

Through the use of various practical scenarios, this course offers an opportunity to gain confidence and facility in speaking more idiomatic and spontaneous Chinese. By enlarging vocabulary and improving oral/aural skills, students gain fluency in discussions about daily life, education, politics, food, travel, and so on.

Japanese

Japanese 1

(Otsue)

The first year of Japanese focuses on building students' foundations in the language. While students take in the two phonetic systems, hiragana and katakana, and some kanji characters, they learn basic grammar including distinctive aspects of the language such as use of markers. Numerous patterns that are needed to construct sentences to function in various social situations are also introduced. Additionally, through extensive examinations of history, philosophy, and the arts, students continuously explore Japanese culture and traditions from ancient periods to the current "pop" trends. Each year, students have face-to-face exposure to various Japanese artists.

Japanese 2

(Otsue)

The second year continues from the first with grammar, but adds an emphasis on composition—students begin writing weekend journals. They continue to build their foundation in the language including distinctive aspects such as measurement words for various objects, equipment, animals, machines, etc. Students continue to learn to function in various social situations including ones in which they are required to use keigo or honorifics.

Japanese 3

(Otsue)

The third year continues the emphasis on developing all four skills of speaking, listening, writing, and reading, and build on what they have learned in the previous years. In the second half of the semester, a number of complex sentence patterns and formulaic expressions are introduced. Students are provided with extensive training to enhance their communication skills, putting emphasis on spontaneity and accuracy. Creative writing exercises are embedded in grammar exercises. The listening comprehension materials include real life dialogues. New kanji and kanji vocabulary are introduced on a daily basis.

Japanese 4

(Otsue)

The fourth year builds on the foundation from the third, but explores reading more extensively. The reading materials include manga style texts, stories, cultural episodes, etc. and include a number of new and old kanji. Students continue to build up their vocabulary.

Japanese 5

(Otsue)

The fifth year continues with an emphasis on reading, but features texts with more complex syntax and advanced kanji vocabulary in both the formal and the informal styles. Readings cover a wide range of topics including Japanese inventions, social hierarchy, traditional arts and Zen, etc. Students will further their understanding of Japanese society and culture through discussions on history and current social issues. In addition, students will learn to express their opinions and thoughts in the formal style of writing with stronger command of the language. In order to facilitate students' fluency, more sentence patterns, formulaic expressions, idioms, and use of onomatopoeia are introduced

Japanese Conversation/Composition

(Otsue) (2x per week)

Students further develop their abilities to express themselves effectively, and also explore the culture via various mediums. Students are given ample time to discuss topics like cross-cultural issues, cultural and current events, etc. On a regular basis, students are asked to conduct research and give oral presentations on a topic of their choice. As they develop their presentation skills, students learn to construct cohesive paragraphs when working on both spoken and written tasks.

CLASSICAL LANGUAGES

Greek

Greek 1

(The Department)

This course introduces students to the rudiments of Ancient Greek. Memorization of forms, vocabulary and syntax are stressed in order to facilitate the reading of unadapted Greek texts as quickly as possible. By the year's end, students will have a strong command of basic syntax and will be prepared to learn complex syntax in Intermediate Greek.

Intensive Ancient Greek

(The Department)

This is a fast-paced, intense course that introduces the essential morphology and syntax of Ancient Greek. The systematic acquisition of forms and vocabulary complement the learning of simple and complex syntax. As the name of the course indicates, this is an intense experience, but one that enables students to read Ancient Greek texts in the original by the end of the year.

Greek 2

(The Department)

This course features review of material from Greek 1 and continues to round out the students' knowledge of Greek forms and syntax. In the second semester, students will refine their skills through translation of selections from a variety of authors, including Herodotus, Plato, and Aristophanes, and will explore the different styles and expressions employed by each. The course is intended to provide students with the skills and confidence to move on to more intensive exploration of specific Greek texts. **Prerequisite(s):** Greek 1

Greek 3

(The Department)

A pure translation course, this class focuses on writings that concern the conflict between rational and irrational on individual and societal levels. We read from Plato and Euripides, the possibly delving into the world of comedy. Students gain an advanced understanding of syntax and familiarize themselves with prose and tragic constructions. **Prerequisite(s):** Greek 2 or Intensive Ancient Greek

Greek 4: Homer, The Odyssey

(The Department)

In this class we will read one of the most influential poems in world history in the original Greek—*The Odyssey*. *The Odyssey*, at its heart, is a poem about coming home, not only from war, but also from wandering. It is a story that contains within it many different, overlapping stories. As we seek to develop command of Homeric Greek, we will explore a selection of these stories. Some of these will be Odysseus's stories—like the stories of the Lotus Eaters, the Sirens, and the island of the witch Circe. Others will belong to other heroic arcs like the coming of age of Telemachus, the loyalty of Penelope, the aftermath of the *Iliad*, the return of Helen, and Achilles in the Underworld. Still other stories will take us beyond the world of heroes to explore broader questions about the nature of justice (in peace and war), the roles of different women in the poem, the question of violence and exclusion, the place of storytelling, and, of course, what it means to come home. In the spirit of the text itself, we will take each episode as it comes, and let the lessons from one lead us on to the next. And the next. And the next. **Prerequisite(s):** Greek 3

Greek 5/6: One Thousand Years of Greek Writing

(Mason)

Greek speakers have been writing alphabetic Greek for almost 3,000 years. In this class we will survey the first millennium of that writing, from roughly 750 BCE to 250 CE. We will begin with Nestor's cup and the Dipylon inscription, two of the oldest surviving epigraphs in alphabetic Greek, and end our adventure with the works of Greek language writers living during the height of the Roman Empire. Our tour will take us chronologically century by century (mostly), will include both poetry and prose, and will, just as it did for the speakers

of Greek who produced them, find us in many places in the (ancient) Mediterranean. We will read widely, including the works of both men and women, and will endeavor to come to some general conclusions about Greek writing while honoring the specific circumstances (historical, literary, personal, etc.) that situate each writer's life (if known) and work. The questions we ask will largely be inspired by the interests of the class, but at least as a start we will begin to think about the novelty of writing – its relationship to the spoken word and the extraordinary move to write something down. What did it mean, for example, for someone to scratch writing onto a piece of pottery? On a slab of stone? Or into bedrock? Who is the audience, who is the speaker, and does that speaker have a “voice”? From there we will read some lyric poetry and think about larger (perhaps) contexts—the social and political worlds reflected in, and created by, lyric poets and poetry. As we continue reading through the years, we will chart our journey as the class sees fit, but we will be sure to connect with as diverse and varied writing as we can. So, we will surely visit the Ionian Greeks and marvel at the explosion of Greek prose in the 5th century emanating from what is now the western coast of Turkey. Likewise, we will spend some time in Rome, first with the writings of Polybius in the 2nd c. BCE, and then Dionysius of Halicarnassus, in the 1st c. BCE—historians both writing about Rome, in Greek. On our way we may examine some inscriptions from Hellenistic Athens, we will read the lyric poems and fragments of some women writers such as Anyte and Melinno, and we will for sure read medical and philosophical texts. Matthew wrote about Jesus, in Greek. And Pausanias about his travels in the Mediterranean. We will find that writers of Greek wrote about nearly everything—in a sense, they wrote their worlds. It would take a lifetime (or more) to read everything written in Greek that survives to us from these first thousand years. Our goal will be to connect with a dozen or so writers and see if we can develop a richer, more complex understanding of the ancient Mediterranean than a focus on one place or time (no matter how marvelous) can achieve.

Our survey could include, but will not be limited to: Inscriptions (from the 6th c. BCE to the 3rd c. CE); Alcman; Sappho; Alcaeus; Herodotus; The Hippocratic Corpus; Aspasia; Anyte; Melinno; Polybius; Dionysius of Halicarnassus; Matthew; Plutarch; Aelius Aristides; Galen; Lucian; Pausanias; and Achilles Tatius. **Prerequisite(s):** Greek 4

Latin

Latin 1

(The Department)

This course introduces the student to the basics of Latin forms and syntax. Memorization of forms and syntax is stressed in order to facilitate the reading of Latin literature as quickly as possible. Readings are selected from Cicero, Caesar, Martial and others. The course also covers background material on mythology, history, and Roman life.

Latin Poetry, Prose, Drama & The Novel

(*The Department*)

Designed as a bridge between the introductory Latin course and specialized electives, this course emphasizes facility in reading and translating Latin authors, studying the literary forms we read, and using textual evidence to gain insight into life in the ancient world. Authors include Cicero, Ovid, Plautus, Sallust, Livy, Catullus, Horace, Caesar, Vergil, and others. The course also intensively reviews Latin grammar and syntax.

The Aeneid: Vergil and The Latin Epic

(*The Department*)

The Aeneid is a poem with everything in it. Famously, it represents a distinctively Roman contribution to the tradition of epic poetry inaugurated in the ancient Mediterranean by the *Iliad* and the *Odyssey* of Homer, but that is only the beginning. And this course is the end of the beginning.

Whereas in our introductory Latin courses (and even in PPDN) we focus on developing the linguistic skills required to read Latin texts in the original, in this course, these skills become the foundation for a broader, deeper, and grander journey—learning not only to translate, but to truly read. Reading, naturally, requires us to pay attention to contexts. This includes the social and political context of Vergil's own day—the world of the early Roman Empire. It includes formal contexts like meter and rhetorical technique, and it also includes the literary context that infuses Vergil's text with allusions ranging from Homer, to Hellenistic poetry, to early Latin verse, and even to Greek Tragedy. Arguably, however, the most important context to consider in this course is the context of the individual reader. You.

The reason for this is simple: throughout its two-thousand year history *The Aeneid* has hung precariously balanced, at times even ambiguously, between the competing claims of different contexts. We have a tendency to think of the “canon” as a place of fixed meaning, but in fact it is always a place of dispute and change. Indeed, what perhaps began as a work of imperial poetry in the court of Augustus became, in the hands of St. Augustine, an object of devotion second only to the Bible. In the hands of Servius, it then became a philological treasury, while at the same time it became in hands of early Christian poets, the raw material for hexameter “remixes”, chronicling the heroism of the risen Christ. In the Middle Ages Vergil becomes Dante's guide in Hell. In early Modern England, Aeneas sings opera. For the Romantics Vergil is an icon of the heroically isolated poet. The story continues.

Even into the 20th-century Vergil's layered text continued to unfold, and not always in ways that are easy for us to celebrate. On the one hand, *The Aeneid's* influence on T.S. Eliot's probing, grief-stricken reflections on the global tragedy of worldwide war may move us to reverent appreciation, but then how do we make sense of the fact that, on the other hand, Vergil's text was—and has always been—in the hands of others, an affirmation of empire at all costs? How can we connect the disturbingly decontextualized use of *The Aeneid* on the great stone wall of the 9/11 Memorial to the private experience of Helen Keller, who read the poem in early Braille?

Since at least the time of Hadrian, *The Aeneid* has been imbued with the power to predict the future (the so-called, *sortes vergilianae*). Its incredible history, however, reminds us that the future is always being written in the present moment, which is why, ultimately, it occupies the place of honor which it does in the Classics curriculum at Saint Ann's. This is the context, and the spirit, in which we present it to you. At the heart of *The Aeneid* are not only the gates of war, but also the bells of change, waiting upon the next set of readers to be rung.

Prerequisite(s): Latin Poetry, Prose, Drama & The Novel

Latin: Another Antiquity

(Connaghan)

The poetry of Late Antiquity is beautiful and brilliant, unsettling and disorientating. In this period the poetical forms feel comfortable and thoroughly classical. However, as in a dream, where all is familiar and yet not quite, something is off-kilter, the forms before the eye are the same and somehow uncannily and gloriously different. In class we will enter the dreamscape of the poetry of Late Antiquity where Rome has become a city of the imagination.

Late Antiquity is a time of sweeping social, political, and cultural change. It is a time of upheaval and yet of surprising continuities. Nowhere is this better seen than in the poetry of the period; a poetry immersed in the traditions of classical poetics yet birthed in a heady mix of social, racial, religious and cultural identities. It is a time of transformation with all of the challenges this brings both to those living through it and to us as we attempt to make sense of it.

Our authors, both female and male, will be drawn from Africa, Spain, Gaul, and Italy. These authors are obsessed with tradition and intertextuality, with innovation and finding their own voice. We will attempt to establish an aesthetics both to understand this poetry in its own right and to help us see its complex relationship to classical poetry. We will read poets of breathtaking talent, of momentous importance, of literary and intellectual delight. These will include Ausonius, Proba, Juvenius, Ennius, Prudentius, Paulinus of Nola, Claudian, Sedulius, Dracontius, Boethius, Maximianus, Venantius Fortunatus.

We will move into territories and times where such things as the canon are left behind, where new eyes and ears are required, where our sensibilities will be challenged and changed

Prerequisite(s): Vergil

Latin: The Declines and Falls of Rome

(Siebengartner)

Like all who came before them and have followed, the Romans wondered about the deepest origins of the world and its creatures and wove stories about them using both the threads of earlier thought and their own unique additions. They pondered what those first generations of humankind were like, sometimes—like Ovid in his *Metamorphoses*—hewing closely to Greek myths of the “Ages of Man,” the Golden Age of Saturn, full of easy, peaceful living and abundance giving way to Silver, Bronze, and Iron Ages as the innovations of seafaring, weaponry, and agriculture burst their insularity and bring different cultures into contact, often

violently. Others, like Lucretius in his *De rerum natura*, almost reverse this process, replacing the image of early man's innocent purity and simplicity with one of primitively painful and grueling struggle, gradually improved upon by cooperation and technological advancement. We will begin this course with these narratives, considering their literary backgrounds, their function in the broader contexts of the works in which they appear, and how they often say more about their authors' own social, cultural, and historical milieus than their beginnings. Inevitably, we'll compare how our own contemporary versions of these age-old, ever-repeated debates about the good ol' days relate: chalkboards or SMART boards? Notebooks or iPads? Legos or Fortnite?

In addition, we will read the many accounts of pivot points in Roman history at which authors claim the sturdy *virtus* of old Rome bent towards luxury and moral corruption. Was it, as Livy claims, when Manlius Vulso returned triumphant and booty-laden from conquests in Asia in 187 BCE? Or maybe, according to Sallust, it was at the end of the Third Punic War in 146 BCE, when, "first, lust for money, then lust for power, grew," (*primo pecuniae, deinde imperi cupido crevit*). Wherever they locate the moment, it is one at which *metus hostilis* (foreign threat) recedes, only leaving room for indulgence, personal gain, and, ultimately, civil strife. Perhaps, then, as many writers suggested, it all started when Romulus first slew Remus, and Rome was forever cursed.

Finally, we will survey how authors link temporal and spatial change, overlaying contemporary landscapes with images of earlier stages of development, whether beautifully untouched, or roughly uncultivated. Vergil's Evander, centuries before Romulus and Remus are born, can show Aeneas a Capitoline hill that was "once scraggly with rough brambles" (*olim silvestribus horrida dumis*); Augustus claims to have found a city of brick and left it marble. Propertius, meanwhile, gives us Veii, once the gilded seat of Etruscan power, now occupied by lonely shepherds and farmers: "they reap their harvests in your bones" (*in vestris ossibus arva metunt*); Lucan has Caesar trampling over the ruins of Troy, heroic remains underfoot.

While these stories of change and decline might seem like downers, we shall, I hope, find comfort in knowing that there have always and forever been good ol' days. That, dare I say, we have always been yearning to make ourselves great again. In the creativity, poignancy, and beauty of these narratives, we will see that we're both always and never perfect, that the past always is as full of lessons, models, and inspirations as regrets. **Prerequisite(s):** Vergil

Latin: Tacitus

(Kingsley)

A chronicler of the horrors of tyrannical Rome, expert largely because he was a careerist of unnatural talent, Tacitus wrestled his life into his literary material (sometimes by indirection, while professing the strictest neutrality) and composed immortally dense works of political psychology. Finding tragedy and rot at the highest echelons, crystallizing blame (and its foil, praise) in his historical writings, Tacitus gives unforgettable front-row testimony on the emperors and their times. In a Latin quite un-Ciceronian, his rhetorical modes communicate righteous, critical mercilessness in acute observation and a "systems"-minded orientation. Dramatic tensions between the center and the periphery, between the old and the new,

between survival and martyrdom are the intractable conditions through which republicans, stoics, women, the lower classes, provincials, foreign tribes, and ex-slaves defined themselves or defended their ways against the centripetal forces of wealth and power in the unitary executive at Rome.

In this class, we will read the corpus, trying to dwell at length in this one writer's cranium. We'll likely go chronologically, from the *Germania* (an ethnography later to become central to the teleological lies of Himmler and Hitler), the *Agricola* (further romanticizing of non-Romans, and also his father-in-law), the *dialogue de Oratoribus* (questions on the relative political flexibility—that is, willpower exercised verbally—in times of peace or of chaos), to the *Histories* on the Flavians and the *Annals* on the Julio-Claudians (where we get the nastiest Nero and the badass rebel queen Boudicca).

Come for the damning epigrams (*solitudinem faciunt, pacem appellant*—make a desert and call it peace), and stay for the Christians and Jews, the quixotic hero liberators, the rank and complicit aristocrats. Let us think with Tacitus about how one responds to threats, how one can conceive a historiography in real time, and just how much strife underpins individual ethics and clan membership. His voice is distinctive—exciting and fun, if hard—and his writing has had world-historical consequences. **Prerequisite(s):** Vergil

Additional Courses

Introduction to Linguistics

(*The Department*) (2x per week)

This class will introduce students to the study of human languages. We will ask big questions—what is language, how does language work in the brain, the body, and society, and what, if anything, can we learn about humanity by considering human languages? We will explore topics in linguistics, from grammar (phonetics, morphology, syntax, etc.) to sociolinguistics, historical linguistics, lexicography, second language acquisition, and computational linguistics. Our focus will in part be determined by student interest. This class will be conducted mostly as a workshop and homework will be limited. That said, students will be invited to give presentations on topics that particularly compel them. No knowledge of Greek or Latin is necessary.

ROMANCE LANGUAGES

French

Accelerated French

(The Department)

This course is offered to students who have successfully completed at least two years of another Romance language, and whose experience with language learning enables them to proceed at a faster pace in assimilating the usages of French. This course emphasizes aural/oral proficiency as well as written skills.

French 1

(The Department)

This course is for students who are new at learning a Romance language, and for those who need one more year to solidify their knowledge and usage of the fundamentals. Emphasis is placed on sentence structure and oral expression. Students acquire elementary conversational skills, and vocabulary is learned through texts and review exercises. Web-based interactive exercises and activities help students practice and retain the material. Special attention is given to accurate pronunciation.

French 2

(The Department)

Students entering this level already possess fundamental skills of grammar and expression (as described in French 1). This course is designed to foster continued development in each of the four language skills: speaking, writing, reading, and aural comprehension. A variety of materials are used: a textbook and workbook to reinforce grammar and vocabulary, and short readings to encourage class discussion and serve as samples of written text. Audio materials are used in class to improve listening comprehension skills. Accurate pronunciation is stressed.

French 3

(The Department)

In French 3 the objectives are to reinforce the students' command of basic grammatical concepts and to stress the idiomatic use of French. We place an emphasis on the assimilation of all major grammatical structures. Readings such as Saint Exupéry's *Le Petit Prince* or Sempé and Goscinny's *Le Petit Nicolas* are used to expand vocabulary and provide topics of discussion. We consider questions of content and form. Topics of class discussion serve as the basis for composition writing. At the end of this course, students should be able to speak and understand French with relative ease and to write coherently.

French 4: French Language & Culture

(The Department)

This course exposes the students to a variety of materials, textual as well as audio-visual, and emphasizes communicative skills through conversation, short writing assignments and hands-on activities. Cultural themes pertaining to life in the French-speaking world are presented through French-language films, short readings, songs and other appropriate material. After a careful elucidation and practice of the linguistic elements necessary for exploring these themes, students are able to express themselves on the various topics introduced.

French 4: French Language & Composition

(The Department)

This course is designed to consolidate previously-acquired language skills and enable students to enjoy increasingly complex literature. While emphasis is given to class discussion and writing to improve active command of the language, it is through reading texts of various literary genres that the students will review grammar and start producing critical and creative writing. The authors studied may include, but are not limited to, La Fontaine, Maupassant, Deharme, Camus, Sartre, Lahens, and Miano.

Contemporary Topics in French Literature and Film

(The Department)

Designed for students who have successfully completed French 4 and are interested in gaining increased fluency in oral French, this two-semester course explores contemporary topics in the French-speaking world through literature and film. One semester is dedicated to reading and discussing works by contemporary French writers. Students are required to read an average of five to ten pages per night and to keep up with the new vocabulary introduced. While the emphasis is on oral expression, students are expected to write summaries, character and plot analyses, as well as short essays, on a regular basis. The other semester is dedicated to the viewing and discussing of films addressing topics such as education, politics, relationships, gender, race, and the environment. Each week students come to class having watched the film assigned over the weekend and ready to discuss it. Through activities such as oral presentations, dubbing, writing film reviews, dialogues and character studies, students will expand their vocabulary and improve their communication skills. Special attention will be paid to idiomatic expressions and the way French is spoken in everyday life. By the end of the year, students should have refined their aural and expressive abilities and gained a greater awareness of some aspects of the contemporary Francophone world.

Modern and Contemporary Literature in French

(The Department)

Open to students who have successfully completed French 4. The literature studied in this course provides a comprehensive overview of writers and literary movements in France and the French-speaking world from the early nineteenth century to the present. Through the works of authors such as Balzac, Nau, Desbordes-Valmore, Baudelaire and Flaubert in the nineteenth century, and Proust, Césaire, Beckett, Duras, Ben Jelloun, and NDiaye in the twentieth, the course aims to stimulate students' interest in both classic and contemporary French letters. Class discussions and oral reports help students to develop their skills in oral expression. Frequent writing assignments, both expository and creative, help students to solidify and refine their skills in written expression.

17th and 18th Century French Literature: Classicism and The Enlightenment

(The Department)

Open to juniors and seniors who have successfully completed the Modern and Contemporary Literature in French course. We begin at the golden age in France, a time of belief not only in the divine right of kings but in the divine itself. Inherent in such beliefs was the idea of the absolute—absolute power, absolute reason, and, by extension, the “absolute” work of art. In literature, perfection becomes the rule, and prescriptions for achieving it are devised. Corneille, Racine, and Molière are recognized as major craftsmen. By the 18th century, cracks begin to appear in the bastion of Absolutism. Writers known as *les philosophes* declare war on heretofore sacrosanct tenets, with words for weapons. The French Revolution begins as a conflict of ideas eventually exploding into insurrection. “On est tombé par terre, c’est la faute à Voltaire; le nez dans le ruisseau, c’est la faute à Rousseau.” Authors are chosen from those above and from the following: Pascal, Madame de Sévigné, Madame de la Fayette, La Bruyère, La Fontaine, La Rochefoucauld, Beaumarchais, Diderot, and Montesquieu.

Advanced Readings in French Literature

(The Department)

For students who have completed all other French electives. Works are selected based on students' interests and literary background.

French Conversation

(The Department) (2x per week)

Offered to juniors and seniors, and to sophomores with permission of the department chair, this class helps students use their acquired vocabulary and expand it to express themselves more fluently. Through a variety of verbal games, paired activities, and oral reports, students build their oral/aural skills and use them in a context of informal conversation on topics such as politics, education, fashion, everyday life, or other subjects of interest to the group.

Spanish

Accelerated Spanish

(The Department)

This course is offered to students who have successfully completed at least two years of another Romance language, and whose experience with language learning enables them to proceed at a faster pace in assimilating the usages of Spanish. This course emphasizes aural/oral proficiency as well as written skills.

Spanish 1

(The Department)

This course is for students who are new at learning a Romance language, and for those who need one more year to solidify their knowledge and usage of the fundamentals. Emphasis is placed on sentence structure and oral expression. Students acquire elementary conversational skills, and vocabulary is learned through texts and review exercises. Web-based interactive exercises and activities help students practice and retain the material. Special attention is given to accurate pronunciation.

Spanish 2

(The Department)

Continuing the study of grammar and building vocabulary, students read and discuss short stories relevant to Spanish culture and begin to express more sophisticated ideas in writing.

Spanish 3

(The Department)

Grammatical concepts are further reviewed and reinforced at this level. Students are introduced to more literary texts, poetry, and to articles on culture and current events in Latin America and Spain.

Spanish 4: Language & Culture

(The Department)

This course exposes students to a variety of materials, textual as well as audio-visual, and emphasizes communication skills through conversation, short writing assignments and hands-on activities. Cultural themes pertaining to life in the Spanish-speaking world are presented through Spanish language films, short readings, songs, and other appropriate materials. After a careful elucidation and practice of the linguistic elements necessary for exploring these themes, students are able to express themselves on the various topics introduced.

Spanish 4: Language & Composition

(*The Department*)

This course is designed to consolidate previously-acquired language skills and enable students to enjoy increasingly complex literature. While emphasis is given to class discussion and writing to improve active command of the language, it is through reading texts of various literary genres that the students will review grammar and start producing critical and creative writing. The authors studied may include, but are not limited to: Allende, Borges, Cortázar, García Márquez, Sábato, García Lorca, and Neruda.

Literature and Visual Arts in 1940s Latin America

(*Montalva*)

This course is designed for students who have successfully completed Spanish 4. This class will focus on a variety of Latin American authors from the 1940s whose works are seen as precursors to the literary boom of the 1960s. We will begin by considering the distinct cultural foundations of Latin American literature (aboriginal, Spanish, African) and some important foundational texts (the *Popul Vuh* and the chronicles of de las Casas, El Inca Garcilaso de la Vega and Guaman Poma). Then we will turn our attention to the *negrismo* movement and the *real maravilloso* (the marvelous real) which began to flourish in the first half of the 20th century in works by Guillen, Olivella, Asturias, Carpentier, and Fuentes. Students will also learn about the Latin American visual arts of the period and about the relationships that writers had with artists such as Xul Solar, Wilfredo Lam, and Frida Kahlo. Students will be asked to research, write and make oral presentations about these and other artists of the period, and to explore the interrelationships between the literary and visual arts. By the end of the year students will have developed a good sense of the artistic forces that helped shape contemporary Latin American culture and national identity.

Creative Writing in Spanish

(*Martin-Basas*) (2x per week)

Leer es cubrirse la cara y escribir es mostrarla. (To read is to cover one's face. And to write is to show it.)

— Alejandro Zambra, *Formas de volver a casa*

Designed for students who have completed Spanish 4, this course will operate like a writing workshop and thus requires a commitment to writing frequently in Spanish. Students will prepare a piece of writing in Spanish for every class, which they will share with their fellow students. Commenting upon each other's work in Spanish will be an essential component of the class. Students will get grammatical and literary input from both teacher and peers. They will read and discuss short fiction and poetry and then "try on" the different narrative voices in their own writing. We will take inspiration from recognized contemporary and classical writers in Spanish such as Roberto Bolaño, Valeria Luiselli, Gabriel García Márquez, Cristina Fernandez Cubas, and Luis Sepúlveda, among others.

20th and 21st Century Literature in Spanish

(The Department)

The prose and poetry studied in this course provide a comprehensive view of 20th and 21st century Hispanic letters. Through the works of Unamuno, Martín Gaité, Matute, and García Lorca (Spain), and of Fuentes, Borges, Bolaño, Restrepo and García Márquez (Latin America), and poetry from both regions, the course aims to stimulate the students' interest in contemporary Hispanic literature and expand their knowledge of language and culture. Short novels by contemporary authors such as Zambra and Vázquez introduce students to the present literary trends in a Latin America that lived through dictatorships, economic crises, and drug wars. Excerpts from movies that explore said conflicts are also watched and discussed.

Advanced Readings in Spanish

(The Department)

For students who have completed all other Spanish electives. Works are selected based on students' interests and literary background.

Spanish Conversation

(The Department) (2x per week)

For juniors and seniors who have completed at least Spanish 3, this course develops communicative proficiency. Placing special emphasis on practical vocabulary and enhancing interactional use of the language, we try to build each student's self-confidence and facility in speaking Spanish.

MATHEMATICS

Required Courses

Algebra 1 (8th Grade)

(The Department)

In Algebra 1, students learn to generalize the laws of arithmetic and perform the four operations on variable expressions. They develop their ability to model and solve word problems by assigning variables to unknown quantities and determining the precise relationship between constant and variable terms. Students apply the laws of equality in order to solve a wide variety of equations and proportions. In the process of graphing the solution sets of linear equations on the Cartesian plane, students gain familiarity with the concepts of slope and intercept. They find simultaneous solutions to systems of equations and apply factoring in order to find the roots of quadratic equations. All of these activities promote both arithmetic and algebraic fluency.

Geometry (9th Grade)

(The Department)

In Geometry, we study the world of points, lines, and planes. We cover topics that include the analysis of congruent and similar triangles, the Pythagorean Theorem, angle sum and area formulas, and theorems concerning the relationship between chords, secants, and tangents of a circle. We solve problems and explore geometric situations intuitively; we also investigate geometry as a formal system, where we begin with a small set of postulates and then build up a Euclidean geometric system by deductively proving further results. With this balance, we uncover mathematics the way it often plays out historically, where bursts of intuition drive knowledge forward, and then formalization solidifies known results into a cohesive whole.

Computational Fluency (9th Grade)

(The Department)

In this once-per-week course, students apply their mathematical knowledge of arithmetic, algebra and geometry to a variety of problems written in the format of questions presented on the mathematics sections of the ACT and SAT. These problems are organized into thematically related units. By reviewing key topics, students in this course will bolster their mathematical vocabulary and their understanding of both concepts and applications. By working on problems in a multiple-choice format, students will practice applying their mathematical knowledge to standardized mathematics tests.

Algebra 2

(The Department)

Students come to Algebra 2 after having had a year of Geometry, and this knowledge is applied on a regular basis. The Cartesian plane provides a setting for examining transformations such as reflection, translation, and scaling. Parallel and perpendicular lines are analyzed using the concept of slope. Functions are examined both algebraically and graphically, as are systems of equations and inequalities. Students also work in a purely algebraic setting, solving equations, manipulating algebraic expressions, working with higher-degree polynomials, expanding binomial powers, and examining rational expressions. The challenge of solving quadratic equations leads to such techniques as factoring, completing the square, the quadratic formula, and the discovery of the complex numbers.

Sequential Electives

Trigonometry

(The Department) (Fall semester)

Beginning with trigonometric functions and triangle solutions, we move on to identities, equations, angle formulae, and the practical applications thereof. Last, we cover the graphs of all the trigonometric functions including inverses and period, amplitude, and phase shifts. In conjunction with the spring semester course Analysis, this course is a prerequisite for Calculus. **Prerequisite(s):** Algebra 2

Analysis

(The Department) (Spring semester)

This course is a rigorous approach to polynomial and exponential functions; sequences and series; vectors; and some analytic geometry. Emphasis is on the mastery of proofs and creative applications to practical problems. This course is a prerequisite for Calculus. In conjunction with the fall semester course Trigonometry, this course is a prerequisite for Calculus.

Prerequisite(s): Algebra 2

Calculus

(The Department)

This is a rigorous calculus course with heavy emphasis on proofs, derivations, and creative applications. Limits, derivatives, integrals, and their technical applications are covered. This course will include an early use of transcendental functions and will require a working knowledge of trigonometric, exponential, logarithmic, and rational functions. **Prerequisite(s):** Trigonometry/Analysis

Additional Electives

Advanced Problem Solving

(The Department) (2x per week)

This course is designed for students who love solving math problems, and it is especially appropriate for students intending to take part in the school's math team. We focus on mathematical topics not typically covered in the standard curriculum. Topics such as number theory and modular arithmetic, polynomials, geometric loci, probability, functional equations, algebraic and trigonometric identities, geometric inequalities, divisibility, three dimensional geometry, complex numbers, recursions, infinite series, quadratic forms, and abstract algebra are explored through a series of problems, often selected from various mathematical contests. The problems in Advanced Problem Solving tend to focus on clever tricks and creative thinking beyond what is typically required in a classroom. Through problems, the objective of the course is both to be more familiar with said clever tricks and also to have wider exposure to mathematics beyond our standard curriculum. We meet twice a week, once to work on problems and a second time to go over the problems together as a class. This schedule is occasionally altered when we tackle a math contest as a class. **Prerequisite(s):** none

Further Explorations in Calculus

(The Department) (Spring semester—same period as fall semester course Techniques in Integral Calculus)

In this course, we will take ideas from calculus and use them as stepping stones towards extensions and explorations in more advanced areas. For example, we will delve deeper into the convergence and divergence of sequences and series, leading us to a discussion of the Taylor and Maclaurin Series. We will study how the concept of infinitesimals leads to exciting results in physics and harmonic analysis, as well as offer insight into the local behavior of various curves that we may have taken for granted. Using infinite series, we will take on a formal study of real analysis, working with concepts that may span continuity, completeness, and cardinality. Along the way, we will continue to explore advanced integration techniques. We may examine special functions and number sets, such as the Weierstrass function, the Bernoulli numbers, and the Cantor set. We may use the idea of volumes of rotation as a way to begin talking about repeated integration and multivariable calculus. **Prerequisite(s):** Calculus, Techniques in Integral Calculus

Geometry II: Modern Elementary Geometry

(Totten) (Fall semester—same period as spring semester course Non-Euclidean Geometry)

This course will concern itself in great part with what is called modern elementary geometry. Since the Renaissance, and especially in the last two centuries, there has been great development and expansion of the work of Euclid and the ancient Greeks. Our study will begin with the many figures associated with the triangle: orthic and medial triangles, the Euler line, the Fermat and Gergonne points, the Feuerbach circle, excircles and Simson lines. Special topics regarding circles—the power of a point, the radical axis, harmonic division and Apollonian

circles—will be covered, and will lead into an introduction of transformational geometry with an emphasis on Steiner inversion. Throughout the course there is considerable use of compass and straightedge constructions, which invite our hands to help see what the mind at first may not. **Prerequisite(s):** Geometry

The History of Mathematics in Theory and Practice

(Andrus) (Spring semester—same period as fall semester course Linear Algebra)

This course begins with the origin of numbers and the number system, tracing its pre-historical roots to the civilizations of Ancient Egypt and Mesopotamia. We will explore the workings of the Babylonian sexagesimal system, and look at its impact on our current ways of measuring angle and time. We will also explore the creation of the earliest calendars through observations of the lunar and solar cycles, and the mathematics of various non-Western cultures. The course will follow the development of a deductive system of geometry in Ancient Greece, and the emergence of algebra. The course concludes with investigations into modern mathematical topics: non-Euclidean geometries, the development of modern algebra, and the emergence of probability and statistics.

Linear Algebra

(Aroskar) (Fall semester—same period as spring semester course History of Mathematics)

Linear algebra is the common denominator of mathematics, with uses in pure as well as applied branches of mathematics. In itself, it is a profoundly enriching field of study that has also developed into a universal tool. While linear algebra is broadly the study of structure-preserving operators on linear (vector) spaces, these concepts are extremely useful in a variety of disciplines ranging from physics and engineering to economics and computer science. In this introductory course, we will study matrix algebra and learn to solve linear systems in several variables. There will be an emphasis on topics useful in other disciplines and various applications will be discussed. We will also aim to gain a deeper understanding of abstract vector spaces and linear transformations by exploring interesting examples and examining isomorphic structures. Proficiency in concepts and skills from Algebra 2 will greatly benefit students taking this course. **Prerequisite(s):** Geometry

Mathematical Art

(The Department) (2x per week)

Mathematical art making has a proud and gorgeous tradition: Mayan temples and Arabic palaces, the drawings of M.C. Escher, the paintings of Bridget Riley and Odili Donald Odita, the stories of Stanisław Lem, the instruction-art of Sol LeWitt, the algorithmic music of Laurie Spiegel, Steve Reich, the data-porn of Ryoji Ikeda—the list goes on and on. In this class we will make drawings and sculptures, write poetry and prose, build synthesizers and sound installations, compose music and enact performance art: whatever medium we pick, we will have the subtle, fascinating curves of mathematics as our live model.

This class will run as a studio. The only prerequisite will be a firm commitment by each

student, no matter what previous experience they have, to engage in serious art-making in a variety of media. Periodic presentations of new mathematics or mathematical art pieces will be offered to students as points of inspiration, but an independent curiosity and creative energy is vital! Gallery shows and informal performances will dot the year, but the meat of the class will be the machinations of our brains as we let the beauty of mathematics pour over our hearts and into our art.

Non-Euclidean Geometry

(Aronson) (Spring semester—same period as fall semester course Geometry II)

One of the postulates of Euclidean geometry states that through a point not on a given line there is exactly one line parallel to the given line. This postulate, known as the Euclidean parallel postulate, seems intuitively unassailable. For what would it mean to say that this postulate is false—either that there are no parallels to a line from an external point, or there are multiple parallels? And both of these options seem, at least at first glance, patently absurd. As it turns out, however, these alternatives to the Euclidean parallel postulate do not lead to absurdity but to different geometries that are just as consistent as Euclidean geometry. This course begins with a close look at the Euclidean parallel postulate and then turns its focus to the main ideas of the two general types of non-Euclidean geometry: hyperbolic geometry (in which the sum of the angles of a triangle is always less than 180° , but not fixed) and elliptic geometry (in which the sum of the angles of a triangle is always greater than 180° , but not fixed). We will also discuss the philosophical consequences of these non-Euclidean geometries. **Prerequisite(s):** Geometry

The Science and Math of Music

(Kandel/Neeseaman)

(See Interdisciplinary Studies)

Techniques in Integral Calculus

(The Department) (Fall semester—same period as spring semester course Further Explorations in Calculus)

In this class, we will continue the exploration of calculus with advanced integration techniques, such as integration by parts, partial fractions, and trigonometric substitution. We will study applications such as arc length, perimeter, measurement of surfaces, areas of regions on polar coordinates, and differential equations. We will reexamine integration with a more rigorous treatment than we took in Calculus, formally producing proofs of results that employ Riemann sums. **Prerequisite(s):** Calculus

Statistics

(Cross)

They use statistics to decorate their articles. They use statistics as a club in the battle for what they believe intuitively to be correct. That is why [they] often believe that you can prove anything with statistics, an obscene and ludicrous position, but one which is the natural outgrowth of the way that they themselves use statistics. What I wanted to do was teach people instead to use statistics as a sword to cut toward the truth.

– Bill James

In this class, we will design and perform experiments, play and study card games, analyze and visualize data, build models, run simulations, summarize data, and write chunks of code (absolutely no prior programming experience is expected). We'll see how probability underlies our understanding of science, grapple with uncertainty, and become fledgling data scientists. This class will be partially project based including a substantial (individual) end-of-the-year project of your choosing.

Independent Study in Mathematics

(The Department)

Students work one-on-one with a mentor on a focused research project. Topics are to be determined by interest and inclination of the student. **Prerequisite(s):** Students must submit a research proposal to the department chair by June 1 to be considered for Independent Study in Mathematics. Proposal guidelines can be picked up in the High School Office or in the Mathematics Department.

MUSIC

All music courses meet two periods per week unless otherwise noted.

Performance Study and Ensembles

The Music Department will offer the following large ensembles based on student needs and interests. It is recommended that students interested in large ensembles choose two. Please consult with your current instrumental teacher if you need to know more about any group. The Music Department is committed to helping students thrive in our ensembles. Students enrolled in any ensemble are required to practice regularly outside of class. The Music Department provides additional support to individual students by offering a Music Resource Room where students can practice during the school day, and we offer a wide-ranging list of private lesson options for those students who wish to support the ensemble experience by studying privately.

Large Ensembles

Brass Choir*—(horns, trombones, trumpets)—Pickering

Chamber Orchestra*—(strings and winds)—Baeza/Woitun

Consort*—(bass, cello, viola, violin, winds)—Gilbert/Eanet

High School Chorus—Asbury

Jazz Performance—Elliott/Coe

Wind Ensemble*—(bassoon, clarinet, flute, horns, oboe, saxophone, trumpets)—Henderson

*requires audition/approval of director

Bach Ensemble: The Study of the Vocal and Instrumental Chamber and Solo Music of J.S. Bach and His Contemporaries

(Gilbert/Williams)

We will work on many aspects of Baroque interpretation, performance practice, style, ornamentation, tempi, the relationship and interdependence of words and music, and any other topics that come up in the rehearsal and preparation of repertoire. We will explore Bach and his contemporaries from the bottom up, paying close attention to the power and influence of the bass line in these great musical works. Keyboard players will learn how to interpret and realize a figured bass and will learn how to play the portative organ. Limited to advanced vocalists and instrumentalists. **Prerequisite(s):** permission of the instructor

Brass Choir

(Pickering) (3x per week)

The Brass Choir is an ensemble for advanced brass players. Musical and technical skills are cultivated through the study and performance of major brass ensemble compositions representing a wide variety of styles. The Brass Choir will perform in multiple settings during the year including assemblies, choral/instrumental concerts, and graduation. Brass Choir will also be combining and collaborating with Consort, Chamber Orchestra, and Chorus to perform major orchestral works. Ensemble members are encouraged to take private lessons/seek outside practice assistance. **Prerequisite(s):** permission of the instructor

Chamber Orchestra

(Baeza/Woitun) (3x per week)

A plucked clarinet? A bowed flute? A violin that uses reeds? A cello with leaking pads? Have you buzzed your viola yet? Something is upside down! Chamber Orchestra is an ensemble where woodwind, brass, and string instruments learn how to play together and enjoy the rich world of sound that they create. Instrumentalists prepare to play in keys utilizing up to four sharps and flats. Chamber Orchestra draws repertoire from art music extending from the Renaissance to today. We will also be combining and collaborating with Consort, Brass Choir, and Chorus to perform major orchestral works. A conducted ensemble, where the individual is cherished and challenged with music suited to each player, this group meets for one double period plus one sectional period each week. Students in Chamber Orchestra are encouraged to take private lessons/seek outside practice assistance. **Note:** An audition is required for any student enrolling in a large ensemble for the first time.

Chamber Players

(The Department)

Historically, chamber music has been the pastime of the aristocracy, yet it is as democratic as music-making can get! For students interested in the challenge of chamber music performance, Chamber Players groups (including piano ensembles) are organized based on enrollment. Duos, trios, and quartets will be coached once a week. Because of the skills required to perform chamber music, students are strongly encouraged to take private lessons/seek outside practice assistance. **Note:** An audition is required for all students who will be participating in the chamber music program for the first time. Students presently participating will be placed at an appropriate level.

Consort

(Gilbert/Eanet) (3x per week)

The Consort is a group of mixed winds and strings for advanced players. This ensemble performs without a conductor and will participate in all instrumental concerts during the year. The Consort works closely with a director in rehearsal. Students learn the art of section leading and ensemble playing through the study of repertoire that spans all periods. Consort

will also be combining and collaborating with Brass Choir, Chamber Orchestra, and Chorus to perform major orchestral works. The Consort will rehearse for one double period and one single period each week. **Prerequisite(s):** permission of the instructor

High School Chorus

(Asbury)

High School Chorus is open to anyone who loves to sing. The chorus sings repertoire from a variety of genres and styles, spanning 500 years of Western music. Chorus will also be combining and collaborating with Consort, Brass Choir, and Chamber Orchestra to perform major orchestral works. No previous singing experience is required.

Jazz Performance

(Coe, Elliott) (3x per week)

Students will perform compositions from the huge jazz repertoire, spanning the major styles of jazz from swing to post-bop. Each combo will consist of a rhythm section and front line. All instrumentalists are welcome. There will be opportunities for large group arrangements as well. We will explore approaches to jazz improvisation through the study of harmony, scales, instrumental technique, and arrangement. Combos will have opportunities to perform in our jazz concerts and more informally in assembles throughout the year. Students should demonstrate an ongoing engagement with their instruments, willingness to improvise, and good reading ability. **Prerequisite(s):** Jazz Techniques (or the equivalent, as determined by the instructors). Students in this class are encouraged to take private lessons/seek outside practice assistance.

Jazz Techniques

(Coe, Elliott)

A class in jazz improvisation and ensemble playing. Instruction in basic scales and chords provides a vocabulary for improvisation. Students are introduced to the jazz repertoire. All instrumentalists and vocalists are welcome. **Note:** Interested students should prepare an audition demonstrating a grasp of major and minor scales and chords. Students in this class are encouraged to take private lessons/seek outside practice assistance.

Jazz Guitar Ensemble

(Coe)

This ensemble performs a variety of music arranged for guitars and percussion. The repertoire includes jazz standards, modern jazz compositions, and original music. Ensemble members improve their reading, composing, accompanying, and rhythmic skills. Members should be very comfortable reading music and charts. **Prerequisite(s):** permission of the instructor

Percussion Ensemble

(Lazzara)

This ensemble studies and performs 20th and 21st century music specifically composed for percussion instruments. Additionally, pieces transcribed from other sources are studied.

Prerequisite(s): Middle School Percussion 2 or permission of the instructor

Vocal Study and Ensembles

(Clark) (3x per week)

Vocal study at Saint Ann's is comprehensive. Our goal is to build better singers, as both soloists and choristers. Proper breathing, vowel production, diction, and basic singing techniques will be the foundation of our study. Art songs (in English, Italian, French, and German) and repertoire from the American musical theater and opera will be studied and performed in solo concerts. Additionally, singers will join together to explore the rich and broad canon of western choral music in various voice combinations. Performance opportunities include choral concerts, the spring voice recital, and the musical theater workshop. **Note:** There is no audition required. Students in Vocal Studies/Ensembles will also participate in High School Chorus.

Wind Ensemble

(Henderson)

The Wind Ensemble combines woodwind and brass instruments. We develop musical and technical skills by studying compositions from a wide variety of styles, composers, and time periods. Students are encouraged to take private lessons/seek outside practice assistance.

Prerequisite(s): permission of the instructor

Instrument Instruction

Nascent Musicians

Is it ever too late to learn an instrument? The Saint Ann's Music Department doesn't think so! If you are interested in learning a musical instrument please let your grade advisor know when you are registering for classes. The Music Department will work to accommodate your request.

Advanced Guitar

(Coe)

This course is designed to enhance performing skills on the guitar through the study of popular, jazz, and classical pieces. **Prerequisite(s):** Guitar 1 or permission of the instructor

Double Bass

(Langol)

This course is designed for the beginning and intermediate double bass player. The course work focuses on developing performing skills and good double bass playing technique through the study of recognized method books, classical pieces, popular music, and jazz. The students are provided an opportunity to focus on skills and repertoire specific to their instrument through the study of solo and ensemble literature with the goal of playing in an ensemble setting. Tone production, technique development, basic bowing technique, and maximally effective practice strategies are the focus of class assignments. Prior string playing experience is a plus. **Prerequisite(s):** permission of the instructor is required

Percussion: The Drum Set

(Lazzara)

This class explores the role of the drummer in popular music. We study and execute techniques that helped define this music, and we listen to recordings of the classic drummers.

Advanced Percussion Techniques

(Lazzara)

This course explores percussion techniques for performing ensembles as well as solo playing. Timpani, 4 mallet vibraphone, drumset, and solo snare drum will be studied.

Prerequisite(s): permission of the instructor

Theory, Composition, and Music Technology

Theory & Composition 1

(Elliott)

This course offers an exploration of the fundamentals of notation, rhythm, harmony, and melody. Students gain a deeper understanding of all musical styles. We train our ears, develop musicianship skills, and study the evolution of the system of tonality used in most musical cultures. Computers and MIDI are used in composition projects.

Advanced Composition/Electronic Composition

(Elliott)

This course covers the study of harmony and voice leading, form, counterpoint, notation, style, and instrumentation, including ear training and musicianship. We will analyze the works of the masters to gain understanding of compositional techniques. Students will work on composition projects using notation software. Compositions for acoustic instruments and electronic media are encouraged. **Prerequisite(s):** Theory and Composition 1, or equivalent and permission of instructor

Music & Computers 1

(Langol)

This class explores the use of electronic keyboards, computers, and software in making music reflective of various musical idioms. Our focus is on understanding the bigger concepts around making music with current music technology in contemporary musical idioms. This class is for the student with no experience or a beginning knowledge of using music technology. In addition to advancing skills as music technologists, the students will be exposed to fundamentals of music theory and various compositional methods as required. Project work will apply these ideas as well as the musical desires of each student. Previous experience with composition is desirable, though not necessary.

Music & Computers 2

(Langol)

This advanced level class continues to explore the ideas covered in Music & Computers 1, while solidifying skills established through previous music lab experience. We explore the use of electronic keyboards, computers, and software in making music reflective of various musical idioms. Included in this course work is a deeper exploration of various musical concepts as well as the possible application of compositional methods to the creative process. A detailed look at basic synthesis and sound design as well as a sharply focused look at effects processing is part of the class discussion. **Prerequisite(s):** Music & Computers 1 or middle school Music Lab experience, and permission of the instructor

Music Scoring for Multimedia

(Langol)

This class targets the ideas around electronic music composition specifically for film, dance, puppetry, theater, and animation. Open to students with advanced skills, an interest in performance/composition, and a facility with music making software, this workshop/class allows students with experience in MIDI and sound processing to realize their creative ideas using the myriad tools of the music lab. Software technology enables composers to achieve unprecedented variety and richness in manipulating recorded sound to create unique compositions. The possibilities are practically limitless. The developing of listening skills and musical analysis are employed in the course work and these become an important part of utilizing compositional methods and style. **Prerequisite(s):** Music lab experience, facility on an instrument, and permission of the instructor

Music Literature

History of Western Music

(Elliott)

Through its evolution since the Middle Ages, western art music has established the language of all familiar musical genres from plainchant to popular song. A style emerges, flourishes, grows amazingly complex, and finally topples, rendered obsolete by the genius of the next artistic generation. Students will explore the major forms and genres from the plainchant to Symphony, sonata to opera. We will hear incredible music, find the reflection of the past in the present, and explore new ways to understand musical language. We will take advantage of the exciting musical life of New York City to inspire our journey.

Jazz History

(Elliott)

Jazz and blues are among America's greatest cultural achievements, exports to the world community that give powerful voice to the American experience. Born of multi-hued society, this music unites people across the divides of race, religion, and region. Jazz history explores freedom, creativity, and the American identity at home and abroad. In this course, we will learn about the development of jazz since its origins at the turn of the 20th century. We will encounter colorful personalities and amazing artists, taking a look at their specific contributions to the music in an effort to understand the stylistic evolution of jazz. Trips to major cultural institutions will complement our extensive listening and learning activities.

Modern Music: The 20th and 21st Centuries

(Elliott)

A revolution in musical thinking took place in the 20th century that would lead to decades of remarkable innovation and creativity in the composition of art music. These developments would inspire musicians of all genres and styles. The advances in technology that define the 20th century provided remarkable potential for sound explorers to invent entire new worlds. We will study the great musical artists of the last 120 years, more or less, from Stravinsky and Schoenberg to today's most innovative musical thinkers.

Opera

(Clark)

The extravagant art. We will look at opera from the ground up, from Monteverdi through contemporary works. Class work involves libretto reading, audio listening, and DVD watching. We will take occasional forays into the scandalous lives of the great composers and opera stars. Class participation includes three daytime trips to the Metropolitan Opera and some written work. (And maybe even some HD Broadcasts!). There is no need to be afraid of opera anymore!

RECREATIONAL ARTS

Basketball

(The Department)

This course will prepare the students for both the physical and mental aspects of basketball, and is open to all skill levels. Students will learn basketball vocabulary, explore strategies, and raise their overall basketball IQ. Students will have a chance to implement their skills in half and full court games during class time.

Challenge Course

(The Department)

Students are faced with challenges through group activities and will set individual as well as collective goals. Team work, leadership, and trust building are major components of this class. We will explore horizontal and vertical climbs on our climbing wall and learn various climbing and belaying techniques. The course may include a three-day camping trip which includes rock climbing and a ropes course.

Fencing 1

(Balboa)

This class, covering the fundamentals of fencing, is open to beginners and those with a limited background in fencing. Students learn basic fencing movements and strategies.

Fencing 2

(Balboa)

The class stresses conditioning, competitive bouts, and advanced fencing techniques.

Prerequisite(s): at least one year of fencing and permission of the instructor

Flag Football

(Schirrippa)

This course introduces the rules and fundamentals of flag football. Emphasis is placed on proper techniques of throwing, catching, offensive and defensive concepts, and teamwork. Students will work through skill drills and learn strategies for playing in game situations.

Floor Hockey

(Schirrippa)

This is an enjoyable and exciting class for all skill levels. Students improve hand-eye coordination and knowledge of the game through drills and games. All hockey fans will enjoy this course.

Karate 1

(Magnes)

Students learn the basic punches, kicks and blocks of traditional karate, combining these techniques in the practice of forms and freestyle sparring. Some self defense applications are covered, although the primary emphasis of the course is on karate as a sport and martial art. A gi (karate uniform) is supplied by the school.

Karate 2/3

(Magnes)

In this class we cover material for the color belt ranks, with increased emphasis on free fighting and street defense. **Prerequisite(s):** a minimum of one year's training in the Saint Ann's martial arts program

Parkour Fitness

(Benney/Bolton)

Parkour is the physical discipline of training to overcome any obstacle within one's path by adapting one's movement to the environment. This class will incorporate both the technical aspects and the physical rigor of Parkour to create a challenging and adventurous workout. Perfect for students interested in gymnastics, dance, and athletics, this "boot-camp" style of exercise class will focus on upper body strengthening, cardiovascular endurance, balance, and agility. It will take place in the 10th floor apparatus room and gym, and at various outdoor locations depending on the weather.

Physioball Fitness

(The Department)

Using large physioballs, this class teaches different exercises designed to increase flexibility, enhance coordination, develop strength and improve cardiovascular fitness. The emphasis is on core (abdominal and back) strengthening and conditioning.

Pilates Conditioning

(Lattimer)

The Pilates method of body conditioning is a unique system of stretching and strengthening exercises developed over ninety years ago by Joseph Pilates. It strengthens and tones muscles, improves posture, enhances flexibility and balance, and unites body and mind.

Racquet Games

(Stevenson)

Racquet games is a course for all skill levels. The units will include badminton, pickleball, and table tennis, depending on gym availability. Beginners learn the games by working on fundamental stroke technique; more advanced players polish their skills while improving game strategy. All students participate in exciting singles and doubles matches.

Running

(The Department)

A course to help people with little or no running experience; experienced runners are also welcome. Stretching and cooling down exercises are taught, along with techniques to improve form and increase speed. Weekly runs vary in distance and intensity. Running routes change from week to week.

Sports and Games

(The Department)

If you enjoyed your MS “Gym/Park” class, then this class is for you. A variety of sports and physical activities will be offered. Based on the availability of indoor and outdoor facilities, you will play games like Capture the Flag, Dodge ball, Ultimate Frisbee, soccer, whiffle ball, basketball, and volleyball. Individual fitness activities may be offered in the fitness room as well.

Table Tennis

(Carr, Stevenson)

Table tennis is one of the fastest growing sports in the United States. Join this class to speed up your hand-eye coordination and to learn how to play this enjoyable game.

Tap

(Howard)

This class teaches rhythmic tap technique, working with complex foot rhythms that lead to improvisation. The body attitude is grounded (closer to the ground), like African dance, as opposed to the lifted attitude of the Broadway tap style. Traditional and contemporary works are learned.

Urban Cycling

(Benney/Carr)

Get outside. Ride a bike. See Brooklyn from a new vantage point. This full-year class will emphasize safe cycling and group riding procedures. Students will learn basic bike maintenance in addition to building cardiovascular endurance. Students should already feel comfortable

riding a bike. Bikes and helmets will be provided, or students may provide their own equipment. **Note:** All bikes must have hand brakes.

Ultimate Frisbee

(Benney)

Ultimate offers a fun, exciting alternative to traditional sports. Students incorporate throwing, catching, and teamwork into a framework of speed and finesse.

Weight & Fitness Training

(Nardiello)

This course introduces the student to the merits of weight and fitness training. Both free-weight and machine work are incorporated into each personally designed workout. Other areas to be explored include flexibility (through stretching) and the value of aerobic training.

Yoga 1

(J. Zerneck)

This course introduces the ancient discipline of personal development that balances body, mind, and spirit. Students learn a series of physical postures and proper breathing as well as meditation and other practical methods for relaxation that promote health, alleviate stress, improve skeletal alignment, and increase muscular strength and flexibility.

Yoga 2

(J. Zerneck)

In this class we begin to explore more vigorous yoga sequences, breathing techniques, and styles of meditation. Different styles of yoga will be introduced including Ashtanga, Bikram, Vinyasa, and Anusara. **Note:** This course will be either a single or double period depending upon student schedules. **Prerequisite(s):** one year of Yoga and permission of the instructor

Interscholastic Sports

(The Department)

The recreational arts requirement may be fulfilled through full-season participation as a player on a junior varsity or varsity team. Emphasis is placed on developing and fostering athletic standards of excellence through participation and competition. All team sports require a significant commitment to practice and game schedules. Saint Ann's is a member of the Athletic Conference of Independent Schools (ACIS), and the girls' teams also belong to the Athletic Association of Independent Schools (AAIS). Our cross country and track teams are members of the Private Schools Athletic Association (PSAA). The fencing team is a member of the Independent School Fencing League (ISFL). Teams include baseball, basketball, cross-country, fencing, gymnastics, soccer, softball, squash, track, and volleyball.

SCIENCE

All courses meet for a full year unless otherwise noted.

Biology Courses

Biology

(The Department) (required)

Biology is the scientific extension of the human tendency to feel connected to and curious about all forms of life. It takes us to the wet, wild world inside a cell, and nudges us to take a close look at the stripes of a zebra or to plunge down to the dark regions at the bottom of the sea where albino crabs move with unhurried pace over the soft, cold mud. This course covers vital topics in this field such as cytology, genetics, biochemistry, taxonomy, evolution, botany, and ecology. This is a dense, grand tour of the most definitive aspect of this planet.

Prerequisite(s): none

Advanced Biology

(Kaplan)

This is an intense and rigorous immersion in a comprehensive study of biochemistry, cell biology, genetics, botany, evolution, and anatomy and physiology. Lectures and discussions are supplemented with occasional in-depth labs, and articles from journals such as *Nature*, *Science*, and *Scientific American*. The only way to cross the ocean of information, enjoying the fast pace and laboratory work, is to be a bonafide biophile! **Note:** Students are expected to have a thorough grasp of ninth grade biology topics. The class meets one seminar period each week in addition to regular class time. **Prerequisite(s):** Biology and Chemistry

Animal Behavior

(Zayas)

Do you like animals? Do you want to know how they have evolved to behave the way they do? This course is an introduction to the fields of ethology, the branch of biology concerned with the mechanisms and evolution of behavior in wild animals, and comparative psychology, the study of general behavior patterns across species. Students will investigate how complex behaviors such as sociality, communication, territoriality, aggression, mating, and learning have evolved across many species. We will explore both how and why animals behave the way they do.

Lessons will be presented through a combination of lectures, discussion, labs, and field trips. As a student in this course, you will learn and practice a variety of observational methods and data analysis techniques both in the field and in the lab. During the second semester, students will work on an independent project exploring a question in animal behavior which will result in a written assignment and/or presentation to the class at the end of the year.

Prerequisite(s): Biology

Marine Biology

(Richards)

Come explore life under the sea in this comprehensive full-year course! We'll consider a range of marine ecosystems—such as salt marshes, coral reefs, hydrothermal vent communities, and kelp forests—and discuss the environmental pressures that have influenced the organisms that have evolved to live there. The emphasis during the first semester will be on seaweeds, marine plants, and invertebrate sea creatures. During the second semester we'll turn our attention to marine vertebrates—bony fish, reptiles, birds, and mammals. Participants have the option of immersing themselves in a week-long expedition to the Newfound Harbor Marine Institute in Florida during spring vacation. **Prerequisite(s):** Biology

Chemistry Courses

Chemistry

(The Department)

This is a broad, sweeping, fast-paced survey course introducing students to the fundamental principles of chemistry, and to the basic techniques a chemist uses. Topics include stoichiometry, atomic and molecular theory, basic atomic and molecular structure, and gas laws, and may also include thermodynamics, chemical equilibrium, and acid-base chemistry. Students develop facility working with calculators and become intimate with the Periodic Table. Laboratory work is an integral part of the course, both in illustrating principles presented in lectures and in providing experience conducting qualitative analysis. **Prerequisite(s):** none

Advanced Biochemistry: Drugs and Poisons

(Radoff)

Have you ever wondered why cyanide can kill? How does cocaine affect your brain? What about how platinum can be used to fight cancer? In this class, we will be looking at the chemical interactions of these (and other) bio-reactive molecules with your cells. Biochemistry is a very broad subject, and by necessity, we will only be able to cover a portion of the material. That said, this is a fast-paced course, intended for the science-lovers among us. We will cover traditional biochemistry topics like biomolecular structure, enzyme function, and metabolism as well as modern biological and biochemical techniques. Reliable access to an internet-enabled computer will be extremely helpful, as we will be using online databases and applications to help us in our study. We will also be reading scientific journal articles in this class. **Prerequisite(s):** Biology and Chemistry

Advanced Chemistry

(Velikonja)

Advanced Chemistry is designed to give students the experience of an intensive college-level course in which they will hone their ability to think critically about chemical phenomena. We will discover why some chemical reactions happen while others don't, how quickly reactions happen and how far they will proceed (thermodynamics, kinetics, and equilibrium). We will also revisit, and explore in greater depth, some of the topics from first year Chemistry including stoichiometry, gas laws, and bonding. Additionally, we will discuss applications of chemistry such as electrochemistry, buffer systems and solubility. The rapid pace of the course requires independent learning and preparation on the part of the students and weekly labs add to the time commitment. Advanced Chemistry is for those who seek a deeper understanding of matter, relish wrestling with equations, and who find chemical reactions exocharmic. **Prerequisite(s):** Chemistry

Transition Metal Chemistry: Color, Reactivity, and Applications in Art

(K. Fiori)

Have you ever stared at the center of the periodic table and wondered when you are ever going to get a chance to learn about these metals? Have you ever wondered why rubies are red and sapphires are blue even though their chemical compositions are nearly identical? Have you ever wanted to understand how pigments and glazes get their intense colors? These questions and many others will be investigated in this course. We will explore the unique properties and reactivity of these often ignored metals. Weekly labs are guaranteed to be colorful. We will make our own pigments and paints, make models depicting the structure of minerals, and explore the acid-base and redox properties of transition metal complexes. This course will cover many topics not discussed in Chemistry or Advanced Chemistry.

Prerequisite(s): none

Physics Courses

Physics

(The Department)

This course provides a systematic introduction to the main principles of classical physics such as motion, forces, fields, electricity, and magnetism. We emphasize the development of conceptual understanding and problem solving abilities using algebra and trigonometry. Familiarity with trigonometry is highly helpful, but not required. The class includes a laboratory component. **Note:** open to sophomores, juniors, and seniors, or others with permission of the instructor

Astronomy

(Kandel)

This course will provide a rigorous tour of the objects and events that comprise the Universe. We will study the formation of stars and planetary systems, the interaction between galaxies and supermassive black holes, and the cataclysmic physics of the first few moments following the Big Bang. We will dabble in xenoscience, the study of extraterrestrials; we'll discuss necessary and sufficient conditions for life, and means of detecting—and eventually exploring—exosolar habitats. We will peruse theories of the size, structure, and ultimate fate of the Universe, and discuss multiverse theories that spring from quantum mechanics, inflation theory, and even more exotic philosophical riffs. “Hard” sci-fi (science fiction that relies on plausible science) will be utilized to vivify concepts and catalyze debates. Students will emerge with knowledge of the mind-boggling diversity of the contents of the Universe, as well as familiarity with the underlying laws of physics, and a sense of how science progresses in the face of seemingly intractable problems. For example, we may study the red supergiant, Betelgeuse, tracing its evolution—and eventual explosion and collapse—while noting the methodological breakthroughs that allow us to tell such a bizarre (and true!) story. **Prerequisite(s):** none

Physics: Mechanics and Relativity

(Kandel)

Mechanics and Relativity is a physics course that emphasizes deep problem solving, along with the philosophical and historical dimensions of the subject. Because we focus our efforts on mechanics (though we briefly discuss thermodynamics, electromagnetism, and optics), we can go into far greater depth. Students strive for a sturdy grasp of physical theories, utilizing diverse modes of thinking: qualitative reasoning, pure intuition, rigorous analysis. We consider the big questions: Where is the Earth in relation to the cosmos, how is it moving, and do its local laws generalize to the Universe? There are wonderful stories behind all of these, in which theories rise and fall, and human beings struggle to overthrow the mental constraints of their forebears. We study the astronomers of the Ancient Greeks, the Copernican Revolution, and the beautiful contributions of Galileo, Newton, and Einstein. In all of these realms, we not only tackle daunting problems, but we bring attention to the problem-solving process itself, to gain insight into our own learning processes; and we consider the wider philosophical implications. For example, does the unprecedented accuracy of Newtonian predictions threaten our belief in free will? Does the very concept of Laplace's demon imply that the future is predetermined? We employ mathematical methods to describe trajectories, orbits, and the strange physics within a spinning spaceship. By the end of the year, we are forced to question many of our deepest assumptions as we tackle the paradoxes of Special Relativity and the implications of the Big Bang model! **Prerequisite(s):** none

Analytical Physics

(Pelzer)

This second-year physics course builds on the material from a first-year Physics course with an emphasis on deeper, more complex problems, and covers new topics such as fluid dynamics, optics, electricity and magnetism, and particle physics. The course focuses on problem solving and mathematical methods. **Prerequisite(s):** Physics

Electricity and Magnetism

(The Department)

This course is an in-depth, calculus-based, proof-driven study of oscillations, waves, electric fields, magnetic fields, and radiation. Purpose: Derive the speed of information.

Prerequisite(s): Analytical Physics and Calculus. **Co-requisite:** second-year calculus

Introduction to Quantum Mechanics

(G. Smith)

It turns out that our fundamental physical reality is exceedingly strange. For example, on the microscopic level, there are no trajectories of particles. Actually, there aren't particles either, at least not in any conventional sense. Whatever these "particles" are, there are no certainties associated with them, only probabilities that in some cases can be very bizarre. If our everyday world behaved quantum mechanically, a roller coaster could get from one side of a hill to the other even if it couldn't make it over the peak, or a car might skitter around ceaselessly if someone tried to fit it into a tight parking space.

In this class we will seek to understand these and many other fascinating aspects of quantum mechanics. We will delve into a range of topics, including the Bohr Model, eigenvalues and eigenvectors, the Schrodinger Equation, the Heisenberg Uncertainty Principle, and angular momentum. We will also consider both the experiments and the theoretical insights that contributed to the development of quantum mechanics in the early 20th century.

Quantum mechanics relies on advanced mathematical techniques, including aspects of linear algebra and multivariable calculus. A significant amount of class time will go toward developing these techniques so that we can effectively apply them. Our mathematical explorations won't be completely rigorous, but a keen interest in getting into the weeds, so to speak, would be a huge plus. **Note:** This class will serve as a prerequisite for Electricity and Magnetism. **Prerequisite(s):** Physics, Trigonometry

Additional Courses

Environmental Science

(Reed)

You've heard about the CLIMATE CRISIS. But what does it really mean? How do we numb ourselves to the problems we know are around us? In this course, we will break down the relationship between humans and the planet and shift our lens to CLIMATE RESILIENCE. In this solutions-oriented course, topics will include climate basics, energy, resources (water, soil, food, air), and biodiversity, with space to explore topics that are itching at the back of your brain and making you anxious to act. Expect a rigorous mix of lab experiments, policy investigation, research projects, occasional tests, and fieldwork. You will emerge on the other side of this course with specific lab skills as well as a better understanding of the politics and economics of sustainability and environmental justice. **Prerequisite(s):** Biology

The Science and Math of Music

(Kandel/Neeseman)

(See Interdisciplinary Studies)

Sex: A Historical and Biomedical Exploration of Human Reproduction

(Levin/Schragger)

(See Interdisciplinary Studies)

Sustainable Design

(Pelzer)

Far more than any species on the planet, humans use the resources of the Earth to purposefully create environments in which to live, work, and play. In Sustainable Design, we will examine the details of how buildings are created, and how waste, water, food, electricity, materials, and air all are distributed through them and the cities and countryside where they dwell. We will address the following core questions: Are our habits and ways of living sustainable? What does sustainability truly mean? What ways of living and building styles can we create to work with environmental surroundings to maximize efficiency and sustainability?

This course will be structured as a combination of lectures and group discussions. Students will then incorporate what they have learned into weekly assignments exploring energy, heating and cooling, waste, water, and food systems in cities, and how these systems manifest in individual homes. Additionally, students will embark on a long-term projects in which they will be challenged to design structures (for urban and rural locations) to maximize sustainability.

Independent Science Research

(The Department) (1x per week)

The Independent Science Research Program grants students the opportunity to design experimental strategies to explore personally perplexing questions of science: What would happen if...? Why is it that...? How does...? Research objectives are as unique and varied as the investigator. Topics are multidisciplinary, ranging from biology and chemistry to the physical fields.

Independent Science Research is a cooperative endeavor between a student or several students and their chosen mentor. Saint Ann's science teachers, as well as auxiliary research investigators, serve as advisers. Students will be matched with potential mentors based on mutual research interests and expertise. Research work proceeds at a pace stipulated by the project as well as the ambition of the research team. Research groups are expected to meet regularly, i.e. every week. After completing a year of exploration, students summarize their projects in a formal research paper. In the spring, discoveries are made public through a poster session and oral symposium. **Note:** This course bears one half credit. **Prerequisite(s):** Students **MUST** submit a research proposal to the Science Department by June 1 to be considered for approval by the department. Proposal guidelines are available in the Science Office and HS Office.

SEMINAR

The high school seminar program is a unique series of courses offered by teachers in addition to their regular teaching load. The seminars are double periods at the end of the day, during which students explore shared intellectual and creative interests. Keep in mind that theater rehearsals and athletic practices are often scheduled during this time of day as well.

Advanced Architecture & Design

(Rumage)

This course explores a variety of architectural/design problems in greater depth than in previous Architecture & Design courses. In order to develop skills in 3D problem solving, model making is a major component of this rigorous course. To enter this advanced course, students are required to have completed Introduction to Architecture & Design 1 and 2, or to have gained permission from the instructor. Each student is also required to be skilled in presenting design considerations in plan, section, elevation and axonometric projection drawings.

The Art of Debate and Rhetoric

(Kingsley/Mason)

The Debate and Rhetoric seminar meets as a single House once a week in the late afternoon seminar period. We break up into smaller committees to debate and vote on resolutions, practice speaking in various formats, arrange impromptu and prepared intramural debates in both large and small houses; and participate as individuals and as a team in the Princeton Model Congress in November and other Model Congresses. The House is largely self-governing, on the premise that the secret of free speech is respect for difference of opinion, and rule by majorities—democracy—depends on the assent of minorities. **Note:** Students who take this seminar should not commit to more than one season of an interscholastic sport with practices or games that conflict with class meetings. Enrollment may be limited.

Asian Pop Dance

(Gu)

In this class students will learn various dance techniques and choreography for a number of Asian pop dances. Each class we will have a warm-up, and then learn Asian pop dance choreography from trending songs. Students will also learn to enhance their performance confidence by polishing steps and expressions.

Colloquium Latinum (Conversational Latin)

(Siebengartner)

This seminar is—you guessed it—about speaking Latin, about actively using this language, just as one would any modern language and just as is done today by small, strange, wonderful, and miraculously growing groups of enthusiasts the world over. We will have two goals, on the one hand to develop confidence hearing, comprehending and creating Latin in conversation with each other, on the other to improve our ability to read Latin texts with greater ease and accuracy by means of our active engagement with the language. To achieve this, we will proceed through carefully constructed, increasingly complex weekly exercises, gradually building comfort and confidence, developing strong core vocabularies, and solidifying our foundations in grammar and syntax. We will discuss our favorite music, critique works of art, interpret literature, debate big ideas, play games, and shoot the breeze, all in Latin. You'll be terrified, you'll love it, and your Latin will thank you for it. **Prerequisite(s):** Beginning Latin 1 and 2 or High School Latin 1

Comedy 303/404 (Formerly Sketch Comedy)

(Kandel)

Learn valuable skills for today's workplace! That's right, at no extra charge! Move beyond the ordinary! Embrace the unknown! Be unbearably annoying in a safe environment! Move beyond the place beyond the ordinary—and then beyond even THAT! Learn to manipulate people without threats, using merely your own facial expressions! Talk the talk AND walk the walk! Master neuro-social signalling and impress your parents' friends!

Fire Works

(Klein/Sullivan) (Fall semester)

In this art seminar, we explore the idea of transformation, the shift of materials from one state to another. In particular, we will look at two materials that rely on transformation by fire in the art process: porcelain and metal. In the studio, we will use porcelain and metal to make work that is sculptural, functional and poetic. And along the way we will explore the concept of shape—of shapes shifting, changing—with a special awareness to the ways in which the artist affects the object, summons it, shifts it from what it is to what it becomes.

*as being available
to any shape that may be
summoning itself
through me
from the self not mine but ours.*

—From “Poetics,” by A.R. Ammons

High School Literary Magazine

(The English Department)

The High School Literary Magazine is created by a board of students and faculty advisers whose goal is to find and publish excellent high school writing. The Board (about eighteen students selected by the English Department and the Head of the High School) meets once a week during a seminar period to discuss and select poetry and prose. In addition, board members prepare all selections for layout and, in April, help compose the magazine. Because the work is heaviest in February, March, and April, students should expect to give several extra hours a week during this period.

High School Mentoring

(Friedrichs/Garber)

High school mentoring is a program for juniors and seniors interested in working with middle school students.

Interested students complete a letter of interest and attend a series of trainings and check-ins throughout the year in order to participate. The mentors then meet regularly in small groups, along with a health teacher, to plan monthly sessions for 8th graders. These sessions occur in the 8th graders' regular health classes and offer an opportunity for the younger students to hear from a fellow teen who is not so far removed from their own experiences.

During the sessions, mentors cover everything from their memories of middle school to navigating social situations and friendships, and dealing with social media. They provide an ear for the middle schoolers who may have questions and concerns they don't want to share with a teacher, and they make an effort to engage with the younger students around school. After each session the mentors debrief with a health teacher about the class.

Interested students should contact Ellen Friedrichs prior to registering.

The Math Behind Finance

(Pershan)

About thirty years ago, math took over finance. This wasn't just a revolution in the tools used for trading—it also changed what got traded and who made money on Wall Street. Financial products became more complex. Mathematicians and mathematics became an integral part of the financial industry. Many of these mathematicians made fortunes, but some of them also created crises.

This course is about this story, told both through financial journalism and mathematics that helps us understand it. (We'll aim for about 50/50.) You don't have to have any special mathematical background or any knowledge of finance to join us—you'll learn those along the way through reading and solving problems in class.

There are big questions raised by the new role that mathematics plays in finance. Can you ever be morally responsible for *creating* an equation, or only for how you use it? Has this influx of wealth changed what it means to be a mathematician? And, besides for mathematicians, who else benefits from the new way that finance is done? You'll leave our course with new questions to think about and new ways to think about them.

Mock Trial

(Hill/Heller)

The Mock Trial Seminar is designed to teach students about the legal trial process and the skills needed to be effective courtroom advocates. The seminar operates on a "learn by doing" principle, in which students actively practice techniques of effective persuasion. The skills of thinking on one's feet, preparing arguments and analyzing fact patterns are emphasized. The first semester is devoted to learning and perfecting courtroom rules in order to prepare the students for the New York State Bar Association Mock Trial Competition against other NYC schools in the spring. Students work on practice cases to gain facility with preparing direct and cross examinations, making objections, introducing evidence, and learning trial procedure. Attendance and engagement are critical to forming a cohesive team for going to trial. Although the seminar is first semester only, extra meeting times during the beginning of the second semester in late January and February will be required as the competition approaches.

Model UN

(Anderson)

The United Nations was established in the aftermath of World War II, when the world lay at the nadir of destruction, to prevent future tragedies. It's singular goal (essentially, to save humanity from itself) is so broad as to make the organization laughable in the eyes of many of the world's more jaded cynics. And yet, in the last 75 years, there has been no additional period of widespread, inter-state conflict. The Universal Declaration of Human Rights has been a guidepost that has increased worldwide quality of life through application of soft-power and economic pressure. The Security Council defused the Cold War. UN Peacekeepers, while known for several tremendous failures, have also ushered in the state of South Sudan and keep a close watch on the simmering conflicts between India and Pakistan; Israel, Syria, and Lebanon; and within Libya. The UN has a track record of doing the most good that it is politically capable of and even it's most shocking moments of impotence are only that: the UN has never committed an atrocity.

This Seminar will encourage students to engage with many of the UN's inherent contradictions (how do you enforce international law while respecting state sovereignty) without losing the idealism that made it such an appealing post-war prospect. We will spend much of our time in class representing large and small state actors in lively, parliamentary debate on topical global issues. Some research will be expected of the students in the class in order to best imitate the real challenges facing UN delegates.

Students will also get the opportunity to take on a large role organizing the SAMUN conference. Our time will be dedicated to planning committees and crises, writing background

guides, and organizing non-debate, periphery events (including dances, lunches, fundraisers, and opening and closing ceremonies). By the end of the year you will be able to say that during your time in High School you helped to organize a full-fledged conference for hundreds of middle school attendees!

New Narratives

(Da Silva)

This seminar explores creative nonfiction as genre that has the potential to reconstruct and reaffirm personal and cultural narratives with an emphasis on race and sexuality. In a time when individual and collective histories are often distorted and sometimes erased, the world is re-evaluating its relationship with creative nonfiction, seeing it now as a vehicle to understanding this particularly intricate landscape. From essay and poetry all the way to music and performance, we will explore the poetic and often political space that creative nonfiction can occupy.

Moving from the 60s through the present, we will look at different manifestations that the genre allows for while investigating its role in larger cultural contexts. Examples include selections from James Baldwin's *Notes of a Native Son*, Audre Lorde's *Sister Outsider* and works from Kiese Laymon, Claudia Rankine, Maggie Nelson, Ta-Nehisi Coates, Joan Didion, Solange, and Kendrick Lamar. As we delve deeper into these materials, you will have many chances to experiment with their various forms yourself. This seminar is geared toward helping you all figure out what creative nonfiction can do for you as you try to make sense of the world, as you try to create art, and as you try to construct your own narratives.

Orientalism, Nationalism, and Post-Colonialism

(Flaherty)

How did the nations of today—their impermeable borders, sacred anthems, and proud flags—come into being? Not by destiny. Perhaps by accident, shenanigans, bursts of heightened emotion, and long planning and hard fighting.

What was the conceptual framework, the rendering of others, that lay at the heart of colonialism's ruthless efficiency? How did some of the great modern empires dissolve, and what has emerged from their long reign of subjugation? How have new nations been constituted out of the violent strictures of colonialism, and whose tools are deployed to take down the old house and erect a new one?

This course will hold a trifecta of seminal texts as its touchstone and inspiration—Edward Said's *Orientalism*, Benedict Anderson's *Imagined Communities*, and Gayatri Spivak's *Can the Subaltern Speak?*—as we examine these questions. We will bring in all manner of music, literature, and visual arts. We will look at how the Romantic and liberatory impulse in the arts—from Beethoven's symphonies to Thomas Mapfumo's chimurenga music, from Latin American revolutionary poetry to South Asian painters (re)claiming modernism—sparked movements, asserted presence, and formed new realities in Europe, Asia, and Africa.

We will also look long, as reactionary impulses, environmental crisis, and formerly subject people grabbing agency with both hands scrambles our current world, calling into the question the very idea of a nation state. The great Russian poet Joseph Brodsky spoke of how the 19th century “had us for a future.” What future will we bequeath?

The course requirements are energy and engagement—nothing more, but nothing less.

“The People United Will Never Be Defeated”—Activism and Community Organizing Today

(D. Smith/Pickering)

Our work will be grounded in a study of activism in America by drawing from major social reform movements including LGBTQIA rights, Black Lives Matter, and the Women’s Rights movement. Course content covers principles of grassroots organizing, game planning, coalition building, meeting protocols, rapid response, and more. We will gain a deeper understanding of government at the local, state, and federal levels. Based on student interests and passions, we will create and implement at least one civic action each semester.

Markers, posters, clipboards, and other materials are provided. Students should plan on wearing well-soled shoes.

Philosophical Problems

(Aronson)

From its beginnings in Ancient Greece, Western philosophy has attempted to ask and answer the big questions that underlie our lives and our relationship to the world—questions that from the philosophical point of view are always with us, even if we are not always conscious of them. For instance: What is knowledge and how do we obtain it? What is the nature of reality? What is truth? Do we live in a deterministic world or is there free will? Does God exist? Is there, in fact, something that we can call mind or soul as distinguishable from brain or body? What is art? This course considers how, in each of the above cases (as well as others), a variety of philosophers—some ancient, some modern, some still alive—have dealt with these inherently thorny issues. There are no prerequisites other than a desire to think hard.

Pilot School

(Roam)

“Cessna niner-niner-zero-eight-golf is departing from runway one-eight.” Licensed pilot Mike Roam is offering ground school for future aviators. We’ll fly the x-plane simulator program, practice maneuvers and navigation, study maps and charts, memorize emergency procedures, and practice our radio calls. Landing is important, of course, but there are many other things to learn including the physics of flight, the power of weather, and the rules of the sky. Both of my parents are licensed pilots and flight instructors—Mom often flew a plane with the same tail number as Amelia Earhart’s plane—and we encourage all young people to visit the sky.

Poetry Writing Workshop

(Skoble)

Poetry is a craft as well as an art. Poems don't happen, they are made. In this workshop we learn how to use the tools of poets. We take poems apart to see how they work, and we put things together to see if they work. Construction and experimentation, exploration and imitation are the processes we use to help us create poems. The poetry workshop is open to all, including dancers, thespians, musicians, athletes and astrophysicists. We meet one double period each week to share our efforts, to read and discuss, and, of course, to write.

Come and join in to trail the steps of these "giants" as they follow their individual quest for freedom and personal expression.

Preschool Seminar

(Fuerst and Preschool Teachers)

"What a surprise!" the Fog Man exclaims when two children arrive at his door on Fog Island in the book by Tomi Ungerer. *"What brings you here? Who are you?"* We will discover what brings you to the preschool as you play in the classrooms and get to know these children and their teachers and the enchanted place they inhabit. *"Anyway, whoever you are, come inside and be welcome."*

The Ram Seminar: Creating Your Student Newspaper

(Goldberg/Forsythe)

"Freedom of the press is not just important to democracy, it is democracy."

—Walter Cronkite

The Ram has been the student voice of Saint Ann's for more than twenty years. During that time it has covered major school milestones, shared student and faculty opinions, offered off-the-beaten-path dining suggestions, and been a shared touchstone during surprise assembly delivery times. If you are interested in learning about journalism, from story generation and reporting to writing and editing, or you want to flex your cartooning, photography, or computer skills, please join us for our weekly seminar meeting. Besides putting together the current issue and planning future issues, we'll look at what other news outlets are doing, participate in peer editing, and conduct writing workshops. Come and find a new venue for your passion for writing, engage in spirited debates about what is newsworthy, and be a part of capturing what makes Saint Ann's yours for posterity.

Note: This seminar is required for all Ram senior staff: editors-in-chief, associate editors, and staff writers. Occasional contributing writers and editors can attend on an as-needed basis or as they desire.

Radicalism and Dissent in America

(Tompkins)

This seminar will explore the ideology, languages, and politics of radicalism and dissent in American history from the Gilded Age to the 21st century. We will consider a range of movements and issues, including: the critiques of wealth, inequality, and monopoly power in the last quarter of the 19th century; the Populist movement and the recurring manifestations of populism in American politics down to our own time; the rise of socialism in America and its transformation into democratic socialism in the 1960s; the long and continuing battle for racial equality and civil rights; dissenters who fought for gender equality, free speech, environmental protections, and LGBTQ rights; other poets, seekers, dreamers, and organizers of the left and the right who catch our interest and deserve our attention for the impact that they have had on our society, politics and culture.

Student Internship in Technology @ Saint Ann's

(Forsythe)

This elective will allow students to explore the realm of Information Technology in an educational environment. While the primary focus is on technical support, students will also learn how to manipulate and work with large datasets in database and spreadsheet applications, become familiar with network and wireless protocols and architecture, and work towards eventually being able to perform certain technical support tasks, under the supervision of the Technology Department staff. Students will gain a practical skill set acquired in a hands-on learning process, and will aid their peers and instructors in the use of technology at Saint Ann's. This will require one to two periods per week, scheduled in periods where the student and their mentor are mutually available.

Tongues of Angels: Literature of the World's Religions

(Townsend)

The literature of the world's religions, both foundational documents and mystical writings, are all efforts to put into words what cannot be put into words: the encounter between the human and the divine. Extraordinary passages about how God talks to Abraham, Jesus talks to his followers, Muhammed discourses with Allah, Arjuna learns from Krishna, Buddha achieves enlightenment, Zoroaster is taught by the Ahura Mazda, and so on, all work to portray human/divine interaction - and all also, therefore, to provide windows into the similarities and vast differences between religions. At a minimum, we will read selections from the Hebrew Bible (Judaism), the Christian Bible, the Qu'ran (Islam), the Bhagavad Gita (Hinduism), the Life of Buddha, and the Avesta (Zoroastrianism). We will also explore individual experiences of the divine in selections from the Zohar, Teresa of Avila, Rumi, Mirabai, Dogen, Lao Tzu, Maimonides, and others. The wonders and conflicts of these religions will also open to us the problem of language: the limits of what it can express, and the efforts to break through those limitations. Please note that all reading will be done in class - there will be no homework.

The seminar will be taught by Craig Townsend, Episcopal priest, former Saint Ann's School English teacher, and holder of a Ph.D. in the study of religion.

Yearbook: Send the Story of Your High School Life to Your Future Self

(Giraldo)

Through imagery and book design, students will create a historical document that will encapsulate this very special time at this very special school. Photographers, illustrators, animators, and filmmakers will work together to communicate what you would like to document about this flash of time. Open to juniors and seniors. **Prerequisite(s):** two years of photography or portfolio review

THEATER

All classes meet one double period per week unless otherwise noted.

Acting

(Barnett, Lamazor)

This professional-caliber acting class emphasizes character study, acting technique, breathing, vocal, and relaxation exercises. Time is devoted to movement exercise, sense memory, and to improvisation, games and storytelling. Also, we will explore and read plays aloud together in class. Ensemble work is encouraged and developed. Scenes and monologues focus on discovering the individual actor's personal relationship to the role and to the text. Actors learn how to break down scripts and understand beats and actions. There are opportunities for performing scenes and monologues, geared toward the individual actor's needs and desires. We may have visits from special guest artists and workshop leaders, and we may take trips to see exceptional productions around town. Ibsen, Shaw, Stoppard, Wilson, Brecht, Mamet, Nottage, Genet, Churchill, Williams, Shepard, Howe, Lorca, Kushner, Hall, Wilder, Jacobs-Jenkins, Fornes, Ionesco, Ruhl, Wilde, Shakespeare, Washburn and many more fascinating friends await you. Experience the joy of playing great roles! All acting class students participate in the Scene Marathon, which is presented in our theater. Come and participate in the extraordinary! **Note:** Scene rehearsals with partners often take place outside of class time.

Acting Intensive

(Lamazor) (4x per week)

Same description as above, except that this class may work on collaborative playwriting/performance or musical/movement projects, film projects, or full length plays, in addition to scenes and monologues. Students may direct scenes or projects on occasion. There may be several performances at different sites over the course of the year. Imagination, empathy, humor and love are our guiding forces. In this time period, in which technology is so heavily relied upon as the means of communication and self-expression, this class focuses on "being here" and being passionately "present" as artists, humans and authentic inter-actors! This class functions as a true, joyful "company" of actors! All Acting Intensive students participate in the Scene Marathon, which is presented in our theater. We may take trips to productions of note and have guest workshops! Bring your focus, verve, dreams, and goodness to your art!

Prerequisite(s): open only to advanced students with the permission of the instructor

African Dance

(Jackson, Mackall)

African Dance is an exciting survey of the techniques and traditions of dances from the African Diaspora with a special emphasis on the dances of West Africa. Classes are accompanied by live drumming. **Note:** Participation in the High School Dance Concert, an essential element of this class, requires attendance at weekend and after school rehearsals.

Costume Production

(Bevans, Chae-Lawrence, Shand)

Come explore costume design and construction, as you create personal projects and help build the costumes for the High School productions. All experience levels are welcome in this class, as assignments will offer a range of technical difficulty. In addition to focusing on construction techniques, students will have the chance to explore other topics such as fashion design, the intersection of art and costume, and Costume history. Each year the High School Costume students take a trip to explore a certain costume or fashion-related exhibit. Past trips have included excursions to The Fashion Institute of Technology's museum, a guided tour of the Garment District, a backstage tour of the costume shop at the Metropolitan Opera, and a Broadway matinee. There will be some opportunities to help design and coordinate pieces for the High School Playwriting Festival, the High School Film Festival or the High School Dance Concert under the guidance of the instructor. Welcome to the world of costume at Saint Ann's! **Note:** Costume Crew participation for a minimum of one play or dance concert is required.

Dance 1

(The Department)

The class focuses on developing students' individual choreographic voices through improvisation and the creation of short movement studies. Class begins with a warm-up that integrates different techniques from ballet to African dance to yoga. Students are exposed to different choreographic approaches through attending performances and studying video. In addition, they have the opportunity to work with professional choreographers, learning pieces, and taking direction. Dances developed both individually and collaboratively with the class are performed during the year. Those developed in association with the instructor are eligible for performance in the student dance concert, for which original costumes may be designed or assembled by students. Both new and experienced dancers are welcome.

Dance/Choreography 2/3

(The Department)

This class studies dance technique, improvisation, and composition to create expressive dance pieces, exploring movement and drama through solo, duet and group forms. Modern dance technique leads to improvisational work and short studies to explore movement textures and qualities. We work with directing multiple bodies in space, using partnering techniques and

weight exchange to convey emotional meaning, and studying formal compositional elements such as symmetry, tension, dynamic use of space, costume and environments. Diverse dance styles, uses of rhythm, and music from many traditions are investigated, and students have the opportunity to learn pieces and take direction from professional choreographers. Dances developed in association with the instructor are eligible for performance in the student dance concert, for which original costumes may be designed or assembled by students. There are field trips to notable performances. **Prerequisite(s):** Dance 1 or permission of the instructor

Dance/Choreography 4

(Jackson)

We continue our study of dance technique, improvisation, and composition. Emphasis is placed on the development of the individual artistic voice through complex, expressive dances incorporating solo and group aspects, examination of multimedia techniques, and the use of juxtaposition and collage to expand dramatic possibilities. Each student undertakes a research project supporting the creation of his or her own dances. The Lincoln Center Library for the Performing Arts provides a resource for our study of diverse music and the integration of costuming, language, and props or sets into our dances. Students have the opportunity to learn pieces and take direction from professional choreographers. Dances developed in the class in association with the instructor are eligible for performance in the student dance concert, for which original costumes may be designed or assembled by students. There are field trips to notable performances. **Prerequisite(s):** Dance 1, Dance/Choreography 2/3, and permission of the instructor

High School Puppetry

(Asbell) (1x per week)

This class is open to all current and former puppetry students. If you have never taken puppetry before, now is a good time. All skill levels are welcome. Individual projects of your choosing may include: building rod puppets, hand puppets, marionettes, body puppets, masks, and creating puppet shows. Join in the Puppet Parade!

Moving Image 1

(The Department)

This class concentrates on the study of film as a two dimensional art form that moves, focusing on the dynamics of screen space and the language of cinema. Working with 16mm film equipment, the class emphasizes the basics of film emulsions, lenses, light readings, and editing. Students develop ideas into well-structured screen narratives, and then each student writes a one page treatment for a short silent film. Working individually or with a production partner, students storyboard, produce, direct, and edit their treatment into a 16mm black & white film. This is a non-linear course requiring constant participation and much out-of-class work. **Note:** This class is open to sophomores, juniors, and seniors.

Moving Image 2

(The Department)

With continuing emphasis on two-dimensional design and the language of cinema, this class focuses on digital video production and electronic editing, producing sync-sound narrative projects. Students are introduced to sound recording technology, and the aesthetics of the sound image—writing dialogue, directing actors, recording location sound, and layering sound images during editing. The class produces four, seven-minute screenplays developed during the screenwriting component of the class. Students are divided into production teams to storyboard, cast, produce, direct, shoot and edit these team projects. **Prerequisite(s):** Moving Image 1 and permission of the instructor

Moving Image 3

(Dobski)

This is a course in advanced film production and color cinematography. Students shoot 16mm color negative film, transfer the images to high definition video, and then edit electronically, producing a three-to-five minute work with a complete soundtrack, including an original score. **Prerequisite(s):** Moving Image 1 and 2 and permission of the instructor

Ninth Grade Videography

(Mirabella-Davis, Oppenheim)

This two-semester workshop reflects the structure of an auteur HD video production class. Students will intensively study all aspects of filmmaking and videography including camera direction, directing the actor, lighting for color, screenwriting, interview techniques, editing, and sound design. In the second semester each crew of three will write, cast, and independently shoot an HD, color short film. In this burgeoning age of technological advancement, digital filmmaking has emerged as one of our era's principle forms of expression, fiction, and broadcast. The goal of this course is to give students the skill sets to tell their own stories in a new and accessible format. **Note:** This class is open to freshman only.

Performance Art

(Barnett)

In this class, we cultivate an improvisational technique that encourages personal storytelling, spontaneity, and abstract thinking. There is a unit on autobiography and a unit on interactive site-specific theater (performances, 'happenings,' or installations set outside the traditional stage). Past work has taken place in a stairwell, a park, and on a street corner; pieces have taken the form of a scavenger hunts, dance parties, and games. Students work individually and in groups. Through trips and lively discussions the class learns about the role of performance in history and contemporary culture. Given the role of technology in art (and life!) today, this class is also a time to 'disconnect,' and to explore the impact that live performance can have on both the audience and the artist. This is a course for students with or without previous experience in improvisation. It is class for visual artists and dancers interested in

working with text, and writers wanting to transform their ideas into physical life. The class also benefits anyone who is nervous when speaking in public.

Play Production

(Kaluza/Smith/Wyron)

Each member of a production staff, from the director to the stagehand, has specific duties and skills. Students in this class learn techniques for running a smooth and professional show, taking on the responsibilities for our theatrical productions. Topics covered are construction, maintenance and set-up of props, reading and taping-out scale ground plans, writing cues, calling light and sound cues, and more. This is a course for advanced tech students committed to our theater and productions. Students with an interest in stage management, props mastering, as well as light, set, and sound design are encouraged to enroll and to deepen their experience of backstage life; the vital, unseen, component of the theater. **Note:** All students are required to work on at least one production which will require time outside of class.

Prerequisite(s): One year of Technical Theater, or permission of the instructors

Playwriting

(Exavier, Posner)

This course explores the elements of playwriting that make it a three-dimensional living art form. Through weekly exercises and assignments, we approach the playscript as a blueprint. The course culminates in a festival of staged readings of the students' plays. In addition, students explore the work of contemporary playwrights by analyzing and discussing their texts, ultimately compiling a list of "fellow travelers"—playwrights whose work each student feels drawn to in content and form.

Playwriting Intensive

(Exavier, Posner)

Playwriting intensive is an investigation into playwriting strategies, movements, and motivations. Plays will be approached from all angles. Students should have experience writing plays, and an eagerness to sharpen their commitment to the craft. In addition to exercises, there will be an emphasis on reading and discussion. From the study of contemporary plays, to theoretical texts, from tragedy to comedy, this intensive workshop encourages students to challenge their preconceptions, and grapple with wide-ranging theatrical concepts. The workshop culminates in a festival of new work, which is the last major theater production of the year. The festival requires a major commitment of time and energy during the final three weeks of school. **Prerequisite(s):** At least one year of High School Playwriting and permission of the instructors

Shakespeare Workshop

(Reardon)

Get ready for Will the Bard in all his glory...from sonnet to soaring soliloquy. The workshop begins with learning and performing a sonnet, then proceeds to monologues, on to scenes, and finally—at year's end—we bring it all together in two performances; one at school and one at Manhattan's Drama Book Shop (called "Will and Friends from Brooklyn"). Those friends may include revenge tragedians like Marlowe and Middleton and the later Restoration Comedians, but it is mostly Shakespeare. In this workshop, you will experience the joy of playing Shakespeare and gain a trust and ease of performing the playwright's blank verse as if it were your native tongue. You will also use all your other talents from singing to skills with musical instruments both modern and old fashioned. And in our scene studies, everyone plays a leading role.

Technical Theater

(Kaluza/Wyron)

An introduction to stage carpentry and other theatrical craftsmanship, Technical Theater is both a practical and a theoretical course. Carpentry, electrics, audio, and effects lectures act as groundwork for hands-on experience with power tools, lighting equipment, and sound gear. Students work side-by-side with their teachers, developing basic stage construction skills, building flats and platforms, creating props, and painting. Stage etiquette is adhered to in this productive environment. We encourage and welcome students who wish to extend themselves further to apply for a position on a production running crew which—it should be noted—will require time outside of class.

HUMANITIES COURSE PERIODS

Period C (English)

The Art of Hell (*Avrich*)
From the Iron Tsar to the Man of Steel
(*Aronson/Mellon*)
How to Be Bad (*Spencer*)
Literature of Disorientation (*Darrow*)
Magical Realism (*Bodner*)
Writing the Revolution (*Mooney*)

Period C (History)

Art History: Parthenon to the Present (*Kapp*)
From the Iron Tsar to the Man of Steel
(*Aronson/Mellon*)
Midwifery in the 17th Century (*Wang*)
Modern East Asia (*Kang*)
School and Society (*Goldberg*)

Period D (English)

Fact and Fiction (*Donohue*)
From the Iron Tsar to the Man of Steel
(*Aronson/Mellon*)
A House Divided (*Chapman*)
Literature and Memory (*Fodaski*)
Literature of the Middle East and Beyond
(*Bosworth*)
Tragicomedy (*Khoury*)

Period D (History)

African-American History (*Johnson*)
Christendom in History and Ideology
(*Deimling*)
Custer Died For Your Sins (*Bertram*)
The Enlightenment, For & Against (*Rutter*)
From the Iron Tsar to the Man of Steel
(*Aronson/Mellon*)
New York City History (*Swacker*)

Non C/D: Lift Every Voice: Transnational Blackness and the Making of a Diaspora (*Mackall*),
Sex: A Historical and Biomedical Exploration of Human Reproduction (*Levin/Schragger*)

SCIENCE COURSE PERIODS

Period A

Biology
Chemistry
Physics
Advanced Chemistry
Animal Behavior
Astronomy
Introduction to Quantum Mechanics
Sustainable Design

Period B

Biology
Chemistry
Physics
Advanced Biochemistry
Analytical Physics
Environmental Science
Marine Biology
Physics: Mechanics & Relativity
Transition Metal Chemistry

Non A/B: Electricity and Magnetism, Sex: A Historical and Biomedical Exploration of
Human Reproduction, Independent Science Research

TBD: Advanced Biology, The Science and Math of Music

HUMANITIES RANKING WORKSHEET FOR RISING JUNIORS AND SENIORS

Section 1:

	Period C	Period D
1st Choice		
2nd Choice		
3rd Choice		

Section 2:

Humanities Ranking			
1		4	
2		5	
3		6	

Helpful Hints:

Each line of section 1 must include an English and History class; one that meets in C period, and one that meets in D.

- NO REPEATS (i.e. you may not list the same class twice)
- Every class you choose must be a class that you are prepared to take, it is possible that you will receive any course you list.
- In section 2 rank all courses listed above in order of overall preference. Don't worry about what period it meets or which department it is in.

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