Buffalo Seminary



Course Catalog

Introduction

As an independent school, SEM provides a comprehensive curriculum that emphasizes the humanities, arts, digital literacy, and opportunities for personal growth and leadership development.

With a strong focus on college preparation, the curriculum anticipates students' academic goals beyond high school and includes both foundational and advanced courses in the humanities, the sciences, and physical education.

This course catalog represents the courses offered; however, not every course is offered every year.

The catalog is arranged by subject area and includes the title of the course, the grade level(s) the course is offered, and a description of the course. Prerequisite courses are noted as such. Within each subject area, courses are arranged by grade level. Courses are listed alphabetically within each grade level.

Graduation Requirements

Overview:
At Buffalo Seminary, our graduation requirements are designed to ensure that each student receives a rigorous, well-rounded education rooted in academic excellence, personal growth, and the exploration of their unique passions. Students engage deeply across a broad range of disciplines needed for success in college and beyond.

The requirements outlined below reflect our commitment to intellectual challenge, leadership, and lifelong learning.

Graduation Requirements:

English - 4 years

History - 3 years (must include U.S. History)

Mathematics - 3 consecutive, year-long mathematics courses in high school, through the successful completion of Pre-Calculus

Foreign Language - 3 years through advanced level

Science - 3 years of lab sciences, including Integrated Biology/Chemistry and either Intermediate or AP Physics

Fine Arts - 5 trimesters (2 hands-on, 2 foundation, 1 of your choice)

Fitness - 4 years

Capstone

*An additional 3 trimesters of either math or science; does not have to be a lab science

Placement in Advanced Courses:
A student's eligibility for placement in Honors, AP, or other advanced courses is determined by one or more of the following: academic standing, teacher recommendation, departmental recommendation, testing data, and/or administrative approval.

English Department Course Offerings

English I: Community and Self (9)

This year-long course introduces students to the concepts, skills, and vocabulary that they will build upon throughout the rest of their high school careers. It gives students both a technical and intellectual foundation in the study of English literature, developing grammar and usage skills as well as the ability to analyze and critique a wide variety of literary texts. Students will develop their reading comprehension, literary analysis, and essay-writing skills in a discussion-centered classroom. Thematically, readings explore the literary representation of self and community. The course begins with an introduction to linguistics, then turns to studying short stories, essays, and poetry. Students will be introduced to writing the SEM Critical Analysis essay following Toulmin's method of argumentation. The year ends with an intensive reading of *Romeo and Juliet* and completing an additional essay about the text.

English II: American Literary Expressions (10)

American Literature is a year-long course that uses American literary fiction and nonfiction to further develop the reading and writing skills necessary for post-secondary success. In trimester one, students learn the basics of literary analysis, reading beyond the surface to analyze the ways texts uphold or challenge ideologies. In trimester two, students become more critical consumers of information and strengthen their persuasive writing by learning about logic, rhetoric, and cognitive bias. Finally, in trimester three, students study personal essay writing, particularly the ways in which the creative writing strategies used in fiction will make them strong essay writers in any genre.

English II: Honors American Literature (10)

Any sophomore may opt in to the Sophomore Honors Program, which will run concurrently with and independently from the regular sophomore American Literature class. It is a credit/non-credit course of study: if a student completes the work according to the English Department's standards and expectations, they will receive honors credit on their transcript; if a student decides that the program is not conducive to their development, they may complete a withdrawal process that includes meetings with the department chair, instructor, and Dean of Students, without any penalty to their grade. Honors students will complete extra reading and writing assignments each trimester, meet individually and in small groups with mentors from across the English Department to discuss their SHP work, and complete an advanced independent writing project at the end of the year. During each of the first two trimesters, SHP students will perform a "deep dive" into one American book, author, or movement. For the final trimester of the year, they'll cultivate their intellectual curiosity while studying and ultimately producing a long-form braided essay that represents not just their work in English class, but also their experiences and passions beyond the classroom.

AP English Literature (11)

Prerequisite: Teacher recommendation; department approval

The AP English Literature and Composition course is designed and taught thematically with an emphasis on core readings along with modern and contemporary selections that illuminate and expand upon a variety of themes. AP English Literature and Composition closely follows the requirements described in the AP English Literature and Composition Course and Exam Description (CED), including the fundamentals of literary analysis and introductory college composition. Each week students discuss and engage in a variety of writing activities focusing on argumentation, interpretation, analysis, rhetorical strategies, exposition, structure, and style. Students read and study a variety of novels, plays, poems, and short stories from the 16th century to the present. The course focuses on the experience of literature, the interpretation of literature, the evaluation of literature, and writing to develop stylistic maturity and sophistication. Students practice their writing via numerous timed essays, which are revised several times, as well as longer essays that require outside research and MLA formatting. Students also practice oral communication skills, through regular classroom discussions and acting as discussion facilitators.

English III: Exploring the Literary World (11)

In this year-long course, students examine principal authors and genres from across the globe. And every year includes a different organizational theme. Most of our texts are contemporary (1960s-present) and range from novels to poems, films to graphic novels. We will discuss formal/stylistic attributes as we seek to understand how societies, cultures, histories, and languages shape stories we tell about ourselves. Designed to prepare students for college composition as well, this course requires drafting and revision of written pieces. Furthermore, since students engage with digital video as a primary source of daily information, students will compose several digital videos that promote media literacy, reinforce composition practices, and offer different avenues for understanding, interpreting, and analyzing print and visual texts. Original research rounds out the year, as students investigate critical discussions around a text; compose a proposal that includes an abstract, annotated bibliography, and an argumentative thesis; craft rough and final draft; and provide a reflective heuristic about the writing process.

English IV: Autobiography (12)

This course asks students to consider what it means to write their own experience. How do we understand the narratives of our lives? How do we tell our own stories in a way that satisfies both the truth and our readers' narrative expectations? Students will read selections from memoirists and autobiographers in addition to nonfiction texts about how to write about their own lives and will, over the course of the trimester, produce a single longform autobiographical essay.

English IV: Creative Nonfiction (12)

This course is designed to encourage you to think about ways of communicating true stories using innovative, engaging techniques across a variety of media. We will read a variety of genres and forms, and you will have the opportunity to dig deeper into a style that appeals to you. Since this is a senior English course, this class will also focus on reading, writing, speaking, and listening skills that are necessary for success in college and beyond. You will be asked to analyze and critique works by published creators as well as your peers, and to create your own nonfiction texts, in order to understand how methods of storytelling can affect the impact of the story itself.

English IV: Critical Theory: Queer Theory (12)

This course serves as an introduction to critical and literary theory through the lens of queer theory. Using Jeffrey Nealon and Susan Searls Giroux's The Theory Toolbox, it begins with an introduction to some of the foundational concepts of theory and philosophy. The course aims to historicize notions of identity in general (and sexual identity specifically) and to denaturalize our understanding of 'culture,' 'identity,' and 'biology.' We will read some of the foundational texts of the academic school of queer theory, including Gayle Rubin's "The Traffic in Women: Notes on the Political Economy of Sex."

English IV: Existential Literature (12)

It is a quintessentially human pursuit to ask, "What is the meaning of life?" In this reading-intensive and discussion-based course, students will explore the ways in which authors have grappled with this question, specifically authors who have come to the conclusion that there may not be an intended purpose to our existence. While fiction will be our primary focus, the class will also read non-fiction works by existentialist thinkers. Students will be expected to write frequent reflections and one long-form essay.

English IV: Femininity in Literature (12)

The word "femininity," like the word "woman," is what theorists might call a floating signifier--it is so loaded with meaning, it means so many (contradictory) things in so many (confusing) ways, that it almost ceases to have any fixed meaning at all. For example, women are expected to be both quiet and demure and garrulous and gossipy; a woman should be her husband's domestic helpmeet and a modern #girlboss. This course will interrogate the pleasures and perils of femininity through theory, personal narrative, and fiction. Sample texts include excerpts from John Berger's Ways of Seeing, Gayle Rubin's landmark essay "The Traffic in Women: Notes on the Political Economy of Sex," and a selection of Ursula Le Guin short stories.

English IV: Ghosts in Literature (12)

The prevalence of ghost stories in cultures and civilizations throughout recorded history indicates that there is something uniquely human about the supposition of a spirit world. This reading-intensive and discussion-based course is driven by the thesis that ghost stories are almost

always about the living, revealing anxieties about identity, loss, memory, and mortality. Students will additionally explore the historical and sociological factors that influenced the post-industrial revolution ghost story.

English IV: Graphic Novel (12)
The purpose of Graphic Novel is to explore forms of visual storytelling and learn to analyze those forms. This course will focus on stories that are told through words and pictures, rather than words alone. Students will study the structural components of graphic novels and comics, and evaluate the way different artists use those components. Students will also create their own visual stories.

English IV: Greek Drama (12)
The purpose of this class is to analyze and enjoy ancient Greek drama (6th century BCE) in its theatrical, historical, and social context. In addition, we will write an essay and create our own short plays. While this may sound intimidating, you will be surprised by these forward thinking, thought provoking, and enjoyable texts.

English IV: Harlem Renaissance Literature (12)
In the early twentieth century, a small neighborhood in the northern section of Manhattan, New York became a world-famous center for Black intellectuals and artists. In this course, we will read fiction, poetry, essays, and plays — all written by African American writers — from this fascinating and transformative period in American history.

English IV: History of Pop Culture (12)
This course will examine the ways in which new forms of media--radio, film, television, and the internet--have left their mark on the history of the last hundred years. With a focus on diverse voices within pop culture, we will investigate the ways in which mass culture has sparked or inhibited change over time.
Students may enroll in this class for either English or History credit; some assessments will differ based on which track a student signs up for.

English IV: Introduction to Moral Philosophy (12)
This course will offer a very brief introduction to moral philosophy. In addition to reading about western philosophy throughout the ages, we'll discuss all manner of ethical quandaries, write several short essays about ethics, and write one longer exploration of a complex topic using multiple theoretical lenses.

English IV: Literature of the World Wars (12)
World War I was known briefly and optimistically as “the war to end all wars.” Poems written by the war’s soldiers and reporting from the fronts helped the world to understand the changing

nature of warfare, and brought the idea of war's inherent glory into question. While some of the literature of World War II continued to portray the grim absurdity of life as a soldier, memoirs and other accounts brought the inhumanity of the Holocaust to public attention. This course will use literature as a lens through which to examine the world wars.
Students may enroll in this class for either English or History credit; some assessments will differ based on which track a student signs up for.

English IV: Medieval Romance Literature (12)
This course will introduce students to medieval literature and allow them to become familiar with the genres and tropes of chivalric romance. Chivalric romance, which includes Arthurian legends and stories about knights, ladies, wizards, and monsters, is a staple of the Western literary tradition, and continues to this day. Students will learn about courtly love, the formal social code that detailed proper courtly behavior. Courtly love was enormously influential on medieval literature. The core of the course will be a thorough reading of Marie de France's *Breton Lais*, and we will supplement our understanding of the genre with selections from Andreas Capellenus' *De Amore*. In addition to a meticulous formalist reading of the text, we will also use a variety of theoretical approaches to understand this literature. We may also look at contemporary portrayals of chivalric romance, either in popular novels or other media. Student assessment will include writing assignments (analytical papers) and class discussion.

English IV: Modern Drama and Social Change (12)
This course is designed to encourage you to think about the ways in which real events influence art, and vice versa. Since this is a senior English course, this class will also focus on reading, writing, speaking, and listening skills that are necessary for success in college and beyond. You will be asked to analyze the writing of others as well as to attempt some creative writing of your own, in order to understand how writers may be shaped by their environments. Our focus in the course is on the ways in which theatre portrays actual moments in history--sometimes through the real words of people involved, and sometimes by creating characters and fictional events that tap into something essential about moments of change. We will be doing some historical research to supplement our reading of these texts, and we may view video clips as appropriate.

English IV: New Weird Literature (12)
"Weird Literature" explores the Weird as a literary genre, a genre of writing that recycles, reimagines, and subverts tired tropes and cliches from horror, fantasy, and science fiction, as well as combines different literary styles together to make a wholly new form of storytelling.

English IV: Modern & Contemporary Poetry (12)
Modern & Contemporary Poetry is founded in the belief that poetry is an irreplaceable human art whose power and pleasure can be savored by everyone, and that we are all poets. In this course we will explore and consider a diverse selection of writing from the modern period (late

1800s-1950s) to that from the most contemporary poets. Together, in our own writing, we will strive to progress in communicating our ideas in concise language, using some of the techniques of the modern and contemporary eras.

English IV: Monsters in Literature (12)

This course is an examination of how literary monsters are a creation of our own fears. Using Jeffrey Jerome Cohen's Seven Theses of Monster Culture as our guiding framework, this course examines the many faces of the monster trope: early mythological beasts; scientific monstrous creations like Frankenstein & Mr. Hyde; and contemporary depictions like Grady Hendrix's Horrorstör, a novel that explores the monster within late-stage capitalism and consumer culture.

English IV: Muckrakers (12)

Muckrakers were writers, photographers, and activists who reached beneath the sparkling surface of American society and made visible everything that lurked beneath: the violence of slavery and lynching, the cruelty of government schools for Indigenous children, the inhumane treatment of people in mental hospitals, and the impossibly wide gap between the wealth of early industrialists and the poverty of the workers whose labor created that wealth. In this course, you will read and discuss selections from many of the texts that exposed the most pressing issues in American society in the late 19th and early 20th centuries. We will read and discuss several examples as a class, and each of you will also research and present information about a muckraker who interests you. Finally, in the last few weeks of the course, you will become the muckrakers of today! Each of you will investigate a current issue that matters to you and find a way to share your findings and advocate for change.

Students may enroll in this class for either English or History credit; some assessments will differ based on which track a student signs up for.

English IV: Reading and Writing Punk Lit (12)

Punk is a music-based subculture that began in the 1970s, evolving over the decades into many related subcultures. For this course, we will be reading and discussing non-fiction texts that illustrate the successes and failures of these movements (with a focus on the feminist movement), and we will be using the music as a point of departure to strengthen our writing skills — via creative writing exercises and essays.

English IV: Reel Narrative I (12)

Reel Narrative I --"Introduction to Film" studies film as an artform with a language pulling from literature, theatre, and photography as well as crafting its own artistic perspectives. By the end of the trimester, students will be able use foundational concepts of film to analyze, interpret, and write about cinema.

English IV: Reel Narrative II (12)

Reel Narrative II explores the history of the horror genre in film. Beginning with the 1920 German expressionist silent film The Cabinet of Dr. Caligari and ending with the contemporary horror film Get Out, this class analyzes the evolution of horror over the past 125 years. Furthermore, we will learn film terminology, such as mise-en-scène and cinematography, which we will incorporate into our film responses and analytic paper. By the end of the class, we will have foundational knowledge of cinematic analysis and vocabulary. Reel Narrative I is not a requirement to take this class.

English IV: Science Fiction & Society (12)

Science fiction is a literary genre that allows readers to imagine the future—to imagine progress. This course will examine the depiction of progress in (and through) science fiction, covering several short stories and novels in the genre. At the end of the trimester, students will use what they've learned to write a science fiction short story inspired by exemplary science writing. Sample texts include Dawn by Octavia Butler, "Mono No Aware" by Ken Liu, "The Women Men Don't See" by James Tiptree, Jr. Our reading (or watching) will be shaped in part by student interest.

English IV: Shakespeare and History (12)

This course will introduce students to Shakespeare's England, focusing specifically on the conditions of the theatre in London, gender, politics, and religion, and how that history can help us understand Shakespeare's texts more completely. The first half of the trimester will be focused on the history; the second half will involve a close study of *A Midsummer Night's Dream*. The trimester will end with an introduction to New Historicism (also known as Cultural Poetics), a method of critical inquiry that foregrounds the social and contingent nature of literary production and interpretation. Students will give a presentation and write a research essay in the style of New Historicism at the end of the trimester.

English IV: Short Story (12)

This course will focus on the craft of storytelling. Our guiding questions will be how a writer composes a story and why stories are told and listened to. Throughout the trimester, as we read and discuss a number of key short stories, we will be focusing primarily on the formal elements of narrative such as plot, characterization, setting, and pacing. In a sense, we will be taking apart these narrative machines to see how they work. Each of the stories we read will be accompanied by at least one short writing assignment intended both to stimulate the imagination and to practice certain structural elements of fiction writing. Along with these weekly small writing assignments, we will each be working on one major short story. All of this writing will be shared with the rest of the class in workshop and peer review formats. By the end of the trimester, we will all become better storytellers and have enriched our appreciation for the vital role that narrative serves in our lives.

English IV: The Brontes (12)

In this reading intensive course, we will read three classic works of English literature by the Brontës: Charlotte Brontë's *Jane Eyre* (1847), Emily Brontë's *Wuthering Heights* (1847), and Anne Brontë's *The Tenant of Wildfell Hall* (1848). In our discussion of these texts, we will explore the world of early Victorian England, developing insights into societal expectations and roles of women. We will also explore the limitations of the publishing world and the necessity of pseudonyms during the publication process. This course explores the world of the Brontës, the impact of their work on English and global literatures, and the influence society has in determining who can and cannot create art. Furthermore, we will delve deeply into early Victorian England history, the role of women within Victorian society, and explore why the Victorian era continues to fascinate readers.

English IV: West African Literature (12)

African Literature--"West African Literature" introduces students to literature from West African nations, such as Nigeria, Senegal, and Ghana, and explores how authors use literature as a form of activism against the remnants of European colonialism. We will also look at how West African authors use literature to create new futures and imagine new identities.

Fine Arts Department Course Offerings

Arts Eye **(9)**

Arts Eye is an everyday exploration of the fine arts that is required for all freshmen. Teachers of theatre, music and art collaborate on major themes throughout the year, investigating a wide collection of what it means to study in each discipline, the use of memory in creation, playwrights as storytellers, and our own identity in this world, to name a few. Students are introduced to the creative world through visiting artists and performers, trips to galleries and theatres, and utilizing national art organizations like StoryCorps. Arts Eye celebrates each student's artistic expression and creates citizens of our world who will seek out art in all their future endeavors either as an artist, advocate, or patron.

Ensemble **(9-12)**

A collaborative music-making course in which students rehearse and perform instrumental music, building skills in listening and group musicianship.

Glee **(9-12)**

A performance-based choral ensemble focused on developing vocal technique, musical literacy, and ensemble singing through a diverse repertoire.

Absurdist Drama **(10-12)**

This course covers theatre performance and various forms of theatrical entertainment through the eyes of these playwrights. The point of this class is to identify different styles and their origins by reading plays and seeing performances. Through these phases of entertainment we will discover different performance pieces, theatres, and personalities. We will not only cover the playwright but also the historical and psychological aspects of the plays as well. Course Objective: To provide students with an overview of theatre (in a variety of forms) and to help them understand its importance to understanding culture, both past and present. We study playwrights who write off the beaten path, challenge us to see the world differently and are usually dealing with existentialism, alienation and the avant garde. Playwrights who have taken us on a ride include: Sarte, Pirandello, Beckett, Brecht, Alfred Jarry, Edward Albee, Eugene O'Neill and Elmer Rice – to only name a few.

Advanced Drawing **(10-12)**

Prerequisite: Intro to Drawing

Students will expand on techniques learned in Intro to Drawing and focus on exploring thematic ideas through a series of projects. Students' drawing skills will evolve through the use of media such as charcoal, pastel, and colored pencil, while studying subjects including still-life, landscape, and portraiture.

Advanced Film Photography **(10-12)**

This is a fine art/advanced photography class. Students go back into the darkroom and work at perfecting shooting film and printing in the darkroom. Each project requires not only a black and white print but also an alternative process. Students are expected to try solarizing, hand coloring, Holga cameras, dyeing and toning, collaging and making photo based 3D projects.

Art and Activism I **(10-12)**

This course shows students how artists have used their creative expression to build public awareness about social and humanitarian struggles all over the world. Students will observe different forms of art, such as performance art, street art, documentary photography, and films and installations. By looking at artists' work and discussing its impact, students will gain an understanding of how the arts, and even one single artist, can make a difference in the world we live in.

Art and Activism II **(10-12)**

Foundations course in how artist-activists can bring awareness to global issues such as culture and identity, equality, animal rights and ecology. You can take Activism I or II in any order, they are independent classes with different subject matter in each.

Art of Puppetry **(10-12)**

The Art of Puppetry lies in the process of animating inanimate performing objects to tell a story. In essence, puppetry is giving life to that which does not have one until a human makes it possible. Much like acting, puppetry actors will storytell, present and perform but do this through objects. Actors will learn how to create puppets, write short scripts, create a show and perform it. In addition, they will learn about the history of puppetry, the various forms and styles of puppetry and key puppeteers in the field.

Basic Painting **(10-12)**

This introductory course allows students to explore the basic tenets of painting. Students learn about design and composition, as well as how a painting evolves from the first brush stroke to completion. Each project begins with gathering resource materials and thumbnail sketches, which encourage the exploration of a variety of ways to solve a problem. Time is spent observing masterworks in order to gain a better understanding of assignments.

Composing & Songwriting **(10-12)**

Students will learn the basics of music notation, setting words to music, and make music independent of words. Students will have the chance to perform their music for their classmates.

Contemporary Women in Photography (10-12)
This is a foundations course that covers women's contributions to photography from the early 1900's to the present. In this course students learn that women have played an equal and sometimes greater role in the history of photography than men. Students are required to take quizzes about each photographer and also be able to identify their work.

Dead Playwrights (10-12)
This course covers theatre performance and various forms of theatrical entertainment through the eyes of these playwrights. The point of this class is to identify different styles and their origins by reading plays and seeing performances. Through these phases of entertainment we will discover different performance pieces, theatres, and personalities. We will not only cover the playwright but also the historical and psychological aspects of the plays as well. Course Objective: To provide students with an overview of theatre (in a variety of forms) and to help them understand its importance to understanding culture, both past and present. We study playwrights who no longer exist on this earth, but whose work is still vibrant today. In the past this has included – Tennessee Williams, Arthur Miller, Lillian Hellman, Lorraine Hansberry, Sophocles, Henrik Ibsen, George Bernard Shaw and Peter Shaffer – to only name a few.

Digital Art and Illustration (10-12)
Students learn how to paint and draw using digital tools and several types of 2D applications in the Mac lab. Digital Art and Illustration and Mixed-Media Mash-Up are scheduled at the same time in order to rotate students enrolled in both courses to allow for some collaborative work. This way both classes have the opportunity to incorporate both digital and hands-on skills and to interact with each other. Each class has its own separate projects, and credit is given for the class for which the student is registered.

Digital Third Dimension (10-12)
Students will create and design 3D models, artwork and environments in this class using several different software applications. When possible, artwork will also be printed out and used to create 3 dimensional art pieces, such as dioramas, mobiles, books, and simple sculptures.

Elements of Music (10-12)
This course looks at the building blocks of music (melody, harmony, rhythm, etc.), the basics of music notation, and a brief outline of music history. A great gateway into understanding the art and science of music.

Experiments in Printmaking (10-12)
In this class we will explore the basic techniques of printmaking. Printmaking is the art of creating multiple copies of an artwork from a single stamp or image matrix. We will use everything from potatoes, to linoleum, to wood, to mesh screens to create our matrices as we

explore linocut, monoprint and screen-printing techniques. If you like to draw or experiment with new mediums this may be the class for you! If you want to share your artwork, but don't want to give away your only original, you will appreciate the share oriented culture of printmaking. Towards the end of the trimester we will organize a print exchange and each student will go home with a print made by every other person in the class.

Foundations in Abstraction (10-12)

This course covers the roots of objective and non-objective abstraction from cave painting to Contemporary Art. Beneath the broad heading of "Abstraction" we will study the psychology, history, and ideas that led artists to move beyond representational artwork. We will examine how abstract artworks impact the human brain and how abstract painters sought to reduce their artworks to simple lines and colors in order to examine the building blocks of visual experience. Much time will be spent at the Albright Knox Gallery engaging with art in person. In addition to six visits to the Albright Knox we will visit The Burchfield Penney, Hallwalls Contemporary Art and CEPA gallery to see exhibits related to the course content. Students will be asked to make connections between historic and contemporary works and will keep visual journals reflecting on the artworks we discuss in class.

Foundations in Film Music (10-12)

This is an exploration of how music has enhanced our experience of the movies from the era of silent film (and the music played alongside it) to today's blockbusters.

Foundations in Public Art (10-12)

This course covers the history of public art from cave paintings, to graffiti, murals, and beyond. We will examine techniques, concepts, and social movements that have driven artists to represent the world around them on a public canvas. Much time will be spent engaging with art in person by visiting local murals and art installations.

Foundations in Representation (10-12)

This course covers the history of mimicry and representation in art from the Renaissance to Pop Art and beyond. Beneath the broad heading of "Representation" we will examine the techniques, concepts and social movements that have driven artists to represent the world around them in different ways. From Da Vinci's scientific approach to Matisse's emotive use of color, we will examine techniques artists developed to make convincingly realistic works and the reasons many artist's abandoned these rules. We will see how artists like Gustave Courbet and Jacob Lawrence sought to represent diverse populations in a medium typically reserved for the wealthy. We will discuss the ethics of appropriation and mimicry in Pop Art. Students will be asked to make connections between historic and contemporary works by artists like Kara Walker. Much time will be spent at the Albright Knox and other area galleries engaging with art in person. Students will keep visual journals reflecting on the themes and questions brought up in class.

Graphic & Print Design **(10-12)**

This course teaches students about communication, traditional typography, advertising, and print design. A brief history of print design is covered as well as how women are portrayed in advertising. Using industry standard design and layout software, students work on projects ranging from business logos/identities and public service announcements to simple design and layout of multi-page documents.

Illustration **(10-12)**

This class is an introduction to illustration techniques, focusing on drawing strategies, concepts, storytelling, and character development exercises while experimenting with a multitude of media including graphite, ink, colored pencil, and watercolor. Students will be encouraged to explore and discover their personal style and find their artistic voice through a series of prompts and thematic projects.

Introduction to Acting **(10-12)**

This course introduces students to basic acting skills, including improvisation, script and character analysis, characterization and to develop concentration in public performance.

Introduction to Acting Shakespeare **(10-12)**

This course introduces students to the keys of "unlocking" Shakespeare's language through performance. Tools such as language, sound, meaning, and rhythm will help students to better understand, interpret and perform Shakespeare. We will use acting skills, including improvisation, script and character analysis, and characterization. This class will also help to develop concentration in public performance.

Introduction to Drawing **(10-12)**

This class will introduce students to the basic principles of drawing. Students will learn to draw from observation using pencil, charcoal, and ink. Time will be spent on perspective, proportion and shading. We will start with the basics and then move towards conceptually oriented projects at the end of the trimester.

Introduction to Photography **(10-12)**

This class is a prerequisite for all other photography classes. Students learn proper composition of photos as they begin shooting digitally and working in Photoshop. Basic camera operation, understanding film and developing negatives and prints is covered before students shoot their first roll of film, and then learn basic darkroom skills.

Introduction to Ukulele **(10-12)**

Introduction to Ukulele is an introductory class for learning the basics of playing the ukulele and a history of the instrument and famous players. Students will learn how to play chords, songs, and an introduction to picking.

Living Playwrights **(10-12)**

This course covers theatre performance and various forms of theatrical entertainment through the eyes of these playwrights. The point of this class is to identify different styles and their origins by reading plays and seeing performances. Through these phases of entertainment we will discover different performance pieces, theatres, and personalities. We will not only cover the playwright but also the historical and psychological aspects of the plays as well. Course Objective: To provide students with an overview of theatre (in a variety of forms) and to help them understand its importance to understanding culture, both past and present. We study playwrights who are currently writing right now! In the past we have enjoyed the works of Paula Vogel (just opened Indecent on Broadway), Suzan-Lori Parks (who we saw at Just Buffalo's Babel & performed her work at SEM), David Henry Hwang (also at Babel), Danai Gurira (her play, Eclipsed was just on Broadway) and Quiara Alegria Hudes.

Making Music **(10-12)**

Improvisation--Making music with instruments, voices, found objects. Students will apply the Elements of Music to individual and group projects. Story-telling in sound, and creating a multi-media performance. Walter Thompson's Soundpainting is a valuable tool in this class.

Mixed Media Mash-up **(10-12)**

This class is all about learning how to choose what to make when faced with unlimited possibility. Instead of focusing on a single artistic medium, you will be introduced to many and asked to choose which one works best for your project. The class will run as a "choice based studio" which means that you will have the opportunity to delve deeper into projects that interest you personally. During the first half of the trimester we will expand your medium toolbox by learning new skills in collage, cardboard sculpture, papercut, bookmaking, drawing and painting. We will focus as much on the process as on the final product. You will share and reflect on your creative process on a portfolio webpage and in class critiques. During the second half of the trimester we will examine some themes in contemporary art and look at contemporary artworks for inspiration. You will have the chance to choose a theme (or themes) and apply what you learned during medium exploration to mixed media projects.

Music Theory **(10-12)**

This course explores the fundamentals of what makes music tick and explores what we hear and how we hear it.

Photography & Mixed Media **(10-12)**
In this advanced photography class, students use their digital photography to create art by: manipulating work in Photoshop, printing on various types of mediums, using scanners, collaging, assembling 3-dimensional pieces and enhancing their work with other art materials.

Poetry in Motion **(10-12)**
This digital class will concentrate on creating art that moves! Stop-motion and fractal animation, video-making and editing, combining text with images, narration, sound and motion graphics will be covered. Students will make video art to be viewed on screen as well as online.

Portrait **(10-12)**
Prerequisite: Introduction to Drawing or Basic Painting
This course will allow students who have taken Intro to Drawing and/or Basic Painting to level-up their abilities by implementing their foundational skills to learn new and advanced techniques in portrait drawing. Students will gain confidence in their creative abilities while building content for a visually impressive and technique based portfolio that they may use when applying for college, scholarships, and art exhibitions in the future.

Public Art (studio) **(10-12)**
This collaborative course will focus on creating a large scale art piece as a group. Students will be encouraged to experiment as they explore thematic ideas, imagery, learn about the public art making process and how it evolves from a small sketch to completion.

Theatrical Production **(10-12)**
This course provides students with a hands-on experience incorporating all aspects of theatre production. By creating publicity, covering box office and budgeting, building props and costumes, and focusing lights, students have the opportunity to draw on skills learned in math, English, history, computer, and design while developing new skills in sewing and construction. This class will be working on producing Buffalo Seminary's fall play.

Voice Class **(10-12)**
Students will learn the fundamentals of vocal production and good vocal health. They will employ these skills as individual singers as well as group-singing with the class. Singing in more than just English is a must!

Women in Music **(10-12)**
Women in Music is a seminar/discussion based course that explores the role of women in music from around the world (both western and non-western). We will examine the role that women have played as composers, performers, and touch on the representation of women in music and how it reflects broader cultural contexts, specifically in relation to gender issues. Key music

historical figures will be researched, listened to, and discussed. Included in the class will be music listenings, lectures, discussion, and field trips to musical performances. Music theory and instrument playing is not required to be successful in this class.

Advanced Acting Shakespeare (11-12)

Prerequisite: Successful completion of Introduction to Acting Shakespeare

This course builds upon the skills learned in Intro to Acting Shakespeare. Students actively "unlock" Shakespeare's language through performance, using more scene work, play analysis and viewing of performances either live or in the classroom.

Advanced Drawing **(11-12)**

Prerequisite: Successful completion of Introduction to Drawing

Students will expand on techniques learned in Intro to Drawing and focus on exploring thematic ideas through a series of projects. Students' drawing skills will evolve through the use of media such as charcoal, pastel, and colored pencil, while studying subjects including still-life, landscape, and portraiture.

Searching for Shakesphere **(11-12)**

Prerequisite: Successful Completion of Intro & Advanced Shakespeare

To explore Shakespeare in ways that break the boundaries of the traditional classroom through history, community, performance and travel. Tools such as language, sound, meaning, and rhythm will help students to better understand, interpret, and perform Shakespeare. Studying Elizabethan English history, Shakespeare's scripts will help students to form a foundation of the Bard's great works. We will use acting skills, including, improvisation, script and character analysis, and characterization. Most importantly this will allow students to take their knowledge out into the community and share it with the world, while learning along the way.. This course can be counted as a "Foundation" or "Hands-On".

Playin' with the Playwright **(11-12)**

How great would it be to spend a full trimester with one writer's work? To share, discuss, delve and greater understand a playwright's legacy – to study their fingerprint on theatre history – and to discover what political, social, economic and major events contributed to their work. Feature playwrights include: August Wilson, Suzan-Lori Parks, Samuel Beckett & Sarah Ruhl.

Foreign Language Department Course Offerings

Advanced French **(All grades)**

Prerequisite: Successful completion of Intermediate French

This is the last of the three-trimester-long core courses and is offered for students who have successfully completed the intermediate level. At the advanced level, students review all key grammatical concepts, especially those nuances which cause the most difficulty for learners of French as a second language, and strengthen their vocabulary through exposure to authentic materials dealing with a wide number of topics such as current events, science and technology, popular culture, etc. Since this is the last core course offered before AP Language and Culture, students at the advanced level are prepared for the rigors of the AP curriculum and the type of tasks that they will be expected to complete. Students at the advanced level are provided ample opportunities to perfect their writing and speaking skills, and by the end of the year they should be able to discuss any topic fluently and cohesively in the target language.

Advanced Spanish **(All grades)**

Prerequisite: Successful completion of Intermediate Spanish

This is the last of the three-trimester-long core courses and is offered for students who have successfully completed the intermediate level. At the advanced level, students review all key grammatical concepts, especially those nuances which cause the most difficulty for learners of Spanish as a second language, and strengthen their vocabulary through exposure to authentic materials dealing with a wide number of topics such as current events, science and technology, popular culture, etc. Since this is the last core course offered before AP Language and Culture, students at the advanced level are prepared for the rigors of the AP curriculum and the type of tasks that they will be expected to complete. Students at the advanced level are provided ample opportunities to perfect their writing and speaking skills, and by the end of the year they should be able to discuss any topic fluently and cohesively in the target language.

Intermediate French **(All grades)**

Prerequisite: Successful completion of Introduction to French

This course is offered as a continuation from Introduction to French, or for students who enter SEM with a solid background in the language. This three-trimester-long course is meant to reinforce the grammar and vocabulary topics presented in the Intro level and expand on them. By the end of the year, students will have learned all major grammatical concepts such as the past tense, mood selection, compound tenses, and additional verb forms such as the future and conditional. Students will also expand their vocabulary, learning new concepts such as health, medicine, technology, the arts, work and the media. Students are exposed to authentic written and recorded materials throughout the year. All activities, both in and out of class, are aimed at strengthening comprehension and production in the four areas of speaking, listening, writing and

reading. The class is conducted in the chosen language, and students are expected to interact with one another and their instructor in the target language as well.

Intermediate Spanish (All grades)

Prerequisite: Successful completion of Introduction to Spanish

This course is offered as a continuation from Introduction to Spanish, or for students who enter SEM with a solid background in the language. This three-trimester-long course is meant to reinforce the grammar and vocabulary topics presented in the Intro level and expand on them. By the end of the year, students will have learned all major grammatical concepts such as the past tense, mood selection, compound tenses, and additional verb forms such as the future and conditional. Students will also expand their vocabulary, learning new concepts such as health, medicine, technology, the arts, work and the media. Students are exposed to authentic written and recorded materials throughout the year. All activities, both in and out of class, are aimed at strengthening comprehension and production in the four areas of speaking, listening, writing and reading. The class is conducted in the chosen language, and students are expected to interact with one another and their instructor in the target language as well.

Introduction to French (All grades)

This course is designed for students who have either never taken French, or whose entrance exam results did not qualify them for the intermediate level. This three-trimester-long course provides students with basic grammatical structures such as the present tense, verbs for expressing ‘to be,’ adjective agreement, object pronouns, negation and the past tense. The class is also designed to introduce students to the correct spelling and pronunciation of the target language as well as to provide a wide array of basic vocabulary terms related to greetings, school, family, hobbies, vacation, shopping, food and festivities. Although this is an entry-level class, students are exposed to authentic written and recorded materials throughout the year. All activities, both in and out of class, are aimed at strengthening comprehension and production in the four areas of speaking, listening, writing and reading. The class is 90% conducted in the chosen language, and students are expected to interact with one another and their instructor in the target language as well.

Introduction to Spanish (All grades)

This course is designed for students who have either never taken Spanish, or whose entrance exam results did not qualify them for the intermediate level. This three-trimester-long course provides students with basic grammatical structures such as the present tense, verbs for expressing ‘to be,’ adjective agreement, object pronouns, negation and the past tense. The class is also designed to introduce students to the correct spelling and pronunciation of the target language as well as to provide a wide array of basic vocabulary terms related to greetings, school, family, hobbies, vacation, shopping, food and festivities. Although this is an entry-level class, students are exposed to authentic written and recorded materials throughout the year. All

activities, both in and out of class, are aimed at strengthening comprehension and production in the four areas of speaking, listening, writing and reading. The class is 90% conducted in the chosen language, and students are expected to interact with one another and their instructor in the target language as well.

AP French Language and Culture (11-12)

Prerequisite: Successful completion of Advanced French

The class involves extensive exposure to authentic news sources, literature and videos involving current events and various cultural topics and thematic vocabulary. Students will become familiar with the AP exam through continuous practice of AP-style assessments (reading, writing, listening and speaking), all of which are graded according to the College Board rubrics. The level of challenge and the learning expectations to which the students are held are similar to those of a university-level class.

AP Spanish Language and Culture (11-12)

Prerequisite: Successful completion of Advanced Spanish

The class involves extensive exposure to authentic news sources, literature and videos involving current events and various cultural topics and thematic vocabulary. Students will become familiar with the AP exam through continuous practice of AP-style assessments (reading, writing, listening and speaking), all of which are graded according to the College Board rubrics. The level of challenge and the learning expectations to which the students are held are similar to those of a university-level class.

Arte y Memoria Histórica (11-12)

Prerequisite: Successful completion of Advanced Spanish

The 1960s and 70s were a turbulent time — not just in the US, but in Latin America and Spain, too! During this period, many Spanish-speaking countries saw radical changes in their governments, economies, and relationships to other nations. And, of course, all of this change is reflected in the art, movies, literature, and music made during, and about, those decades. In this class, we will study both historical and modern-day art from Spanish-speaking countries to explore the question of how we use art to understand society, and more specifically, how it can allow us to promote memoria histórica — historical memory. Through this elective, you will strengthen your communication skills in Spanish and get the chance to produce a creative historical memory project of your own.

Bon Appétit (11-12)

Prerequisite: Successful completion of Advanced French

France and Québec have two completely different identities when it comes to food. French cuisine has not influenced Québec cuisine; therefore, the only thing the two French territories have in common when it comes to eating is what we say before we eat: “Bon Appétit!” French cuisine developed its refinement and strict culinary techniques over centuries, going back to a

time when people aimed to please the Monarchy, and has grown has what we now know as one of the most renowned cuisines worldwide. Québec culinary tradition, on the other hand, was built around very long winters and vigorous chores, such as the colonization of a new land. This course will compare and contrast both traditional habits, along with building new vocabulary and the general knowledge of students.

Buen Provecho (11-12)

Prerequisite: Successful completion of Advanced Spanish

Do you enjoy trying new foods? Have you considered where the food you eat comes from? Who grew it first? Why? What ways can this food be prepared? Food can transcend linguistic barriers and bring people together. However, there is a lot language has to offer our exploration of food. In this course we will look at food origins with attention to the associated cultural practices and traditions associated with both raw and cooked foods. We will learn not only about the foods themselves but also explore and appreciate the cultures that made some of our favorite foods possible!

Cuentos Cortos Latinoamericanos (11-12)

Prerequisite: Successful completion of Advanced Spanish

This course focuses on selected short stories written in Spanish from Latin America and Spain, and explores the work of writers in the genre of fantasy, detective and mystery in Hispanophone literature. This course is a journey through the socio-political characteristics and intercultural influences short story Latin American writers have been exploring and focuses on from the beginning of the 19th century up to today. Historical backgrounds on the authors and the texts will be presented to the students; therefore, they will not only gain knowledge of Latin American literary texts and movements, but also on the historical and cultural influences that crafted all literary works to be studied. Students will be actively participating in class discussions of themes in small groups.

Cinema Latinoamericano–Latin-American Film (11-12)

Prerequisite: Successful completion of Advanced Spanish

This trimester course is offered to those students who through different independent and commercial films want to learn about the historical development, the armed conflict, emigration, discover the importance of government and political roles in Latin America. Students will continue to enrich their vocabulary and improve their communication skills. Every class is designed with different activities before the film, during, and after to come to a full interpretation. After each film the students will defend their critiques to emerge with an expanded view of the Latin American world.

Discovering the Francophone World (11-12)

Prerequisite: Successful completion of Advanced French

This course offers the opportunity to explore the subtleties of modern French, to continue developing speaking and reading skills, and to focus mainly on conversational French while deepening knowledge of French culture and civilization. Students will be asked to research a variety of sources (magazines, newspapers, websites, etc.) to find articles to discuss in class. Specific topics will be assigned from week to week to guide student research (e.g.: economy, politics, sports, food, technology, etc.). Students will be responsible to lead conversations and to actively participate in discussions. This class will only focus on speaking and reading. Students will be able to build speaking techniques throughout the semester to help them reach their full conversational potential.

El Arte Hispanico (11-12)

Prerequisite: Successful completion of Advanced Spanish

This class introduces students to the wide range of artistic styles and periods in the Western World with emphasis in Spain and Latin America focusing on architecture, Painting and Sculpture. Critical thinking, research, oral and writing skills are cultivated in this class, which emphasizes visual literacy, an understanding of history as well as the social forces and ideas that shaped different periods and styles. Ancient (Greco-Latin World), Medieval, Renaissance, Baroque, Neoclassicism, Romanticism, Modern & Postmodern Art.

El Arte Hispanico 2 (11-12)

Prerequisite: Successful completion of Advanced Spanish

This class introduces students to the wide range of artistic styles and periods in Spain and Latin America focusing on movies, music and literature. Critical thinking, research, oral and writing skills are cultivated in this class. We will explore visual and auditory art in various Spanish speaking countries and will allow our senses and our imagination to travel thanks to some of the most important composers, creators, and authors of the world.

Exploring the Hispanic Community (11-12)

Prerequisite: Successful completion of Advanced Spanish

Students will have the opportunity to visit the local Hispanic community to learn about the diversity in their own region. Studying the mission and exploring the community will demonstrate the importance and utility of bilingualism as students will interact with native speakers and hone communication skills. This elective will develop a relationship with community organizations to create prospective senior internships in Spanish.

La actualidad - Current Events (11-12)

Prerequisite: Successful completion of Advanced Spanish

During the trimester, participants will be asked to find Spanish news articles to share with the rest of the class and to lead a conversation on the topic. Each class, participants will either lead the conversation, or participate in a debate. The goal of the class is to develop critical thinking in Spanish, to build new vocabulary, to become more comfortable speaking, and to understand the world from a different perspective.

L'Actualite–Current Events (11-12)

Prerequisite: Successful completion of Advanced French

This course is mostly targeted to improve the students' speaking skills. Each student will be taking turns every class to find an article in a French newspaper and share it with the rest of the class, including the teacher. The student choosing the article will be leading the class conversation. Each class, all students will contribute to the conversation. Grades are strictly based upon speaking. The goal of this class is to develop critical thinking in the target language, to clearly formulate an opinion, to bring awareness of the world around us and to respectfully understand different perspectives. The teacher will be correcting students and reinforcing the language skills. All conversations and topics are chosen by students.

La culture francophone au cinéma - French culture in movies (11-12)

Prerequisite: Successful completion of Advanced French

After teaching electives about political issues, culture, food, traditions, and literature, the third trimester French elective will aim to combine everything together on a screen. Indeed, the students will have the opportunity to extend their knowledge of the French culture through different films. They will learn about historical developments, conflicts, cultural life, and more. Students will continue enriching their vocabulary and improving their communication skills. Every class will be designed with different activities before, during, and after the film to get a full perspective. After each film the students will be able to defend their opinion and widen their view about French speaking countries.

Latin American Dance (11-12)

Prerequisite: Successful completion of Advanced Spanish

During this trimester course, different styles of dance will be introduced via background articles, history lectures, and biographies of modern and historical figures in the dance. Students will learn the historical roots of the dance, how that style influenced the genre of dance, and contemporary influences of the style. Students will also learn and practice that dance style with directions given in Spanish.

Les femmes de Versailles (11-12)

Prerequisite: Successful completion of Advanced French

Versailles was the residence of the last three kings of France of the Ancien Régime, but was also the headquarters of their wives: Marie-Thérèse, who died there in 1683, Marie Leszczynska, who

lived there from 1725 to 1768, and Marie-Antoinette, who lived there was dauphine in 1770, then queen from 1774 to 1789. Each in their own way, these three personalities left their mark on Versailles, Marie-Antoinette being the most visible today. The female members of the royal family also occupied an important place in Versailles, from the duchesses under Louis XIV to the daughters of Louis XV. Many other "unpopular" women also impacted the image of Versailles: Madame de Maintenon, who became the secret wife of Louis XIV; the many favorites of Louis XV, from Madame de Mailly to Madame du Barry, including the unbeatable Madame de Pompadour; the friends of Marie-Antoinette, the Duchess of Polignac in particular. This class will offer an overview of their living conditions at court, a study of their role, and a reflection on their destinies: improbable and exceptional.

Latin American Culture (11-12)

Prerequisite: Successful completion of Advanced Spanish

This trimester class will be offered to those students who have a passion for Latin American culture, Spanish language and community service. This course will be taught in Spanish and will focus on history, government, geography, economics, tourism, education, religion, and sports in Latin American culture. Students will be assessed using primarily weekly readings and in-class discussions. In addition, students will do a final project involving extensive research on a location of their choosing in Latin America. Students will do a presentation and use technology to find a contact to interview in their selected country.

The Francophone World: Québec (11-12)

Prerequisite: Successful completion of Advanced French

This course provides an environment in which students can experience immersion, building their French language proficiency while deepening their knowledge of a French-speaking culture: Québec. After this three-semester-long elective, students will be able to identify and understand major movements, periods, and historical themes that contributed to the shaping of Québec culture and identity. Students will have opportunities to do project research on topics such as: geography, historical figures, attractions, literature, culture, tradition, and food.

Health/Leadership Department Course Offerings

Seminar: Global Citizens (9)

In Global Citizens class, students investigate the top 5 Global Crises in a quest to answer the following: Can we actually make the world a better place? Students spend several months doing research in groups to come up with creative solutions to the world's problems and then present their findings in a final presentation to the class at the end of the trimester. Students leave Global Citizens inspired, empowered, and excited to put their classmates' ideas into practice.

Foundations: Health/Leadership for Freshmen (9)

This full year course lays the foundation for the rest of the 4-year curriculum, by building a sense of community with one another and building each girl's knowledge base and vocabulary at an introductory level. Topics include: team-building activities, time management and study skills, friendships and relationships with one another, healthy decision making, alcohol awareness, sex education (anatomy, reproductive systems, pregnancy, contraception, and STIs), media literacy, eating disorders, and public speaking. 1st Trimester: Girl World; Team Building, 2d Trimester Brain Science & Alcohol Awareness, 3d Trimester: Sex Ed.; Media Literacy

Explorations: Health/Leadership for Sophomores (10)

In this full year course, students will explore more deeply topics introduced in the Foundations level. Topics include how the brain works, mental health and mindfulness, media and information literacy and drug awareness.

Applications: Health/Leadership for Juniors (11)

This is the year in which students learn skills that enable them to apply their knowledge to real-life situations. Topics include leadership skills, transitioning to the work force including resume writing and interview preparation, public speaking and an intensive trimester-long college counseling workshop.

Survival 2.0: Health/Leadership for Seniors (12)

It's time to prepare for college and the world beyond SEM's long wide hallway and this full year class is the culminating experience. Topics include college counseling and how to prepare for college. Additionally, there is a speaker-series featuring alumnae representing a variety of professional fields.

History Department Course Offerings

History I: Civilizations and Civics (9)

Civilizations and Civics is designed to introduce 9th-grade students to the foundations of human society and the principles of active citizenship. This course weaves together the study of world history and civics to help students understand how geography, culture, religion, government, and economics have shaped civilizations across time—and how those legacies continue to influence the modern world. Students will begin by exploring foundational world geography to develop spatial awareness and contextualize historical developments. The course then traces the rise of early civilizations, examining how humans transitioned from nomadic societies to complex urban centers. Through the study of major world religions and belief systems, students will gain insight into the values, conflicts, and connections that have shaped diverse societies. As the course progresses, students will analyze the development of various political systems—from monarchies and empires to democracies and republics—alongside economic systems such as feudalism, mercantilism, capitalism, and socialism. Throughout, students will make connections between historical systems and contemporary governance. The civics strand of the course emphasizes the roles, rights, and responsibilities of citizens in a global context. Students will investigate how individuals and groups have worked to create change, participate in civic life, and shape the world around them. Through inquiry-based learning, primary source analysis, and collaborative projects, Civilizations and Civics empowers students to think critically, engage thoughtfully with history, and understand their place in today's interconnected world.

United States History (10)

This is a survey course that begins with the first Americans and extends through the late 20th century, although students are asked to make connections to the America of today throughout the course. Students develop a foundational understanding of American history through textbook readings, online supplemental texts, and brief lectures, but an emphasis is placed on the use of primary source documents and texts that require students to think critically about historical context, purpose, and point of view. Writing is an integral part of the course; students learn to develop an argument and analyze relevant evidence in order to communicate their own ideas about history as clearly and convincingly as possible. In the first trimester, the curriculum focuses on America through the early 1800s. Students trace the development of both Native American and colonial civilizations, and special attention is paid to questions of identity and political power. As students study America's path toward independent nationhood, they are asked to consider the meaning of terms like "freedom" and "equality" to different groups of Americans in the late 18th and early 19th centuries. In the second trimester, students turn their focus to the growing nation. As students examine America's early national identity, they use key events and phenomena such as westward expansion and the Civil War to help them analyze the ways in which America remained true to its earliest ideals as well as the ways in which American ideals changed over time. In the third trimester, students study America's industrialization and

emergence as a world power. Students analyze the concept of the "American Dream" and identify the ways in which that concept contributed to the world we live in today, while also looking at the ways in which that dream was not always consistent with reality. Beginning with American imperialism and extending through both world wars, Korea, and Vietnam, students examine America's expanding role in world events. Students who perform exceptionally well in their freshman year will be recommended for AP U.S. History.
Students may take this course or AP US History to satisfy the US History graduation requirement.

AP United States History (10)
Prerequisite: Teacher recommendation; department approval
This challenging and fast-paced course offers extremely motivated students a chance to study American History at the college level. AP US History combines broad knowledge of American history with in-depth understanding of how and why historical events unfolded. Students in this course practice the historical thinking skills necessary to succeed on the AP US History exam. At the same time, they study the sweep of American history from the pre-Columbian era to the present, and seek out the common strands that connect each period to the next. This class requires a great deal of reading, including a college-level textbook and many diverse primary sources, as well as focused, structured analytical writing and high-level discussion.
Students may take this course or US History to satisfy the US History graduation requirement. Placement in this course is based on performance in previous history courses, completion of a sample assessment, and discussion of student needs with history faculty.

AP World History (11)
Prerequisite: Teacher recommendation; department approval
SEM offers Advanced Placement World History for highly motivated and qualified juniors. The objective of this advanced, fast-paced, college-level course is to prepare students for success on the national AP World History exam. Reaching this objective includes understanding the broad themes and important events of world historical development from roughly 8000 BCE to the present; learning how to construct a historical argument based on primary and secondary sources; understanding long-term and large-scale historical change; and being able to make valid comparisons between diverse civilizations. On a broader academic level, students in AP World History practice and improve their formal writing skills, learn how to take effective and accurate class notes; and hone their critical and analytical thinking skills. Throughout the year, as students examine world historical developments, they keep an eye on patterns, large-scale changes, as well as continuities. They analyze how particular historical developments have impacted gender roles, religious traditions, political traditions, technology, social norms, economics, and the environment. AP World History emphasizes both a clear understanding of regional developments and an understanding of how the world's diverse civilizations comprise a global history.

Students may take this course, World History, or AP Human Geography to satisfy the World History graduation requirement. Placement in this course is based on performance in previous history courses, completion of a sample assessment, and discussion of student needs with history faculty.

The World: Patterns of Change (11)

The junior world history class is designed to continue building the historical thinking skills students have practiced in their previous history classes at SEM while exposing them to more challenging readings and preparing them for college-level humanities coursework. Throughout the year, as students examine global historical developments, they keep an eye on patterns and large-scale changes, as well as continuities. This course introduces students to ancient, classical, medieval, and modern civilizations from across the globe, with an emphasis on the ways that societies interact and develop over time. Students will learn to assess and analyze the different ways in which the cultures of the world think about major issues, including political structures, social norms, technology, economics, the environment, and identity. World History students continue to strengthen their writing skills, with a focus on developing an argument, analyzing evidence, supporting their salient points, and addressing relevant counter-arguments. We also expect students to read and annotate complex texts, make substantive contributions to class discussions, and demonstrate their knowledge and understanding through tests, quizzes, and projects.

Students may take this course, AP World History, or AP Human Geography to satisfy the World History graduation requirement. Placement in this course is based on performance in previous history courses, completion of a sample assessment, and discussion of student needs with history faculty.

America in the 1960s (11-12)

American in the 1960s--This course examines the events and individuals that made the 1960s a truly pivotal chapter in American history. Situating the decade within the broader history of the Cold War, we will study the origins and evolution of America's involvement in the Vietnam War; investigate the multiple ways in which people responded to this conflict; chronicle the rise and enduring significance of the period's many political transformations; and analyze important examples of popular music, film, and television.

AP Human Geography (11-12)

Prerequisite: Teacher recommendation; department approval

This course introduces students to the systematic study of patterns and processes that have shaped human understanding, use, and alteration of Earth's surface. Students employ spatial concepts and landscape analysis to examine socio economic organization and its environmental consequences. They also learn about the methods and tools geographers use in their research and applications.

Students may take this course, AP World History, or World History to satisfy the World History graduation requirement. Placement in this course is based on performance in previous history courses, completion of a sample assessment, and discussion of student needs with history faculty.

Contemporary Middle East History (11-12)
This course surveys the recent history of the Middle East, placing particular emphasis on the causes and consequences of the ongoing Israeli/Palestinian conflict. We will consider the significance of the First and Second World Wars for the Middle East; examine the founding of the State of Israel, as well as its tumultuous aftermath; chronicle the region's most important 20th century conflicts; and contemplate the present and uncertain future of this enormously significant part of the world. Broadly speaking, the class will be organized like a college-level history seminar. Students should expect weekly reading assignments, quizzes, several graded class discussions, and an analytical essay.

HERstory as History (11-12)
This course provides an overview of the U.S. women's rights movement through a survey of the key events and personalities that have shaped it. The primary focus will be events from the 19th through the 20th century, starting with the 1848 Women's Rights Convention in Seneca Falls, N.Y. Particular emphasis will be on the First and Second Waves of feminism. By the end of the course, students should have a general appreciation of the events that paved the way for the challenges and opportunities available to women in the 21st century.

History of Pop Culture (11-12)
This course will examine the ways in which new forms of media--radio, film, television, and the internet--have left their mark on the history of the last hundred years. With a focus on diverse voices within pop culture, we will investigate the ways in which mass culture has sparked or inhibited change over time.
Students may enroll in this class for either English or History credit; some assessments will differ based on which track a student signs up for.

Mapping the World (11-12)
Mapping the World will explore core concepts of human and physical geography, with practical applications in GIS, preparing students for further studies or careers in geography, urban planning, environmental science, and related fields. A primary objective of the course is to develop skills in spatial analysis, geographic data visualization, and problem-solving through ArcGIS.

Marginalized Identities in US History (11-12)
This course allows students to focus on key groups and figures in United States history that have often been underrepresented in historical narratives. Mainly using primary sources, Marginalized

Identities in United States History examines how time, space, and intersections such as race, class, and sexual orientation define being a man or being a woman.

The Mongol Empire (11-12)

Historians love a good villain. For hundreds of years, if scholars taught Mongolian history at all, their success and spectacular expansion was told almost as a fairy tale, one of blood-thirsty 13th century ogre hordes whose violent rampage across the Eurasian continent left good people powerless in their wake. This course is an attempt to rewrite a great error in history by re-examining this topic and looking at it with a more critical eye. In this course, students will explore the origins of the Mongol empire and the impact, both negative and positive, that it had on its conquered countries--China, the Middle East, India, Russia.

The World Wars (11-12)

World War I was known briefly and optimistically as "the war to end all wars." Poems written by the war's soldiers and reporting from the fronts helped the world to understand the changing nature of warfare, and brought the idea of war's inherent glory into question. While some of the literature of World War II continued to portray the grim absurdity of life as a soldier, memoirs and other accounts brought the inhumanity of the Holocaust to public attention. This course will use literature as a lens through which to examine the world wars.
Students may enroll in this class for either English or History credit; some assessments will differ based on which track a student signs up for.

Muckrakers (11-12)

Muckrakers were writers, photographers, and activists who reached beneath the sparkling surface of American society and made visible everything that lurked beneath: the violence of slavery and lynching, the cruelty of government schools for Indigenous children, the inhumane treatment of people in mental hospitals, and the impossibly wide gap between the wealth of early industrialists and the poverty of the workers whose labor created that wealth. In this course, you will read and discuss selections from many of the texts that exposed the most pressing issues in American society in the late 19th and early 20th centuries. We will read and discuss several examples as a class, and each of you will also research and present information about a muckraker who interests you. Finally, in the last few weeks of the course, you will become the muckrakers of today! Each of you will investigate a current issue that matters to you and find a way to share your findings and advocate for change.
Students may enroll in this class for either English or History credit; some assessments will differ based on which track a student signs up for.

The World Today (11-12)

A one-trimester senior elective which encourages students to become engaged global citizens. The course explores a handful of major topics per trimester, including at least one topic dealing

with international issues or countries/regions of the world other than the U.S. and Western Europe. Flexible time is reserved in each cycle to discuss current events as they happen. Students practice the skills they will need to become independent consumers of news media by analyzing the bias and point of view of various news sources and selecting the most relevant and trustworthy sources to present to their peers. The true goal of this class is to prepare students to fully participate in the modern world, whether they want to hold their own at the dinner table or run for office.

Urban Studies (11-12)

In this course we will discuss factors which influence quality of life in the urban context. Our studies will focus on the interrelationships between government, socioeconomics and the infrastructure of urban life. The City of Buffalo, in its current state of resurgence, becomes the laboratory for investigation and exploration. Field trips to developing sites throughout the city become the basis for understanding a city on the rise.

African American Studies (12)

Too often, the study of Africans and their descendants—both in the Americas and across the global diaspora—is framed primarily through the lens of slavery, colonization, and systemic oppression. While this course does not shy away from the harsh realities of these histories, it purposefully centers the rich cultural, political, intellectual, and spiritual traditions that have sustained African and diasporic communities across time and place. Through an interdisciplinary approach that draws from history, literature, art, music, and oral traditions, African Resilience and Joy: A Global History explores how African peoples have continually reimagined freedom, kinship, identity, and celebration—even in the face of unimaginable hardship. From the flourishing of ancient African kingdoms to the vibrancy of contemporary Black cultures around the world, students will examine the creative strategies of resistance, survival, and joy that define the global African experience.

AP African American Studies (12)

Prerequisite: Teacher recommendation; department approval

AP African American Studies is an exciting, interdisciplinary course that draws from a variety of fields—history, literature, the arts, geography, science, and law—to explore the vital contributions and experiences of African Americans. In AP African American Studies, students explore key topics that extend from early African kingdoms to the ongoing challenges and achievements of the contemporary moment. Given the interdisciplinary character of African American Studies, students in the course will develop skills across multiple fields, with an emphasis on developing historical, literary, visual and data analysis skills. This course foregrounds a study of the diversity of Black communities in the United States within the broader context of Africa and the African diaspora. The course provides students with a strong

foundation in facts and evidence about African American history and culture, offering an immersive survey course that is not currently available in most American high schools.

AP United States Government & Politics (12)

Prerequisite: Teacher recommendation; department approval

The objective of this class is to explore the foundation and development of the government of the United States. The course is designed to study all aspects of government, including constitutional foundations, political beliefs and behaviors, political parties, interest groups, the role of the mass media, the institutions of government, public policy, and civil rights and liberties. The course will also continue to build critical thinking and analytical skills through analysis of primary sources, reading in the text, and various classroom presentations and exercises. There will also be extensive analytical written work to be completed. Finally, the course will prepare students to take the AP exam in May.

Mathematics Department Course Offerings

Geometry **(9-10)**

Geometry is a full year course that is an algebra-based approach to geometry. The algebra topics covered include: solving equations, factoring, operations with polynomials, operations with radicals, rational expressions, and systems of equations. These topics are taught with the understanding that this may be some students' first exposure to the topics and therefore more time is spent on these fundamentals. The geometry topics covered are graphing linear equations, angle relationships with parallel lines, right triangle trigonometry, proving triangles similar and congruent, relationships within triangles, properties of quadrilaterals, circles, area, surface area and volume.

Honors Geometry **(9-10)**

Honors Geometry covers the same topics as in Geometry, but moves at a much faster pace and explores more challenging application problems. The algebra topics are reviewed in Honors Geometry with the expectation that students already have a basic understanding of that material from a previous Algebra course. Due to the accelerated pace of the class, more time is available at the end of the year to explore additional topics, including, but not limited to, probability and statistics, transformations, and parabolas.

Honors Intermediate Algebra with Trigonometry **(10-11)**

Prerequisite: A or higher in Geometry; B- or higher in Honors Geometry; teacher recommendation

Students in Honors Intermediate Algebra with Trigonometry cover the same topics as in Intermediate Algebra, but move at a much faster pace and explore more challenging application problems. Honors Intermediate Algebra with Trigonometry also includes the study of trigonometry, including the unit circle, trigonometric equations, trig identities, and trig functions.

Intermediate Algebra **(10-12)**

Prerequisite: Successful completion of Geometry

This full year course continues the study of the topics started in Algebra 1 and Geometry. Students study linear systems of equations, quadratic functions, complex numbers, polynomial functions, radical functions, rational exponents, rational functions, exponential functions, and data analysis.

Honors PreCalculus **(11-12)**

Prerequisite: B- or higher in Honors Intermediate Algebra with Trigonometry; Teacher Recommendation

Honors Precalculus is a full year course which focuses on the study of the twelve basic functions and their graphs. Students study linear, trigonometric, rational and polynomial functions, conic

sections, systems of equations, matrices, parametric equations, vectors, motion, sequences, series, statistics and the concept of limits, which is a bridge to Calculus. Honors Precalculus also focuses on the applications of each topic that is covered, which is an essential skill in Calculus. Students are encouraged to approach problems in a variety of ways: algebraically, graphically, numerically, and verbally.

Introduction to Calculus **(11-12)**

Prerequisite: Successful completion of PreCalculus or Honors PreCalculus

Introduction to Calculus is a year-long, academically rigorous course that is designed to support topics studied in calculus. This course will provide opportunities for students to be involved in experiences that apply concepts of Calculus. These concepts include: functions, graphs, limits, differentiation, and applications of differentiation and integration. This course encourages geometrical, numerical, verbal, and analytic expression of concepts, results and problems, while incorporating appropriate technology, manipulatives, and graphing calculators. This course is not an AP Calculus class, however it is an introduction to Calculus and would be suited for someone who is looking to take Calculus I as a freshman in college.

PreCalculus **(11-12)**

Prerequisite: Successful completion of Intermediate Algebra

Precalculus is a full year course in which students study trigonometric, polynomial and rational functions, analytic trigonometry, vectors, parametrics, and polar coordinates.

*This is a requirement for students who took Geometry as their first math class at SEM.

AP Calculus AB **(12)**

Prerequisite: B+ or higher in Honors PreCalculus; teacher recommendation, department approval

This full year course studies the four main topics of Calculus: limits, derivatives, integrals and definite integrals, as well many applications of these operations to word problems. AP Calculus AB is the equivalent of the first semester of college calculus. The course ends with an AP exam consisting of multiple choice and short answer questions.

AP Calculus BC **(12)**

Prerequisite: B+ or higher in Honors PreCalculus; teacher recommendation, department approval

This full year course studies the four main topics of Calculus: limits, derivatives, integrals and definite integrals, as well many applications of these operations to word problems. AP Calculus AB is the equivalent of the first semester of college calculus. The course ends with an AP exam consisting of multiple choice and short answer questions.

AP Statistics **(12)**

Prerequisite: B- or higher in Honors PreCalculus; A- or higher in PreCalculus; teacher recommendation, department approval

AP Statistics is a full year course that introduces students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students are exposed to four broad conceptual themes: exploring data, sampling and experimentation, probability and simulation, and statistical inference. Students use technology, investigations, problem solving, and writing as they build conceptual understanding. Students explore statistics through discussion, activities, and real-world problems. Successful completion of this course equips students with an understanding of statistics that they can apply in academic and everyday endeavors. Students are required to take the AP exam.

Financial Algebra A **(12)**

Prerequisite: Successful completion of at least Intermediate Algebra

Students are encouraged to use a variety of problem-solving skills and strategies in real-world contexts, and to question outcomes using mathematical analysis and data to support their findings. It provides students a motivating, young-adult centered financial context for understanding and applying the mathematics they are guaranteed to use in the future.

Financial Algebra A covers banking services and consumer credit.

Financial Algebra B **(12)**

Prerequisite: Successful completion of at least Intermediate Algebra

Students are encouraged to use a variety of problem-solving skills and strategies in real-world contexts, and to question outcomes using mathematical analysis and data to support their findings. It provides students a motivating, young-adult centered financial context for understanding and applying the mathematics they are guaranteed to use in the future.

Financial Algebra B covers automobile ownership and employment basics.

Financial Algebra C **(12)**

Prerequisite: Successful completion of at least Intermediate Algebra

Students are encouraged to use a variety of problem-solving skills and strategies in real-world contexts, and to question outcomes using mathematical analysis and data to support their findings. It provides students a motivating, young-adult centered financial context for understanding and applying the mathematics they are guaranteed to use in the future.

Financial Algebra C covers independent living and preparing a budget.

Science Department Course Offerings

Seminar: Systems Engineering (9)

This required Freshman mini-course explores the connections among the elements of complex systems. Students begin by studying simple and complicated systems to learn the vocabulary of systems engineering before applying these terms to complex systems. One important learning goal is the understanding that not all problems have simple answers and some problems have no answers at all. The trimester culminates in an exploration of the ultimate complex system, Climate Change.

Integrated Biology/Chemistry (9)

This course takes an integrated approach to introducing core introductory concepts in biology and chemistry. Students investigate how matter is arranged in living organisms, as well as the environment those organisms inhabit. Students explore the interconnectedness of life from the molecular level to global ecosystems. Topics of study include atomic and compound structure, periodic table basics, chemical formulas and equations, phase changes, proportions, common chemical reactions, organic chemistry, cells, genetics, organisms, and ecology. Successful completion of this course is the prerequisite for higher level biology and chemistry courses.

Conceptual Physics (10-11)

Students in this course will explore the following physics topics: wave fundamentals and mechanics. Math skills should include, but are not limited to those presented in Algebra. An emphasis is placed on a conceptual understanding of the physics principles that are presented and the ability to generalize concepts from inquiry activities. Coursework involves laboratory activities, in-class assignments and formal assessments that require students to demonstrate problem-solving skills in the context of a science scenario. This fulfills one year of lab science for graduation.

Intermediate Biology and Honors Intermediate Biology (10-11)

Prerequisite: Successful completion of Integrated Biology/Chemistry

This course is a lab based course that will meet the requirement of a one year lab science for graduation. Students will learn major concepts of a standard biology course building on the information such as chemical reactions, water and its structure and behavior, cell structure, cell cycle and cell energetics taught in Integrated Biology/Chemistry. Skills include knowledge of additional content and also the application of it to various areas of biology. Many topics involve critical analysis of evidence and data to draw conclusions. For example, human anatomy and physiology will be initially taught by system and then we will have a discussion on the integration of these systems to maintain homeostasis. Assessment will be done regularly through homework and classwork to check for daily understanding, quizzes and tests will be used to

assess the student's knowledge and application of the material. Labs and activities will be used to allow for hands-on implementation and learning.

Intermediate Chemistry and Honors Intermediate Chemistry (10-11)
Prerequisite: Successful completion of Integrated Biology/Chemistry
Intermediate Chemistry builds upon the introductory topics learned in Integrated Biology/Chemistry. Students develop a deeper understanding of atomic and compound structure, chemical reactions and bonding, acids and bases, thermochemistry, kinetics and equilibrium, gas laws, and practical applications. There is a strong emphasis on understanding and working with quantitative values associated with these topics, including a strong focus on stoichiometric relationships. Additionally, the theoretical concepts presented in Intermediate Chemistry are supported and reinforced by hands-on laboratory work. As the students have already learned lab basics in Integrated Biology/Chemistry, lab work in this course emphasizes more advanced data and error analysis, as well as scientific communication skills. Students are assessed through regular homework assignments, lab reports, quizzes, unit exams, projects, a midterm, and a final exam.

Agronomy 1: Genetics and Agricultural Efficiency (10-12)
This course will dive into topics ranging from genetics, sustainability and energy, and food. Students will be given hands-on experiences about different pathways that they can be involved in the agriculture profession while developing their perspective on how this occupation impacts their daily life. If possible, trips to different local farms will be had in order to showcase real life practices of professionals in their field. Trimester 1 topics include: History of genetics in agriculture, natural and selective breeding, transgenics and biological engineering techniques, how genetics are used by agriculturalists and scientists, development of new breeds of organisms, the beef life cycle, ruminates, heredity and DNA analysis techniques, and carbon outputs from beef and dairy cows.

Agronomy 2: Sustainability and Agriculture (10-12)
This course will dive into topics ranging from genetics, sustainability and energy, and food. Students will be given hands-on experiences about different pathways that they can be involved in the agriculture profession while developing their perspective on how this occupation impacts their daily life. If possible, trips to different local farms will be had in order to showcase real life practices of professionals in their field. Topics in Trimester 2 include: Sustainable agriculture, soil nutrients, water, economics, land use, careers, technology and innovations, and capstone projects pertaining to women in agriculture.

Agronomy 3: Food Science and Agriculture (10-12)
This course will dive into topics ranging from genetics, sustainability and energy, and food. Students will be given hands-on experiences about different pathways that they can be involved

in the agriculture profession while developing their perspective on how this occupation impacts their daily life. If possible, trips to different local farms will be had in order to showcase real life practices of professionals in their field. Trimester 3 includes the following topics: Introduction to food science (relevance to global society, research practices, and relevant physical and life sciences topics), food biochemistry, food microbiology, and the future of food science.

Anatomy & Physiology: Infection / Immunity (10-12)
This trimester course will cover the immune system and how it works to fight infections. The class will discuss different types of infections and how the various aspects of the immune system fight off invaders. Specific topics will include allergies, autoimmune disorders, and numerous infectious diseases, such as influenza, malaria, tuberculosis, and HIV.

Anatomy & Physiology: Internal Medicine (10-12)
This trimester course will cover several of the major body systems, including cardiovascular, respiratory, and digestive systems. These systems will be studied individually and in coordination with each other. Specific topics will include blood typing, the effects of smoking, cystic fibrosis, heart disease, and numerous other disorders of each body system.

Anatomy & Physiology: Movement (10-12)
This trimester course will cover the movement of the body, specifically the skeletal, muscular, and nervous systems. The class will study the development and function of these body systems, as well as their integrated functions. Specific topics will include osteoporosis, knee replacement, athletic injuries, muscular dystrophy, and forensic science.

Anatomy & Physiology: Neuroscience (10-12)
This trimester course will cover the control of the body, specifically the nervous system and the senses. This class will study the structure and function of the peripheral and central nervous systems, as well as the interaction of the five senses. Specific topics will include experimental testing of the senses, learning and memory, multiple sclerosis, Parkinson's disease, vision correction, and auditory disorders.

Astronomy: Solar System (10-12)
Students will explore how the universe affects Earth (lunar phases, eclipses, seasons, tides, comets and meteor showers) and how our view of the universe has changed with time. We end the trimester by discussing humans in space—our journey to the Moon and our exploration of Mars, in the hopes of going there someday. Projects for this course include planning a human mission to Mars.

Astronomy: Space Missions and Aliens (10-12)
The sky is filled with artificial satellites—some launched from Earth and maybe someday, some originating from other worlds. We learn about the history of our exploration of the solar system and about the space telescopes that fly above Earth's atmosphere, taking the most amazing pictures. Some of these pictures show us other planets like Earth, revolving around other stars. Which planets might be home to intelligent life?

Astronomy: Stars and Galaxies (10-12)
Students will explore the night sky and take a closer look at the various stars and galaxies that inhabit it by examining the only information we get from these objects: light. We end the trimester by looking back in time to the Big Bang and ahead in time to the…?

Environmental Studies (10-12)
(E5: Earth, Ecosystems, Endangered, Extinct, and Exotic) E5 examines the precarious relationships between the dynamic systems that make up the Earth and the biologically diverse populations living here, particularly focusing on endangered, extinct, and exotic organisms of our world and the effects of loss of biodiversity. Topics will include ecosystems, trophic levels and energy exchange, and conservation methods. This trimester class includes both lecture and hands-on activities, including simulation of biomes. The analysis and interpretation of data will be emphasized. Student assessment will be based on homework, tests, projects, and class participation.

Intermediate Physics (10-12)
Students in this course will explore select topics involving mechanics, electromagnetism, and waves. Math skills should include, but are not limited to those presented in Intermediate Algebra (students should have completed or be currently enrolled in Intermediate Algebra). An emphasis is placed on both conceptual understanding and mathematical modeling of the physics principles. Coursework involves laboratory activities, in-class assignments and formal assessments that require students to demonstrate problem-solving skills in the context of a science scenario. This fulfills one year of lab science for graduation.

Meteorology (10-12)
Meteorology is a trimester course that provides students with an introduction to weather. It includes studying the makeup of and human impact on the atmosphere. Seasonality is investigated along with heat and radiation balance, temperature, humidity, and precipitation. Students will learn and be able to apply the five principles of meteorology. The motion of the atmosphere, atmospheric pressure and wind, air masses and fronts, and severe weather will be studied. An in-depth investigation into meteorological instrumentation, local weather, and synoptic forecasting will help the students survey jobs in this expanding field. All will be pulled together by investigations into the relationship between weather systems, technology, and

humans. All lectures will be supported by in-class activities and laboratory investigations. Student assessments will include tests, projects, and class participation.

Oceanography (10-12)

Meteorology is a trimester course that provides students with an introduction to weather. It includes studying the makeup of and human impact on the atmosphere. Seasonality is investigated along with heat and radiation balance, temperature, humidity, and precipitation. Students will learn and be able to apply the five principles of meteorology. The motion of the atmosphere, atmospheric pressure and wind, air masses and fronts, and severe weather will be studied. An in-depth investigation into meteorological instrumentation, local weather, and synoptic forecasting will help the students survey jobs in this expanding field. All will be pulled together by investigations into the relationship between weather systems, technology, and humans. All lectures will be supported by in-class activities and laboratory investigations. Student assessments will include tests, projects, and class participation.

Scientist for Life (10-12)

As future decision-makers, SEM graduates should have the ability to collect information and develop an informed opinion on any topic. In this yearlong course, students choose five or six science-related topics of current significance and collaborate on a quest for information - they determine the questions that must be asked, and then find the answers. Topics previously covered include forensics, climate change, alternative energy, nutrition, and infectious disease. Class participation is vital to this course, both in the class and in online discussions, and assessment for this course is project-based.

Women in Science & Math Who Changed History (10-12)

Students will explore a variety of fields in science and math as we build a timeline of scientific contributions from women in this blended learning course. Next, we will examine the historical context which enabled these women to make their discoveries. Finally, we will look at current trends of women in various science and math fields, culminating in groups of students creating a plan to help increase gender parity in math and science fields. This is a project-based class; in addition to the timeline, there will be several small and two large projects with a mix of individual contributions and group efforts. As this course only meets for two short periods per cycle, students will be expected to complete work and participate in various forums outside of class.

AP Biology (12)

Prerequisite: Integrated Bio/Chem with teacher recommendation OR Chemistry or Honors Chemistry and Biology or Honors Biology

AP Biology is a yearlong college-level course designed to prepare students for the AP Biology exam as well as for upper-level college courses in biology. The range and depth of topics are

extensive, as is the laboratory experience. The major topics covered include evolution, cellular biology, genetics, organismal biology, and ecology. This course is fast-paced, and is both reading- and writing-intensive. This course is designed to be taken by students after successful completion of Biology and Chemistry (introductory courses).

AP Chemistry (12)

Prerequisite: Integrated Bio/Chem with teacher recommendation OR Chemistry or Honors Chemistry

AP Chemistry is a yearlong college-level course that prepares students for the AP Chemistry exam as well as for upper-level college courses in chemistry. This course covers a wide-range of topics and has an intense quantitative aspect. Students complete an extensive set of laboratory experiments. The major topics covered include atomic structure, chemical reactions, thermodynamics, and kinetics and equilibrium. This course requires students to have already taken Chemistry (introductory course).

AP Physics 1 (Algebra Based) (12)

Prerequisite: Teacher recommendation; department approval

AP Physics 1 is the equivalent of the first semester of a college algebra-based physics class. The topics included are comparable to those presented in AP Physics C (Mechanics), but without the calculus. Students will need to have already taken or be concurrently enrolled in Intermediate Algebra to take this course.

AP Physics C (Mechanics) (12)

Prerequisite: Teacher recommendation; department approval

This yearlong calculus-based physics curriculum is similar to the material covered in a first-semester college physics course. Topics include motion, momentum, energy, and simple oscillations. Students take the AP Physics C (Mechanics) exam and are prepared for upper-level college physics courses. Because calculus is used in formulating principles and solving problems, students should be taking calculus concurrently.

Computer Science Department Course Offerings

Seminar: Coding **(9)**
This required trimester-long mini-course introduces our freshmen to basic computer programming concepts and career opportunities using MIT SCRATCH and Code.org activities.

App Design **(10-12)**
Students create their own apps in this hands-on trimester course using Code.org's App Lab. They will design app interfaces, program interactivity, use data, and begin learning the JavaScript that powers their projects. The course ends with a look at vibe coding, giving students a chance to compare traditional coding with the newest AI app-building tools.

Comp Sci Topics: Web Design **(10-12)**
Discover how the Internet works and tackle social issues such as privacy, digital manipulation and artificial Intelligence. Engage in hands-on learning by building your own website using HTML, CSS, and JavaScript.Students who enroll in this course will have the choice to attend in person or to take the course asynchronously with regularly scheduled check-ins. This may be a good option for students who may not be able to fit the course into their schedule.

Intro to Cybersecurity **(10-12)**
Learn the mechanics of web application and network security, including the exchange of information and the steps needed to shield data and systems. Use basic Python programming to implement essential encryption and decryption techniques. This course introduces students to career opportunities and lays the groundwork for understanding cybersecurity practices used by professionals. Students who enroll in this course will have the choice to attend in person or to take the course asynchronously with regularly scheduled check-ins. This may be a good option for students who may not be able to fit the course into their schedule.

Python Programming **(10-12)**
This course is designed for beginners and covers the essentials of Python, one of the most popular and versatile programming languages in the world. Learn the fundamentals of Python syntax, control structures, data types, functions, and error handling through hands-on exercises. By the end of this course, you'll have the skills to write basic programs in Python and a strong base for future study in computer science or software development.
Students who enroll in this course will have the choice to attend in person or to take the course asynchronously with regularly scheduled check-ins. This may be a good option for students who may not be able to fit the course into their schedule.

OSG AP Computer Science A (Java) **(11-12)**

Prerequisite: Discussion with CS department

This course is offered in partnership with OSG (Online School for Girls). The AP Computer Science A course introduces the key concepts of programming in Java. The analytical, critical-thinking, and problem-solving skills that students develop in this course transfer to programming in other languages as well. This course is designed with the idea that programming should be fun, engaging, and intuitive. Students learn to apply the main principles of object-oriented software design and programming using classes and objects, constructors, methods, instance and static variables, inheritance, class hierarchies, and polymorphism. Students work creatively and collaboratively with their classmates to discuss ethical and social issues relating to the use of technology and develop a solid foundation from which to launch into a wide range of computer science areas. This course prepares students for the AP Computer Science A exam.

OSG AP Computer Science Principles **(11-12)**

Prerequisite: Discussion with CS department

This course is offered in partnership with OSG (Online School for Girls). This course investigates the "big ideas" found in our digital world. Using the Python programming language, students develop and demonstrate fundamental concepts of computer programming that can be applied across a variety of projects and languages. Students explore different means of representing information digitally and how our digital world has evolved. They create computer programs to solve authentic problems or to explore personal interests such as unique musical pieces, math calculators, and data summations. Students discuss the current state of technology and its role in our everyday lives, discerning the positive and negative influences of innovations concerning computer and network technologies to society, culture, and economics. Throughout, students develop their skills in computational thinking, logical reasoning, and describing processes through algorithms and abstraction. Finally, students demonstrate their learning by creating a portfolio for submission to the College Board and are prepared for the AP Computer Science Principles exam.

OSG AP Cybersecurity **(11-12)**

Prerequisite: Discussion with CS department, foundational understanding of computer systems is recommended

AP® Cybersecurity is an introductory college-level course designed for students interested in pursuing careers in information technology, cybersecurity, or related fields. The goal of the course is to develop an understanding of how individuals and organizations identify, assess, and mitigate cybersecurity risks in an increasingly digital world. Students explore common threats and vulnerabilities across multiple domains, including physical spaces, computer networks, individual devices, and data and applications. Emphasis is placed on defense-in-depth strategies, risk management frameworks, and the professional skills outlined in the National Initiative for

Cybersecurity Education Workforce Framework. Throughout the year, students engage with course content through hands-on laboratory investigations, real-world case studies, and career-connected scenarios that mirror authentic cybersecurity challenges. By the end of this course, students will be able to determine, evaluate, and recommend comprehensive security mitigations; analyze cybersecurity artifacts and evidence; and consider the impact of cybersecurity decisions on individuals, organizations, and society. This course prepares students for the AP® Cybersecurity exam in the spring and provides the opportunity to earn an employer-endorsed credential that aligns with industry certifications.

OSG Artificial Intelligence (advanced) (11-12)

Fall semester or full year, this course is offered in partnership with OSG (Online School for Girls).. From virtual personal assistants like Siri and Alexa to autonomous vehicles that navigate and drive themselves, Artificial Intelligence (AI) is embedded in all kinds of technology and makes everyday objects act in human-like ways. Beginning with AI's foundation in data science, this course explores the world of AI, its key technologies, and the concerns guiding its use. Students model machine learning algorithms using block-based and Python programming languages and design intelligent agents to solve real-world problems. Topics include natural language processing, image processing, deep neural networks, data science life cycle, computation thinking, and predictive analytics. Students leave this course having gained an understanding of how AI can help us make better decisions and build "smarter" technology.

OSG Game Design (advanced) (11-12)

Prerequisite: Successful completion of AP Computer Science A or equivalent

Fall semester or full year. This course is offered in partnership with OSG (Online School for Girls). Computer scientists are creatives, problem-solvers, puzzlers... and tech junkies. The fundamental purpose of programming is to solve a real-world problem, and if done well, the design is elegant, useful, usable. Moreover, if done really well, then it can be addictively fun. So how does that happen? At the intersection of art and science sits game design, a field of computer science that draws on graphic design, programming, math, and psychology to create the experiences we enjoy so much in video games, virtual reality apps, and all kinds of digital media. This class introduces students to the tools of a game designer using the game engine Unity, the C# programming language, and resources from a variety of fields to explore what it takes to design a game. Students build on their prior computer science experiences to apply programming and design skills in this challenging and creative interdisciplinary course. This is the most advanced course in our CS strand and is specifically designed as an alternative to AP or as a post-APCSA course.

Capstone Department Course Offerings

Junior Capstone **(11)**

In this trimester-long course, each junior creates a roadmap for their Senior Capstone project. Students explore their interests to determine a broad topic before examining resources of ever-increasing complexity to refine their broad topic into a research question. Emphasis is placed on evaluating sources for reliability and critical thinking. Students then design a centerpiece (a creation or an experience) that uniquely answers their research question. By the end of this course, students will have written a proposal describing their centerpiece in detail and its connection to their research question. They will also have created an itemized, week-by-week plan to bring their centerpiece and formal writing requirement to fruition. Evaluation is based on the proposal, week-by-week plan, and several intermediary writing assignments and presentations. This course is a graduation requirement.

Senior Capstone **(11)**

Senior Capstone is an independent research project carried out by each SEM senior during the first or second trimester of senior year. In the prerequisite course, Junior Capstone, students choose and research a topic of their own devising. They leave Junior Capstone with a research question and a week-by-week plan to answer that question through a centerpiece project, five pages of academic writing, and a twenty minute presentation; students carry out this week-by-week plan during Senior Capstone. The centerpiece, an expression of their research, can be a creative work (a series of visual works of art, creative writing, detailed models, etc.) or an experience (a volunteer project, a performance, etc.). The academic writing provides context for their question as well as a detailed explanation of how their centerpiece addresses that question. All students present their work at SEMposium at the end of each trimester. Grading is based on the final products: centerpiece, academic writing, ability to carry out their plan, and presentation. This course is a graduation requirement.