

# Blake Upper School

## Course Catalog

### 2019-2020

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### **THE BLAKE SCHOOL (Grades 9-12)**

Joseph Ruggiero, Ph.D., Director of Upper School

#### **Upper School Philosophy Statement**

The Blake Upper School believes in giving students a wide variety of academic, artistic, and athletic opportunities in order to develop their skills, expose them to new ideas, and foster their individual interests and collaborative capabilities. We believe in nurturing independent, self motivated, and self reliant individuals who assume greater and greater responsibility for their own learning, take on active and meaningful leadership roles, and become increasingly aware of, and sensitive to, their interdependent roles in our community and the world. As the curriculum progresses, classes become increasingly student centered and students are given a considerable amount of freedom, even at the risk of temporary failure. Toward this end, we encourage all members of the community to engage in a creative and ongoing process of self-inquiry. Above all, we believe in promoting the Blake School's four core values of respect, love of learning, integrity, and courage.

#### **Graduation Requirements:**

Twenty-two (22) credits are required for graduation.

One credit equals one full year course or the equivalent.

The standard course load is five or six classes each semester.

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## ARTS

### DEPARTMENTAL REQUIREMENT:

Minimum of four semesters during grades 9-12

## MUSIC

### Music Technology: Composition & Production

*Open to sophomores, juniors, and seniors* First Semester Course

This course focuses on the fundamentals of music composition and the electronic manipulation of musical sound through the use of MIDI (Musical Instrument Digital Interface) sequencing, notation and production software. Assignments focus on using these tools to compose creative musical products. Culmination of the class may be a public performance of student work. Prior basic music reading skills are helpful, but not necessary.

### Band Year Course

Band is open to all students in grades 9-12 who have previous instrumental music experience. Course content includes: the continuing development of technical facility on an instrument; the study of a stylistically, culturally, and historically broad musical repertoire; exploring the musical structure, elements, and terminology of repertoire performed; and the development of an aesthetic approach to music through performance and listening. Performances include at least two concerts per year, spring band tour, solo and ensemble contest and other performance opportunities.

*This course may be repeated for credit.*

### Advanced Band Year Course (no exceptions)

Prerequisite: *Audition; open to juniors and seniors*

Students enrolling in Advanced Band are part of Band and will meet the stated expectations and requirements of that course PLUS additional requirements and expectations intended to enhance their musicianship and leadership skills. Students with the Advanced Band designation will be required to: prepare a solo for Region/State Solo & Ensemble Contest; research and prepare program notes for concert repertoire; meet with instructor outside of class once every other week, and assume leadership responsibilities within the ensemble leading sectionals, or contributing to concert and tour organization.

*This course may be repeated for credit.*

### Chamber Orchestra Year Course

Chamber Orchestra is open to students in grades 9-12 who have previous experience playing violin, viola, cello, or double bass. Course content includes: the continuing development of technical facility on an instrument; the study of a stylistically, culturally, and historically broad musical repertoire; exploring the musical structure, elements, and terminology of repertoire performed; and the development of an aesthetic approach to music through performance and listening. Performances include at least two concerts per year, spring concert tour, solo and ensemble contest and other performance opportunities.

*This course may be repeated for credit.*

### Advanced Chamber Orchestra Year Course (no exceptions)

Prerequisite: *Audition; open to juniors and seniors*

Students enrolling in Advanced Chamber Orchestra are part of **Chamber Orchestra** and will meet the stated expectations and requirements of that course PLUS additional requirements and expectations intended to enhance their musicianship and leadership skills. Students with the Advanced Chamber Orchestra designation will be required to: prepare a solo for Region/State Solo & Ensemble

Contest; research and prepare program notes for concert repertoire; meet with instructor outside of class once every other week; and take on leadership responsibilities within the ensemble leading sectionals, or contributing to concert and tour organization.

*This course may be repeated for credit.*

### Cantemus (Soprano/Alto) Year or Single Semester Course

Singing is an innate human activity, shared by people across the world since the beginning of time. In this class, you will enter the world of creative, expressive, and collaborative vocal exploration. Bring the voice you have and learn to maximize its beauty and versatility by using it efficiently and effectively. Build your musicianship – including vocal technique and music literacy – while learning varied repertoire from around the globe. Breathe. Sing. Move. Connect. Share. Reflect. Repeat. Cantemus choir is open to all Soprano and Alto range singers, grades 9-12, and is designed for singers of all levels of skill and experience. No audition is required. Cantemus performs in one major concert each semester. Students may register for either one or both semesters.

*This course may be repeated for credit.*

### Vocare (Tenor/Bass/Changing Voice) Year or Single Semester Course

Singing is an innate human activity, shared by people across the world since the beginning of time. In this class, you will enter the world of creative, expressive, and collaborative vocal exploration. Bring the voice you have and learn to maximize its beauty and versatility by using it efficiently and effectively. Build your musicianship – including vocal technique and music literacy – while learning varied repertoire from around the globe. Breathe. Sing. Move. Connect. Share. Reflect. Repeat. Vocare is open to all Tenor, Bass, and early cambiata (changing) voices, grades 9-12, and is designed for singers of all levels of skill and experience. No audition is required. Vocare performs in one major concert each semester. Students may register for either one or both semesters.

*This course may be repeated for credit.*

### A Cappella Choir Year Course (no exceptions)

Prerequisite: *Audition only; held in the spring*

This select, mixed-voice choir is comprised primarily of 10–12 graders, although ninth graders may audition. The course emphasizes further development of already established individual vocal technique and music literacy. This ensemble performs challenging a cappella literature from a wide variety of styles, time periods, and cultural traditions. Performances include two major concerts per year and spring choir tour, as well as other performing opportunities that may arise.

*This course may be repeated for credit.*

### Student-Led Ensembles (co-curricular)

<b>Blakers' Dozen</b>	No Credit
<b>Blakers in Treble</b>	No Credit

Prerequisite: *Audition only, held in late spring; members must also be enrolled in a choral music class in order to participate in this group.*

These choirs represent select groups of 10<sup>th</sup>-12<sup>th</sup> grade students who perform a variety of styles of a cappella choral literature, including lighter, popular music. Groups rehearse twice a week before school on Tuesday and Thursday mornings. Performances include two concerts per year, spring choir tour, and other off-campus events. Each group is student-led under the artistic direction of the choral music teacher.

## Ursa Major Chamber Ensemble No Credit

Prerequisite: *Membership is by audition only and is limited to students enrolled in Band or Orchestra.*

Ursa Major is a select group of motivated instrumental musicians who want to develop their chamber ensemble performance skills. They perform a variety of traditional classical and non-traditional instrumental music based on each year's instrumentation. Rehearsals take place before school and performances each year include two major concerts, Solo & Ensemble Contest, spring band & orchestra tour, and off-campus community events. This is a student-led ensemble under artistic direction of the instrumental music teacher.

## Jazz Express No Credit

Prerequisite: *Membership is by audition only and is limited to students enrolled in Band or Orchestra.*

Jazz Express is a select combination of motivated student musicians who work to develop their jazz performance and improvisation skills. Emphasis is on performance, as this group performs often for events in the community at large as well as during the school day.

## SPEECH & DEBATE

### Argumentation/Debate First Semester Course

This course is an introduction to the development and application of argument in debate situations. Course experiences focus on the development of speaking, listening, research, and critical thinking skills.

*\*Class requirements include participation in three weekend competitive debate tournaments in the Twin Cities area.*

### Advanced Debate: United States Domestic Political Issues Year Course, 2 classes/week; 0.5 credit

Prerequisite: *Argumentation/Debate and instructor approval*  
*This course will be offered every fourth year. It will be offered during the 2019-2020 academic year.*

This advanced course in argumentation and public speaking utilizes the competitive format of policy debate. The course includes speech writing, research, speaking, and critical thinking skill development. The course examines current issues in United States domestic affairs, including economics, race and class, party political processes, federalism and checks and balances in the United States system of government. Understanding methods of public policy analysis are covered within the content of the class. Class requirements include competitive debates in class.

*\*Class requirements include participation in three competitive debate tournaments on weekends in the fall with other schools in the Twin Cities.*

### Advanced Debate: International Affairs Year Course 2 classes/week; 0.5 credit

Prerequisite: *Argumentation/Debate and instructor approval*  
*This course will be offered every fourth year. It will be offered during the 2020-2021 academic year.*

This advanced course in argumentation and public speaking utilizes the competitive format of policy debate. The course includes speech writing, research, speaking, and critical thinking skill development. The course examines current issues in international affairs, including foreign affairs and relations, military capabilities of nations, international organizations, and how the United States best operates in an increasingly multi-polar world. Understanding methods of foreign policy analysis are covered within the content of the class.  
*\*Class requirements include participation in three competitive debate tournaments on weekends in the fall with other schools in the Twin Cities.*

## Advanced Debate: Pursuing Social Justice Year Course 2 classes/week; 0.5 credit

Prerequisite: *Argumentation/Debate and instructor approval*  
*This course will be offered every fourth year. It will be offered during the 2021-2022 academic year.*

This advanced course in argumentation and public speaking utilizes the competitive format of policy debate. The course includes speech writing, research, speaking, and critical thinking skill development. The course examines current issues in social justice. The class will particularly focus on issues of race, class and gender and how argumentation can impact those issues in both a positive and negative manner.

*\*Class requirements include participation in three competitive debate tournaments on weekends in the fall with other schools in the Twin Cities.*

## Advanced Debate: Contemporary Society Year Course 2 classes/week; 0.5 credit

Prerequisite: *Argumentation/Debate and instructor approval*  
*This course will be offered every fourth year. It will be offered during the 2022-2023 academic year.*

This advanced course in argumentation and public speaking utilizes the competitive format of policy debate. The course includes speech writing, research, speaking, and critical thinking skill development. The course examines current issues in contemporary society and uses a variety of philosophical and public policy methods to analyze contemporary debates in our society. Topics will be generated from the current competitive debate topics released by the National Speech and Debate Association.

*\*Class requirements include participation in three competitive debate tournaments on weekends in the fall with other schools in the Twin Cities.*

## THEATRE

### Improvisation and Acting First or Second Semester Course

This course is ideal for actors of all skill levels looking to improve their confidence and release their own creativity. Using the guiding principles of improvisation and a variety of improvisation activities, students learn the importance of quick thinking, free-flowing imagination, and collaboration within an ensemble. Students will continue to develop these skills through a combination of vocal and movement-based exercises that are then implemented into contemporary scene studies. Participants will develop a final public performance to showcase the techniques and skills they have learned throughout the course.

*This course may be repeated for credit.*

### Advanced Theatre Production First Semester Course

Prerequisite: *Acting and Improvisation*  
*This course will be offered every other year. It will be offered during the Fall of 2019.*

Advanced Theatre Production is a multifaceted, collaborative course that enables students to gain a broader understanding of the creative art forms required to see a play into full production. This course includes units on set design, costume design, and directing, and features a variety of local theatre professionals as guest lecturers. Utilizing the skills gained in the first part of the semester, the entire class works collaboratively to produce a one-act play in which students act, direct, and are responsible for the technical elements of the production. The culminating performance of this production is open to the public.

*This course may be repeated for credit.*

## Musical Theatre

Second Semester Course

*This course will be offered every other year. It will be offered during the Spring of 2020.*

Co-taught by theatre and choral music faculty, this course provides students with the opportunity to strengthen their skills and confidence in the combined fields of acting and vocal performance. Beginning with vaudeville and progressing through the decades to the present, students learn the historical trends of musical theatre and explore these significant moments.

*This course may be repeated for credit.*

## Advanced Acting

First Semester Course

**Prerequisite:** *Improvisation and Acting*

*This course will be offered every other year. It will be offered during the 2020-2021 academic year.*

In Advanced Acting, students build upon the performance skills they developed in their Improvisation and Acting course through deeper exploration of the complexities of classical theatre texts. Students utilize a variety of new vocal and physical techniques, as well as historical context, to bring the iambic pentameter of Shakespeare and the rhyming couplets of Molière to life on stage, all while broadening their ability to create dynamic and believable characters. This course culminates in a final public performance featuring a selection of the classical scenes studied throughout the course.

*This course may be repeated for credit.*

## Playwriting

Second Semester Course

**Prerequisite:** *Improvisation and Acting or by the permission of the instructor.*

*This course will be offered every other year. It will be offered during the 2020-2021 academic year.*

Playwriting begins with a series of short, prompt-based writing exercises that enable students to practice creating realistic dialogue and meaningful character development. Students then bring these skills and techniques together to draft their own one-act play. Throughout the course, students will have the opportunity to see their work staged and performed by other members of the class, giving them the unique learning experience of hearing and seeing their work brought to life. Selections from each student's one-act play are featured in a public performance at the end of the semester, and scripts may be considered for future production in the annual student-directed play series.

## VISUAL ARTS

### **Semester Courses Offered Both Semesters**

### Ceramics

First or Second Semester Course

This course introduces students to the world of clay art. Through utilizing pottery wheel processes, hand-building techniques, and surface decorating concepts, students will explore their creativity, strengthen observational skills, and make connections between their lives and cultures very different than their own. Students develop a foundational understanding of the physical nature of ceramic materials and processes while stretching their ability to express their ideas with the clay medium. Through studio work, group critique, and art historical studies, students gain fresh awareness of their visual environment and abilities to create functional and decorative objects.

## Drawing

First or Second Semester Course

"Drawing is more than a tool for rendering and capturing likenesses. It is a language, with its own syntax, grammar, and urgency." Learning to draw is about learning to see. In this way, it is a metaphor for all art activity. Whatever its form, drawing transforms perception and thought into image and teaches us how to think with our eyes." - Kit White, artist/teacher. This course leans towards the realistic drawing of people, places, and things. The book *Drawing on the Right Side of the Brain*, by Betty Edwards, will complement our work in this course.

## Painting

First or Second Semester Course

How do you tell your own story with paint? In this course we paint every day. We splash paint to convey meaning. We study color theory, and how color can express emotion. We carefully build up paintings with learned skill and confidence. We work in multiple modes, using photographic sources, signs and symbols, found and created patterns, and the fascinating approaches of contemporary artists at our neighboring Walker Art Center. *Color*, by Betty Edwards, will complement our work in this course.

## Photography

First or Second Semester Course

You have grown up in a world filled with photography. To your parent, a camera was a single-purpose device that only took photographs and was brought out for special occasions, but you know a world where the camera is so omnipresent that it's in everyone's pocket. You will learn more about cameras and photography than you ever thought possible. We will delve into the origins of photography and use a darkroom to learn how artists and scientists worked together to find a way to paint with light. Ultimately, this class provides creative, expressive ways to use the camera.

**\*Students need not have a personal camera to take this class.**

## Printmaking

First or Second Semester Course

Printmaking gives you the ability to make multiple, identical works of art or swiftly test out variations in color and shape. The beauty of printmaking is that it can seamlessly combine many different art techniques: drawing, painting, calligraphy, typography, and photography all merge into a harmonious art form.

### **Semester Courses Offered Fall 2019**

### Art History - Women in Modern Art

First Semester Course

Open to 11th and 12th grade students, no prerequisite.

In this course, we will rediscover the women who made 20th Century Art, spanning all of the major movements from pre- to post-modern. Regular research visits to the Walker Art Center, MIA, the Weisman, and galleries in Minneapolis will be a significant aspect of this class. Course work will encompass journaling, discussion, slide and video presentations, and interviewing local arts people. Parts of the book *Broad Strokes* by Bridget Quinn will be read.

### Design

First Semester Course

**Prerequisite:** *One introductory-level visual art course; open to sophomores, juniors, and seniors*

Students learn the fundamentals of 2D and 3D design through studio-based activities like drawing, painting, clay modeling, 3D construction with foam-core, wood, metal, plastic, found objects, and digital graphic manipulation. This course encourages development of critical thinking and creative problem solving techniques. Project topics covered in class include graphic designed greeting cards,



logo/brand ID design, color studies, design sketching, creating a clay chess set, fashion accessory, artist inspired electric lamp and chair. Students will study global and historic design traditions and participate in group critique sessions to develop perspective and strengthen original ideas.

### **Game Development**

#### **First Semester Course**

In this course for absolute beginners, students learn about game design and development through a series of “game jams” following a “learn-as-you-go/learn-by-doing” model. The course uses a method of looking at the design process through different “lenses,” or ways of looking at the same problem to set the direction and refinement of a game’s design. At the same time, students also learn how to use Unity, the game development tool they will be using throughout the class. They will learn how to make a game using graphics, sounds, and effects, and how to have the game respond to the player. The rest of the course has students randomly selected into separate teams and lets them work collaboratively to brainstorm and develop an original game. Students can focus on different aspects of game art, design, and coding while developing skills in communication, project and time management, and creative problem-solving. No prior experience with programming required - just an imagination and a desire to make cool things!

### **Advanced Ceramics: Wheel Techniques**

#### **First Semester Course**

Prerequisite: Ceramics; open to sophomores, juniors, and seniors

This ceramics course is entirely based on using the pottery wheel to learn the skills necessary to create functional forms like mugs, bottles, pitchers, vases, lidded jars, and teapots. In this course, students develop the ability to confidently put form to their ideas. Building a diverse repertoire of pottery wheel techniques and applying them to design problems is the primary focus of Advanced Ceramics: Wheel Techniques. Students greatly expand upon the foundation level wheel throwing skills and concepts to which they were introduced in the beginning level ceramics course.

### **Advanced Drawing: Spaces and Places**

#### **First Semester Course**

Prerequisite: Drawing or Drawing and Painting 1; open to sophomores, juniors, and seniors

*This course will be offered Fall of 2019-2020 academic year.*

This course focuses on landscapes, architecture (interior and exterior), maps, and public spaces. We learn a multitude of techniques to translate our 3-dimensional world into a 2-dimensional drawing, from linear and atmospheric perspective to map-making projections. The book *The Urban Sketcher: Techniques for Seeing and Drawing on Location* will complement our work in this course

### **Advanced Filmmaking: Personal Stories**

#### **First Semester Course**

Prerequisite: Filmmaking

Filmmaking is more than a medium for entertainment. It’s also as important and effective a mode of self-expression as painting or writing. This course explores how filmmaking can be used as a journal, as documentation, and as a tool for self-discovery. We will screen a number of short- and feature-length films that demonstrate the unique ways their makers perceive their lives and how they convey this through film. Students will make several short films during the course that begin with a very specific focus and then move to more open-ended assignments. We will also have a chance to talk with working filmmakers about their approaches and thinking.

### **Advanced Photography: Storytelling**

#### **First Semester Course**

Prerequisite: Photo or Photo 1; open to sophomores, juniors, and seniors

*This course will be offered Fall 2019-2020 academic year.*

Use photography as a means of documenting the world, creating fictional narratives and championing causes.

### **Semester Courses Offered Spring 2020**

### **Advanced Ceramics: Asian Ceramics**

#### **Second Semester Course**

Prerequisite: Ceramics; open to sophomores, juniors and seniors

In this hands-on, wheel throwing and clay sculpting class, students will discover the rich and diverse history of Chinese, Japanese, and Korean ceramics by focusing on learning and practicing regionally specific pottery making, glazing, painting, and clay sculpting techniques. As an extension of this learning experience, students will incorporate these methods into their own original ceramic art creations. Both pottery wheel and clay sculpting techniques will be practiced. A field trip to the Minneapolis Institute of Art to study its collection of Asian ceramics is integrated into the curriculum of this class.

### **Advanced Design: Exhibit Design**

#### **Second Semester Course**

Prerequisite: Successful completion of Design; open to juniors, and seniors, as well as sophomores who both take Health in the summer and Design first semester.

In this hands-on studio course, students learn to think like designers while creating their own exhibitions. Students will study how designers communicate socially relevant and politically charged ideas through their design decisions. Students will practice constructing effective public exhibition spaces that integrate photography, video, graphics, lighting, sculpture, historic artifacts, and landscape.

### **Advanced Game Development: Platformers**

#### **Second Semester Course**

Prerequisite: Game Development

*This course will be offered Spring 2019-2020 academic year.*

One of the most fun and addicting forms of gameplay is the platformer. Whether it’s Mario, Sonic, Kirby, Qube, or Little Big Planet, platform games offer the opportunity for creative and compelling forms of play while providing a variety of game design challenges under some very specific constraints. For this course, we will focus on the specific concerns of designing and creating assets for platform games. In a similar fashion to the initial Game Development course, we will learn the fundamental aspects of platform game designs through lessons and individual exploration and skill development, and then move to a set of game jams for more intensive and broader experience. During this course, we will talk with developers who have specialized in platformers, looking and the special concerns and practices involved in this type of game.

### **Filmmaking**

#### **Second Semester Course**

If you have ever wanted to learn how to express yourself through filmmaking, this course is a good place to start. Students will produce a number of short films throughout the semester and will develop skills in camerawork, editing, and sound. Students will learn how to shoot using best practices for camerawork and composition, and then bring them into Final Cut Pro X, learning the tools and techniques used by professionals. Class projects present unique opportunities that challenge each student’s creativity. Student work will be presented on Blake’s Vimeo channel and in gallery shows. The course includes film screenings for inspiration and study of filmmaking techniques including lighting, composition, editing, and sound design.

### **Advanced Painting: Pattern - Nature and Culture**

Second Semester Course

Prerequisite: *Painting, or Drawing and Painting 1; open to sophomores, juniors, and seniors*

*This course will be offered Spring of 2020.*

Your own thumbprint holds a powerful pattern that ultimately represents personal identity. A pinecone presents a pattern that can be mathematically broken down into the Fibonacci sequence. Cultures around the world have created beautiful, meaningful patterns on clothing, ceramics, and rugs. And contemporary painters use pattern - natural, cultural, organic, and geometric - to tell stories and make sense of the world. Art can be anything you want it to be. In this course you will make paintings built from pattern, and also have the opportunity to make a large-scale painting.

### **Advanced Printmaking: Americas**

Second Semester Course

Prerequisite: *Printmaking; open to sophomores, juniors, and seniors*

Create your own prints while studying the use of prints throughout the American continents. (Speaking Spanish is not required, but Spanish students will find an extra layer of connections as we investigate the prints of Latin American countries.)

### **Courses Offered in Future Years**

#### **Art Now – 21<sup>st</sup> Century Art**

First Semester Course

*Open to 11th and 12th grade students, no prerequisite*

*It will be offered during the 2020-2021 academic year.*

In this course, the Walker Art Center and Sculpture Garden is our primary text. Our focus will be 21st Century Art. We will visit the garden and galleries weekly to uncover the people, ideas, and work that is happening right now in the contemporary, international art world. We will also study the many recent controversies about censorship in the arts. Art can offend, but is there a line to cross where art should be censored? Course work will encompass journaling, discussion, slide and video presentations, and interviewing local arts people.

#### **Advanced Ceramics: Native American Ceramics**

Second Semester Course

Prerequisite: *Ceramics; open to sophomores, juniors and seniors*

*This course will be offered Spring 2020-2021 academic year.*

In this hands-on, wheel throwing and clay sculpting class, students will discover the rich and diverse history of Native American Ceramics. Clay work from several Native cultures from south, central, and north American regions will be explored. Learning and practicing regionally specific pottery making, glazing, painting, and clay sculpting techniques will be the focus of this course. As an extension of this learning experience, students will incorporate these methods into their own original ceramic art creations. Both pottery wheel and clay sculpting techniques will be practiced. A field trip to the Minneapolis Institute of Art to study its collection of ceramic Arts of the Americas is integrated into the curriculum of this class.

#### **Advanced Ceramics: Clay Sculpture**

Second Semester Course

Prerequisite: *Ceramics; open to sophomores, juniors and seniors*

*This course will be offered Spring 2021-2022 academic year.*

Sculpting a human, animal, or imaginary creature's head through clay modeling, reproducing real life objects through clay sculpting, creating large scale coil-built structures, and learning how to make molds of objects in plaster and latex and then casting them in clay to make Pop Art inspired sculptures are among the major projects that make up the curriculum of the Advanced Ceramics: Clay Sculpture

course. This is NOT a pottery wheel based class. Instead, students will use hand building process to put form to their creative inspiration. A field trip to the Minneapolis Institute of Art and regular group critiques complement the significant studio-based focus of this advanced level course.

### **Advanced Drawing: Growth and Decay**

Second Semester Course

*Open to 10th, 11th, and 12th grade students. Prerequisite: Drawing, or Drawing and Painting 1.*

*It will be offered Spring of 2020-2021 academic year.*

Do the objects you keep define who you are? Can objects define a culture? This course interrogates objects; their growth and their decay. You will plant a seed and draw it as it grows. We will compile and draw an array of things - rusty car parts to candy - junk to junk food. This course is about finding, depicting, and seeing with fresh eyes the objects that surround us.

### **Advanced Drawing: The Human Condition**

First Semester Course

Prerequisite: *Drawing or Drawing and Painting 1; open to sophomores, juniors, and seniors*

*This course will be offered 2021-2022 academic year.*

Who are you? Who are we? This course will focus on portraits and figure, allowing you to develop skills in observing and drawing people and their condition. Portraits allow us to confront ourselves. In addition, this course is perfect for those interested in subjects ranging from cartooning to fashion design. This course also includes 3 Tuesday evening figure study sessions. *Drawing Portraits: Faces and Figures* by Giovanni Civardi will complement our work in this course.

### **Advanced Filmmaking: Stories in: 30**

Second Semester Course

Prerequisite: *Filmmaking*

*This course will be offered Spring 2020-2021 academic year.*

How much story can you tell in thirty seconds? As it turns out, quite a lot! This course is as much about creative problem-solving as it is about filmmaking. Students will be challenged with telling a story or expressing an idea within very tight running time constraints. What can you get away with in thirty seconds? Fifteen? Five? We will look at filmmaking in advertising, where getting a message out in thirty seconds involves being surprising, compelling, and even shocking. Students will make a number of films experimenting with limited time frames, and they will talk with advertising creatives and commercial producers about the challenges they have to address in a crowded media world.

### **Advanced Filmmaking: The Power of the Cut**

First Semester Course

Prerequisite: *Filmmaking*

*This course will be offered during the 2021-2022 academic year.*

The art and craft of editing is where the medium of filmmaking is unique, and this course is focused on developing the skills for creative and effective expression through editing. We will screen a variety of films to understand how their editors constructed their narratives, from the entirety of the film down to a single cut. Our assignments will emulate these methods and then allow students to find their own way of telling a story as the class progresses. We will also visit post-production houses to look at how editing is practiced in a professional environment.

### **Advanced Game Development: Social Platforms**

Second Semester Course

Prerequisite: *Game Development*

*This course will be offered during Spring 2020-2021 academic year.*

One of the most significant components of games is the social aspect. Whether it's sharing your accomplishments on leaderboards, competing, or playing in co-op mode, social games involve something you can't get from a computer's AI - unpredictability and the investment of human contact. While we'll still be drawing upon our experiences from the beginning Game Development course, we will be moving away from the computer into the world of games played on a table with other people, with a board, cards, dice, and pencil/paper. Believe it or not, PacMan can be played as a board game and this will lead us into a deeper dive on what game design is really all about. Once students understand this, they will do a game jam involving multiplayer aspects to complete the course. During this time, we will also be talking with game designers and developers of both board/card games and video games about their thinking processes and methods for designing their games.

### **Advanced Game Development: Virtual Reality**

Second Semester Course

Prerequisite: *Game Development*

*This course will be offered during the 2021-2022 academic year.*

VR/AR (virtual reality/augmented reality) has become the new frontier for games, with desktops, consoles, and mobile devices all serving as platforms for these new immersive experiences. Beyond games, VR/AR has found applications in simulations, training, and therapy. This course focuses on the making of VR/AR projects, beginning with individual explorations into the practices and tools for VR/AR and moving into more complex collaborative work determined by the class. We will have the opportunity to create virtual spaces that envelop our players, while working with the same tools and methods used by professional game developers. We will also be talking with developers and creators of VR projects about their own approaches to their work, and we'll have opportunities to experience some of the new games and experiences coming out on different platforms.

### **Advanced Painting: Signs, Symbols, Language**

Second Semester Course

Prerequisite: *Painting, or Drawing and Painting 1; open to sophomores, juniors, and seniors*

*This course will be offered Fall 2020-2021 academic year.*

From graffiti to hieroglyphs, people have always used signs, symbols, and language to communicate their culture's central ideas and beliefs. From children to contemporary painters, artists use simple symbols and text to create signs. These can tell a story, give a direction, or get us to think about ourselves in a new way. In this course you will make paintings grounded in your own symbolic and linguistic interests. By exploring the huge range of signs, symbols, and languages of the world, you will expand your own visual vocabulary to tell your story with personal clarity. You will also have the opportunity to make a large-scale painting.

### **Advanced Painting: From a Photo** Second Semester Course

Prerequisite: *Painting, or Drawing and Painting 1; open to sophomores, juniors, and seniors*

*This course will be offered 2021-2022 academic year.*

"What makes for great art is the courage to speak and write and paint what you know and care about." --Audrey Flack, painter. In this course you make paintings from your own photographs. In doing so, you learn to paint your own truth. From the personal to the political, from realism to abstraction, photography is an immensely useful tool that painters have used since its invention. Do we see our world through photographs, or do we experience it with our own eyes? In this course you create your own painting assignments, use photos in more ways than you ever thought possible, and also have the opportunity to make a large-scale painting. The book *101 Things to Learn in Art School* by Kit White will complement our work in this class.

### **Advanced Photography: The Natural World**

First Semester Course

Prerequisite: *Photo 1; open to sophomores, juniors, and seniors*

*This course will be offered 2020-2021 academic year.*

Photographing nature in many forms will be the theme. Much of this class will be spent outside, regardless of weather, so dress accordingly. We will use both traditional film and digital cameras.

### **Advanced Printmaking: Repetition & Tessellation**

Second Semester Course

Prerequisite: *Printmaking 1; open to sophomores, juniors, and seniors*

*This course will be offered 2020-2021 academic year.*

Printmaking for those who like multiples and the ways math can be used to make art. Screen print and relief print will be the media in this class. We'll print on paper and fabric.

## ENGLISH

### GRADE 9 COURSES

**English 9** will introduce students to the arts of reading, writing and discussing literature in a variety of genres. Skills and habits of mind that are fundamental to analysis and interpretation will be the focus of the learning activities and assessments in ninth grade.

#### World Literature

Year Course

This English course builds a foundation of skills that will empower ninth graders to be effective lifelong readers and writers. The class is also coordinated with the social studies course, World Cultures 9: Modern World History. Readings may include Brian Friel's *Translations*, R. K. Narayan's *Ramayana*, Edwidge Danticat's *Krik? Krak!*, Chinua Achebe's *Things Fall Apart*, Chimamanda Adichie's *Purple Hibiscus*, Naomi Nye's *Words Under the Words*, and William Shakespeare's *Twelfth Night*. Throughout the year, students will consider such questions as the following: Why do we read? Why do we write? Why do we tell stories? Why do we talk about the stories we read and hear? What are the conversations that stories create? How does context create meaning in literature? The power of story and the influence of perspective on story are important themes.

#### Ancient Roots of Modern Literature

Year Course

This yearlong interdisciplinary course will look at the “big ideas” that shape our interconnected world in the 21st century. We will explore questions like: What does it mean to be human? What are the overarching philosophies of human existence? Because modern history has many roots in ancient stories and sacred texts, we will study how modern interpretations of those texts expose the values and structures of the civilizations that created them. Once or twice a week, we will have combined class meetings, team-taught by English and Social Studies faculty, emphasizing the interdisciplinary nature of the course and its assessments. This is not an answers course; it is a questions course that will uncover complexities, priming every student for a life of curiosity, discovery, and inquiry. This course will develop the same skill set as *World Literature* and *World Cultures*, emphasizing the development of discussion, reading, writing, and research skills. This course is taken with *Ancient Roots of Modern Thought*.

### GRADE 10 COURSES

#### American Literature

Year Course

Sophomores in this course will read literature of increasing stylistic and thematic complexity in a variety of genres. Students will be expected to move well beyond the literal level in their interpretations of texts, as they begin to recognize the difference between “story” and “literature.” Students will think deeply about what it means to be an American and what defining characteristics make up American Literature. In particular, we will examine the texts we read for what they can teach us about issues of race, class, and gender in the United States. Annotating texts and developing effective discussion skills are strands throughout the year. In their writing, students will explore a variety of forms, including creative writing and analytical essays. Texts include such titles as J.D. Salinger's *The Catcher in the Rye*, N. Scott Momaday's *The Way to Rainy Mountain*, Nathaniel Hawthorne's *The Scarlet Letter*, Tim O'Brien's *The Things They Carried*, August Wilson's *Fences*, Zora Neale Hurston's *Their Eyes Were Watching God*, Toni Morrison's *The Bluest Eye* and F. Scott Fitzgerald's *The Great Gatsby*. Other texts are determined by individual teachers.

### GRADE 11 COURSES

The electives for juniors are seminars that offer students both intensive literary study and a heightened focus on the process of writing. Students will engage texts that invite close reading while they develop tolerance for ambiguity, appreciation for complexity and strategies to avoid reducing any text to a single meaning or issue. Reading selections for all electives explore genres, voices and literary traditions that span the globe.

As writers, students will be encouraged to focus on process: drafting, revising, discussing, revising and revising their work, with the ultimate aim of producing thoughtful, cogent essays in a voice that feels natural to the student. The writing will include literary analysis, where students have the opportunity to develop their insights as readers and interpreters of literature, and personal essays, where students will reflect on their own lives and the world around them. Written teacher feedback on student writing highlights progress toward stated outcomes and details opportunities for growth and revision. At least once a semester, and in most cases more frequently, students schedule one-on-one writing conferences to work with the teacher in a more detailed, focused way on some important aspect of their writing.

#### AP English Literature & Composition

Year Course

This college-level course is intended for highly motivated students interested in rigorous reading and writing experiences that prioritize literary analysis. The seminar-style course will embrace the challenges of writers such as Morrison, Shakespeare, Joyce, Shelley, Donne, and Kushner while preparing students for the AP English Literature & Composition exam without straying from the central reasons for studying literature. ***There is a supplemental charge to take an AP Exam that will be the responsibility of the student to pay. Financial aid is available.***

#### The Literature of War

First Semester Course

In this semester-long course, students will spend time reading, discussing, and analyzing various works that grapple with the horrors, mysteries, and even beauties of war. Through close examination of literary style, perspective, and technique, students will gain a deeper understanding of the experience of war as well as the process and effects of writing about war. They will complete many, varied writing assignments—large and small, creative and analytical, in class and at home—to help them become more comfortable and confident in their ability to write with sophistication and clarity, no matter what the assignment, occasion, or audience. Texts include various poems, *All Quiet on the Western Front*, *Slaughterhouse-Five*, and *Henry V*.

#### Creating Identity

First Semester Course

Why are we who we are? What makes a person a person? This course will examine what literature has to say about how one's identity is constructed. Students will explore how the context of race, class, gender, and sexuality influence our content as people and how language influences this content. The class will be taught as a seminar, focusing on the close reading of texts, including titles such as Huxley's *Brave New World*, Ishiguro's *Never Let Me Go*, Coates' *Between the World and Me*, Ali Smith's *Girl Meets Boy*.

#### Honor, Glory, Greed

Second Semester Course

What will people do and give up fulfilling an ideal or desire? This literary seminar will focus on the ideas and obsessions characters devote their lives to satisfying. Closely reading novels, stories, plays and poems, (titles may include *Sir Gawain and the Green Knight*, *The Brief Wondrous Life of Oscar Wao*, *The Buried Giant*, and *When My Brother Was an Aztec*) students will examine the meanings of



these characters' achievements and the costs and consequences of fulfilling their desires.

### Visions of Realism

Second Semester Course

This seminar will explore the ways authors have represented what's "real," what's magical, supernatural or spiritual, and what happens when people question the distinction. Students will examine the roots and legacies of a paradoxical world where *magical* things *really* happen as a part of the lived experiences of people in our world today. We'll read Social Realism, Magical Realism, and watch Surrealism.

## GRADE 12 COURSES

### The 21st-Century Novel: Forward & Back

First Semester Course

The novel has been around for a long time—2,000 years, taking the term loosely, and at least a few hundred years in its modern form. And yet, derived from the mid-16th century Italian, by way of Latin, the word *novel* essentially means “new story.”

So, then, nearly a quarter of the way into the 21st century, what's *new* with the novel? If the contemporary, 21st-century novel is an effect, what are its causes, its stimuli? What antecedents does it owe its existence to? In what ways might its modern form also look ahead? What might the form foretell? What is the “canon” of the now? How are writers and thinkers stretching the definition of what a novel—or literature, for that matter—can be?

While reading literature will be the primary mode, and for which student choice will occasionally factor in, students will also study other emerging non-traditional literary mediums that borrow from and present similarly to the novel's form, such as podcasts and web series. So, too, while discussion and written essays will remain the primary forms of expression, as a 21st-century course dealing with 21st-century content, assessments will occasionally take 21st-century form, such as blog or vlog posts and podcasts.

### Global Shakespeare

First Semester Course

Shakespeare's plays are profound, passionate, and perpetually relevant. For over 400 years, people of all sorts have looked to them for beauty and truth, for what it means to be human, while writers and dramatic artists across the globe have been inspired by them to create connecting, responding artworks that are timeless in their own right. Shakespeare has now become the most global of writers. This course will give students a chance to deeply understand a small number of the most seminal Shakespearean works and also investigate how they have been reimagined in multiple cultures and times. Using the original texts and more current film versions from Russia, Japan, and India, students will come to know not only Shakespeare but also more central human traits like the influence of culture on meaning.

### The Literary Essay

First Semester Course

In a departure from the traditional analytical essays emphasized in previous English courses, this course focuses on writing well-crafted, nuanced personal essays—that is, essays that speak from the “I” and prioritize personal experience. Students will study and practice artistic and creative use of literary techniques such as narrating with scenes, dialogue, point of view, and recording details and observations. There will also be a focus on reporting, in which students will explore and make sense out of a place, person, or idea through investigative research. Though the primary focus is on writing, students will be expected to read and discuss weekly—after all, strong writers are voracious readers. Students will study the work of professional essayists in an attempt to discover their techniques and to understand how to merge content and craft. The course

emphasizes the importance of discovering one's own voice and style through writing exercises, peer workshops, class critiques, and above all, revision. Daily writing practice, short papers, and several substantially revised essays will be required.

### Literature and Film of South Asia

First Semester Course

In this class, we will examine a host of colonial and post-colonial South Asian writers and their various cultural, historical, and social preoccupations, including the following fields of inquiry: Gandhi and his legacy, colonialism and its legacy, Dalit (“untouchable”) aesthetics, Kashmir, Hijra culture, and arranged marriage. While we will examine writings from various disciplines, our inquiries will pivot around literature and film. We will consider questions about style and medium, especially those that pertain to language and translation, and about representation, e.g., how “the East” figures in the popular “western” imagination.

### Native American Fiction, Folklore, & Film

First Semester Course

In order for us to make sense of where we are going, it is vital to look not only to the past, but to listen to the original inhabitants of a place. This course will read and hear the voices of indigenous people from the past and today as they steadily speak today in fiction and film. We will address the costs and benefits of an oral tradition as a form of literature, as well as questions of authenticity, the Noble Savage, the Urban Indian, the Trickster, and representations and objectification of indigenous people and culture in our nation's consciousness. The course will culminate with proposals to this question: What can Indigenous literature teach us as we move forward in a global society? Students may read fiction by Louise Erdrich, David Treuer, Leslie Marmon Silko, and Sherman Alexie and view films such as *Fast Runner*, *Smoke Signals*, and *Reel Injun*. A community collaboration with Little Earth of United Tribes runs throughout the semester.

### African-American Literature

Second Semester Course

Interested in courageous conversations? If you answered “yes,” then this semester long course is for you! African American literature grew out of an oral tradition of storytelling and spirituals. In this course, you will consider this vernacular tradition and its impact on African American authors who come along after this early time period. Along with considering the content of literary works, students will explore a number of cultural, historical, and political themes and then examine how the issues of gender, race, sexuality and class affect the meanings of varied works. Students will leave the course with a broader, more nuanced sense of African-American writing (and authors) and will hopefully be compelled to read more varied cultural texts as they move beyond the walls of Blake. Readings may include texts by Octavia Butler, Ta-Nehisi Coates, Taiyion Coleman, Toni Morrison, Alexis Pate, Alice Walker, Colton Whitehead, and Richard Wright.

### Comedy

Second Semester Course

Comedy has been called “the last refuge of the nonconformist mind.” It is also spectacle, vitality, absurdity, and happy endings. This course will explore this diverse genre, its patterns and a variation, trying to understand what makes us laugh and why that matters. Our larger areas of inquiry will include satire, irony, parody, and theories of humor and comedy. We will read plays, watch films, analyze jokes, and consider cartoons, stand-up comedy, sketch comedy, and even memes. In short, this course will be a study of the most happy of aspects of universal human culture. Our material will be chosen from artists such as William Shakespeare, Oscar Wilde, Buster Keaton, Kubrick, Sarah Ruhl, Eugene Ionesco, George Saunders, Wes Anderson, and the Coen Brothers. Students will write several essays and complete creative projects to address the larger questions raised in class.

## **Creative Writing: Fiction and Poetry**      Second Semester Course

This class is all about creative writing. The heart of our work will be the writer's workshop, during which students present their own stories and poems to one another for peer response and review. Between writing projects, we will read stories and poems by established writers with an eye to the elements and techniques that make their work sing. When not considering the work of classmates and other writers, we will engage in playful writing exercises designed to help us enliven our own language and voices. Our goal is that all will leave this course with a handful of short stories and poems they can proudly call their own, along with a series of reusable activities and exercises designed to generate ideas for writing beyond the scope of this class. In addition to refining our own writing, we also seek opportunities to meet with published authors to discuss the art of creative writing.

## **Literature and Politics**      Second Semester Course

What is the intersection between literature and politics? Is all literature political—and, if so, in the same way(s)? Can literature be politics as such? How might certain styles of writing enable and disable certain political possibilities? What happens if we re-conceptualize politics as, in Masha Gessen's words, "a conversation about how we inhabit this world together"? We will approach, refine, supplement, and answer these questions through an interdisciplinary examination of texts spanning literature, film, philosophy, literary theory, history, and political science. All of our texts, from different times and places around the world and with different intellectual and political commitments, converge in their conception of literature as a political form.

## **Myth and Memory**      Second Semester Course

If, as Frost said, poetry is what's lost in translation, then myth is a form of storytelling that transcends translation – delivering tales that still resonate within us centuries later. In this course, students will engage older texts such as the Epic *Gilgamesh*, Ovid's *Metamorphoses*, the Mayan *Popol Vuh*, and Homer's *The Odyssey*, as well as modern retellings and "refractions" such as John Gardner's *Grendel*, Zachary Mason's *Lost Books*, and Ali Smith's *Girl Meets Boy*. After careful reading and seminar discussions, students will write a balance of analytical meditations and personal reflections on these powerful works.

## **Post-Colonial Literature: Reclaiming Value**      Second Semester Course

Colonization fosters objectification and obliteration of people and their cultures, but literature can signal the revolutionary shift toward agency, renewal, resistance, and reclamation rather than just indictment and critique. Through our readings, we will examine the ways literature represents and reframes the perceptions, relationships, and consequences of colonial history while tracing the contemporary impact in Ghana, India, England, Myanmar, the Caribbean, and the US. Some address of post-colonial theory will ground the course; however, fiction will drive this course. Texts may include Yaa Gyasi's *Homegoing*, and short stories by Hanif Kureishi, Jhumpa Lahiri, Jamaica Kincaid, and films from Malaysia and Congo. These texts go beyond inquiry into what has been lost, what is reclaimable and what value reparations might add. How does literature express hope, persistence, resilience, and adaptation? How does literature conceptualize the different shapes such reclamations might take? How can literature help us understand what it means to make amends in other places in the world and in our own lives?

# MATHEMATICS

## DEPARTMENTAL REQUIREMENT:

Enrollment in a minimum of four semesters of mathematics offered by the Blake Mathematics Department and successful completion of Geometry and Algebra II, either at Blake or through courses that are equivalent to those offered at Blake. Computer science courses do not count toward the mathematics graduation requirement, except by permission of the department chair.

Because problems that depend upon mathematics for their solution arise in many fields, the mathematics department strongly recommends that students continue the study of mathematics in all semesters. Nearly all Upper School students complete four years of mathematics.

The department offers several courses of study to meet the varied needs of our student body:

- Students with an interest in the social sciences or humanities are encouraged during their junior and senior years to choose *Functions, Statistics & Trigonometry with Modeling* or *Probability & Statistics* or one of the other semester electives.
- Students interested in the applied sciences or pure mathematics are encouraged to take some level of *Pre-Calculus* and *Calculus* before graduation, as well as semester electives that provide an opportunity to participate in mathematics research or to explore advanced mathematics in greater depth.

The most common courses of study are outlined in the Mathematics Course Sequences flowchart found at the end of this section. Students are not locked into a mathematics course sequence and, with appropriate preparation; it is possible to switch sequences in consultation with the mathematics department.

In order to be successful, a student enrolling in a mathematics course must be proficient in preceding mathematics concepts and skills. The course prerequisites and evidence of readiness recommendations listed in this course guide provide a way for students to demonstrate mastery of prerequisite content. The mathematics department strongly recommends that a student who has not demonstrated evidence of readiness consider an alternative mathematics course sequence. If a student who has not demonstrated evidence of readiness, based on their performance in their current math class, desires to enroll in a course, the student must consult with his or her mathematics teacher to develop a monitored plan for demonstrating proficiency in prerequisite concepts and skills. The plan must be in place by May 15, 2018, and fully executed including testing by August 15, 2018 in order for the course request to be honored.

*The department will place students who are new to Blake in the appropriate course based on mathematics experience, teacher recommendation, and test results. Students may be asked to take a placement exam.*

## Geometry

Year Course

Prerequisite: *Algebra I* or teacher recommendation

We will explore Geometry from its earliest beginnings as a set of rules arrived at by trial and observation by nearly every civilization on Earth. Our main focus is on Euclidean geometry, which was developed by the Greeks into a set of conjectures concerning figures formed by points, lines, planes and circles. This course emphasizes both deductive and inductive reasoning. Topics include congruence, logic and proof, similarity, properties and areas of circles and polygons, relationships of lines and planes in space, solids and their volumes, right triangle trigonometry and transformations.

## Honors Geometry

Year Course

Prerequisite: *Honors Algebra I*

Evidence of readiness: B in *Honors Algebra I*

This course gives a more rigorous treatment of the topics covered in *Geometry*, emphasizes deductive reasoning and formal proof, and approaches geometry from synthetic, analytic, and transformational perspectives. Additional topics will be chosen from symbolic logic, axiom systems, finite geometries, non-Euclidean geometry, the nine-point circle, Ceva's Theorem, proofs of the Pythagorean Theorem, advanced constructions, higher dimensions (*Flatland*), networks, topology, fractals, the Golden Section, Platonic and Archimedean solids and their duals, cyclic quadrilaterals, and Cantorian infinity.

## Algebra II

Year Course

Prerequisite: *Algebra I* or *Algebra IB*, and *Geometry*

Evidence of readiness: Completion of *Algebra I* or *IB* and *Geometry*

*Algebra II* is a course that extends and reinforces the problem solving and symbolic reasoning found in *Algebra I*. Students learn the skills required to investigate properties and transformations of various functions, including linear, quadratic, higher-order polynomial, exponential, and radical functions, with an introduction to logarithmic and rational functions. Applications are made in the areas of inequalities, systems of equations, and mathematical modeling. Algebraic manipulation and computation are mastered in the context of reasoning and problem solving.

## Honors Algebra II

Year Course

Prerequisite: *Honors Algebra I* and *Honors Geometry*

Evidence of readiness: B in *Honors Algebra I* and *Honors Geometry*

*Honors Algebra II* incorporates aspects of a problem-based learning curriculum and is designed for students who prefer independent problem solving and who demonstrate persistence and confidence in tackling novel problems. The course gives a more rigorous treatment of the topics covered in *Algebra II* and includes additional topics such as conic sections, matrices, sequences and series.

## Functions, Statistics & Trigonometry with Modeling

Year Course

Prerequisites: *Geometry* and *Algebra II*

This course, which emphasizes the collection and analysis of data using tools from *Algebra II*, is hands-on in its approach. Many of the problems are of an interdisciplinary nature and the use of technology and dynamic modeling software is an integral part of the curriculum. Topics include sequences and series, functions and graphs, permutations and combinations, best-fit lines and curves, probability and statistics. The course reinforces topics from *Algebra II* and provides excellent preparation for both *Probability and Statistics* and *Pre-Calculus*.

## Pre-Calculus

Year Course

Prerequisite: *Geometry* and *Algebra II*, or *Functions, Statistics & Trigonometry with Modeling (FST)*

Evidence of readiness: B in *Algebra II* or B in *FST*

This course focuses on functions and their characteristics, including trigonometry. Although the course begins with a brief review of algebra concepts, students in *Pre-Calculus* must already possess a strong foundation in algebra. Topics include function notation and transformations; combinations and composition of functions; linear, quadratic, polynomial, rational, exponential, logarithmic, and trigonometric functions; sequences and series; and analytical trigonometry.

**Honors Pre-Calculus** Year Course  
Prerequisites: *Honors Geometry* and *Honors Algebra II*  
Evidence of readiness: B in *Honors Geometry* and B in *Honors Algebra II*

This course gives a more rigorous treatment of the topics covered in *Pre-Calculus*. Additional topics include parametric equations and an introduction to limits.

**Calculus** Year Course  
Prerequisite: *Pre-Calculus* or *Honors Pre-Calculus*  
Evidence of readiness: B in *Pre-Calculus*

Calculus is a mathematical tool used to analyze changes in physical quantities. It was developed in the seventeenth century by Gottfried Wilhelm Leibniz and Isaac Newton to study the major scientific and mathematical problems of the day. Students in this course will develop a deep understanding of the important ideas of calculus and a strong foundation to prepare them for continued study of calculus. Topics include limits, derivatives, and integrals, with an emphasis on application, problem solving and conceptual fluency.

## ADVANCED PLACEMENT & POST-AP MATHEMATICS

**AP Statistics** Year Course  
Prerequisite: *Pre-Calculus* or *Honors Pre-Calculus*  
Evidence of readiness: B in *Honors Pre-Calculus* or B+ in *Pre-Calculus*

In this course, students will learn to be intelligent and critical consumers of data and information, to use the tools of statistics to understand and make decisions from data, and to communicate statistical information clearly and precisely. Topics encompass four major themes: descriptive statistics, which makes use of graphical and numerical techniques to study patterns and departures from patterns in data; planning and conducting a study, in which students learn to collect data according to a well-developed plan; probability and random variables, which are the tools that let us anticipate what the distribution of variable should look like under a given model; and inferential statistics, which guides the selection of appropriate models. Students enrolling in *AP Statistics* will be expected to sit for the Advanced Placement Statistics examination in May. ***The supplemental fee for taking the AP exam will be the responsibility of the student. Financial aid is available.***

**AP Calculus AB** Year Course  
Prerequisite: *Pre-Calculus*, *Honors Pre-Calculus* or *Calculus*  
Evidence of readiness: B in *Honors Pre-Calculus*, A in *Pre-Calculus* or B in *Calculus* or instructor permission

*AP Calculus AB* is a college-level course in calculus that includes limits, derivatives, integrals and their applications. The course will emphasize proof and an understanding of fundamental concepts, along with development of computational skills. Considerable time will be devoted to preparing students to take the AP exam. Students enrolled in *AP Calculus AB* will be expected to sit for the Advanced Placement Calculus AB examination in May. ***The supplemental fee for taking the AP exam will be the responsibility of the student. Financial aid is available.***

**AP Calculus AB/BC** Year Course  
Prerequisite: *Honors Pre-Calculus* or *Calculus*  
Evidence of readiness: A in *Honors Pre-Calculus*

*AP Calculus AB/BC (yearlong)* is a college-level course in calculus that includes limits, derivatives, integrals and their applications. The course will cover all *AP Calculus AB* topics with emphasis on proof and an understanding of fundamental concepts, along with development of computational skills. *AP Calculus BC* will also cover the calculus of the polar coordinate system, vector calculus, curvilinear motion as defined parametrically, specialized methods of integration, separable differential equations, indeterminate forms, infinite series and Taylor series. Students enrolled in *AP Calculus BC* will be expected to sit for the Advanced Placement Calculus BC examination in May. ***The supplemental fee for taking the AP exam will be the responsibility of the student. Financial aid is available. Please note that a minimum enrollment is needed to run this class.***

**AP Calculus BC & Advanced Topics** Year Course  
Prerequisite: *AP Calculus AB*  
Evidence of readiness: B in *AP Calculus AB* or score of 4 on the AP Calculus AB examination

*AP Calculus BC* includes the remaining topics from the AP Calculus BC syllabus that are not in the AP Calculus AB syllabus, including the calculus of the polar coordinate system, vector calculus, curvilinear motion as defined parametrically, specialized methods of integration, separable differential equations, indeterminate forms, infinite series and Taylor series. Students will be expected to sit for the Advanced Placement Calculus BC examination in May. The second semester will cover combinatorics in some detail with particular focus on how these ideas help open new problem-solving doors. We will also apply those concepts to subjects like number theory, computing, and set theory. In addition, we will cover some unique problems that show the beauty, potential, and complexity of mathematics. ***The supplemental fee for taking the AP exam will be the responsibility of the student. Financial aid is available.***

**Linear Algebra with Topics in Multivariable Calculus** Year Course  
Prerequisite: *AP Calculus BC* or *AP Calculus AB/BC*

This is a college-level course in linear algebra covering the properties of linear maps on finite-dimensional vector spaces and inner-product spaces, with real and complex coefficients. The course emphasizes the abstract definition of a vector space, and includes the study of  $\mathbb{R}_n$  and  $\mathbb{C}_n$ , as well as  $P_n$  (polynomials) and other vector spaces. Topics include null space and range, trace, determinant, eigenvalues and eigenvectors, the spectral theorem, standard decompositions and characteristic polynomials. Topics from multivariable calculus will be incorporated throughout, to provide examples of how linear algebra can be applied in this context.

## MATHEMATICS & COMPUTER SCIENCE ELECTIVES

Students who have fulfilled their mathematics graduation requirements or who would like to simultaneously explore additional topics in mathematics or computer science are encouraged to consider mathematics or computer science electives. Actual course offerings will depend upon course enrollment. Some semester-long electives are offered in alternate years.



### *Electives offered every year*

#### **Statistics and Research Methods**

First Semester Course

Prerequisite: *Functions, Statistics & Trigonometry with Modeling* or *Pre-Calculus* or *Honors Pre-Calculus* or instructor permission

This semester course introduces students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students use projects as a basis for learning how to collect data sensibly, identify bias, and display and analyze statistics obtained from data, using technological software designed to allow them to explore many of the central questions of statistics. Through these conversations, students better learn how to analyze their world, interpret graphs and data presented in the media, and craft their own research and arguments. During the second quarter, students will complete an extensive research project and give a presentation to explain their findings.

#### **Fairness and Game Theory**

Second Semester Course

Prerequisites: *Geometry* and *Algebra II*

The branch of mathematics called game theory deals with the underlying mathematical theory of conflict and cooperation. It is applicable whenever two individuals – or companies, political parties, or nations – confront situations where the outcome for each depends on the behavior of all. In this course, you will develop a structured method for analyzing complex situations involving personal decision-making, social choice, conflict, fairness, and political power. You will even start to view everyday interactions in terms of game theory. Additional topics of study may include fair division of resources, voting methods, and applications to business or economics. Through analysis of case studies, you will evaluate and apply these theories in various real-world contexts and explore the meaning of fairness and equity as applied and interpreted through a mathematical lens.

#### **Introduction to Computer Science**

First Semester Course

Prerequisite: *Algebra I* or instructor permission

In this one-semester project based course, students will be introduced to the elements of computer science and gain experience with general computational problem solving techniques. The course reintroduces students to the internet as a multi-layered system by collaboratively solving problems about encoding and transmitting data. It explores how computers store complex information at the level of bytes and bits (and nibbles) and gives students the opportunity to begin programming in JavaScript to learn general principles of algorithms and program design that apply to any programming language. Emphasis is placed on algorithms and algorithm design, abstraction, creativity, collaboration, and the societal impacts of computing.

#### **AP Computer Science Principles**

Second Semester Course

Prerequisite: *Introduction to Computer Science*

This one-semester project based course works in conjunction with Intro CS to prepare students for the AP CSP exam which consists both of paper-pencil exam and a CS portfolio. Students continue to explore elements of computer science through the lens of human-computer-interaction by researching current events and the intersection of big data, public policy, ethics, and social impact as well as learning the basics of how and why modern encryption works. They then develop a series of interactive web applications in JavaScript that can be manipulated both on the computer and a touch screen device. The course includes 20 hours of project development in which students are able to explore their programming skills and develop their own interactive app or software.

### *Electives offered in 2019-20 and alternate years thereafter*

#### **Research in Mathematics (Pure or Applied)**

Second Semester Course

Prerequisite: Admission to this course is by application only.

Pure Research: *Honors Geometry*

Applied Research: *Honors Geometry* and *Intro to Computer Science*

The first quarter of this course prepares students to undertake beginning research in mathematics. Topics during the preparation period include problem solving and problem posing strategies, set theory, logic, methods of proof, and a comparison of computer-based mathematics and pure mathematics. Students will solve paradigmatic problems and develop the mathematical writing skills necessary for publication. During the second quarter, students will be given a larger open question to investigate using either a pure or applied approach. Students will demonstrate progress by meeting benchmarks and giving presentations to the class throughout the quarter. Students who wish to continue their mathematics research will receive assistance in identifying a university mentor for summer research (minimum of 100 hours required) and in preparing for national math and science competitions.

#### **Introduction to Computer Programming**

Second Semester Course

Prerequisite: *Algebra I* or instructor permission

This semester-long course provides students with an in-depth investigation into computer programming. Students design, implement, test, and document programs of increasing complexity and abstraction. Students are introduced to theoretical considerations and techniques of program analysis. Topics include procedural, object-oriented, and functional programming paradigms; abstract data types (stacks, queues, graphs, trees); fundamental algorithms (searching and sorting); performance and time/space complexity, and theoretical limits of computing.

### *Electives offered in 2020-2021 and alternate years thereafter*

#### **Discrete Systems (The Art of Math)**

First Semester Course

Prerequisites: *Geometry* and *Algebra II*

This course, subtitled “The Art of Math,” is designed to acquaint students with examples of mathematical concepts in architecture, art, music and nature. Through the study of branches of mathematics such as knot theory, projective geometry, group theory and other disciplines within discrete mathematics, the course will offer opportunities for first-hand experience through the generation of art works, the writing of papers, and the study of real-world applications. Additional topics include fractals, chaotic systems and the development and application of the Golden Section

#### **Software Design**

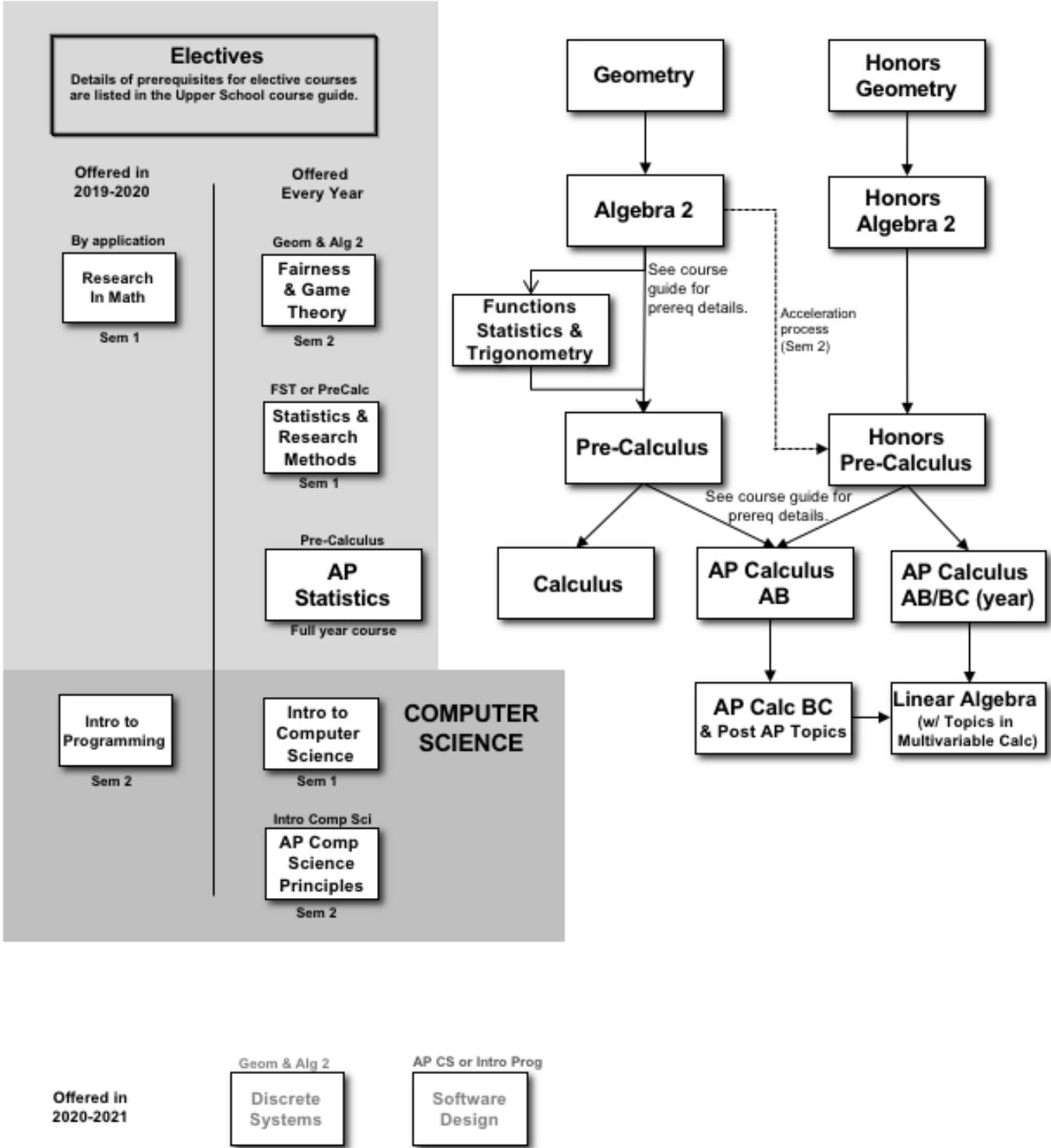
Second Semester Course

Prerequisite: *Introduction to Computer Programming* or *AP CS Principles* or instructor permission

In this project-based course, students will explore a variety of design techniques while collaborating in teams to iteratively design and develop software. Communication, collaboration, and creativity will be emphasized as teams learn how to manage their projects, share code, and set goals and timelines. The hands-on nature of this course will encourage students to discover and learn problem solving and software design methods as they become relevant to each project. Topics may include object-oriented, functional, and/or procedural programming; abstract data structures; graphical user interfaces; and software architecture and design patterns.

The Mathematics Course Sequences flowchart depicts the course sequences that students may follow as they advance through The Blake School's mathematics program. Students may switch sequences with appropriate preparation and the consent of the Mathematics Department.

# **THE BLAKE SCHOOL MATHEMATICS COURSE SEQUENCES 2019-2020**



Actual course offerings will depend upon enrollment.

Not all paths are shown. Students may switch between course sequences after meeting departmental requirements.

\*Placement by teacher recommendation based on independent problem solving, mathematical maturity, and work habits.

## MODERN AND CLASSICAL LANGUAGES

### DEPARTMENTAL REQUIREMENT:

Satisfactory completion of level III of one language and study of that language through at least the end of sophomore year. Because language competence is increasingly required in many fields, the MCL department strongly recommends continued enrollment in Modern and Classical Languages courses during the junior and senior year. Most Upper School students complete four years of Modern and Classical Languages.

All rising Blake Middle School students are placed into Upper School courses according to their language proficiency and their academic performance in MS.

New students to Blake with prior language experience will be placed in the appropriate level by decision of the department. A written placement test and oral interview in the target language are required for placement.

Course sequences are usually followed as outlined. Students deemed to be of exemplary motivation and who are interested in accelerating their course of language study must consult with their MCL teacher to develop a monitored plan for demonstrating proficiency in prerequisite knowledge and skills, and complete the US MCL Acceleration Contract before the first day of Spring Break. Full execution of the acceleration plan includes successfully passing the Acceleration Exam in August.

The department recommends remedial work to those students whose language proficiency may prevent them from being successful in the next level. This is usually the case when a student has earned a C+ or below as the final grade in a course.

**Students who want to begin their study of a language should note that, depending on enrollment, a level 1 class in a language may not be offered in a particular school year. Students entering Level 1 should be prepared to consider an alternate language choice or summer acceleration options; please contact PK-12 MCL Department Chair, Agnes Matheson for details.**

### FRENCH

#### French I Year Course

This course is an introduction to the French language and to our textbook series. The curriculum is context-based and addresses culture as well as the four language skills: listening, speaking, reading, and writing. By the end of the year students will have gained enough French so that they can express themselves in simple conversation on very familiar topics. The curriculum is supported by a robust online platform, which allows students the flexibility to do a lot of additional practice outside of class.

***Please note that a minimum enrollment is needed to run this class.***

#### French II Year Course Prerequisite: *French I*

Through a variety of materials and methods, French II will continue to develop a strong foundation in listening, speaking, reading and writing. Class time will be devoted to aural/oral work with most written work done outside of class. Through videos or film clips, history, discussion, and digital media, students will develop a cultural perspective of France and Francophone countries.

#### French III Year Course Prerequisite: *French II*

In this course, taught entirely in French, students continue to build their understanding of the French language. This is a year of intense study that deepens a student's basic foundation in preparation for advanced classes that include readings, poetry, civilization, film and music. Listening, speaking, reading and writing skills are developed within the context of language usage through a variety of materials. Students learn to speak with confidence in everyday situations as well as to successfully express a variety of ideas through writing. Grammar is presented through a variety of themes, and the textbook is supported by an online platform with additional activities.

#### French IV Year Course Prerequisite: *French III*

More interdisciplinary and content-based than French III, French IV focuses on increased proficiency in language communication skills and appreciation of contemporary French and Francophone culture. Arranged thematically, the course allows students the opportunity to interpret authentic texts and produce language in diverse contexts. Through literary excerpts and articles, students are exposed to a variety of French cultural contexts. Time is devoted to the development of reading strategies, and student read novels in their entirety. Speaking skills improve greatly through daily discussion and attention to oral expression as all elements in class are conducted in French. Writing skills are enhanced through essays and journals that accompany all thematic units.

#### French V Year Course Prerequisite: *French IV*

This is a Pre-AP course designed for advanced students who are interested in furthering their knowledge of the language and culture. Taught in French, the content of this course includes short stories, poetry, non-fiction readings, current events and cultural activities from a variety of French-speaking countries. Grammar practice will be reviewed in the context of the readings and by additional reinforcement exercises. Emphasis will be given to developing effective communication skills, and students will write compositions and make oral presentations on a regular basis. A robust multimedia component will support the growth of communication skills and the development of global competence.

#### AP French Language and Culture Year Course Prerequisites: B in *French V*, or A in *French IV* and a score of 90% on the Advancement test.

Interdisciplinary and content-based, the AP French Language and Culture course promotes both fluency and accuracy in language use while providing students an opportunity to broaden their worldviews and deepen their knowledge of French and Francophone cultures through critical study and authentic materials. Students are engaged in an exploration of culture in both contemporary and historical contexts, using their knowledge of French to understand and compare cultural products, practices, and perspectives of the French and Francophone worlds with their own communities. Taught in French, the course incorporates interdisciplinary topics across the six required themes (Global Challenges, Science and Technology, Contemporary Life, Personal and Public Identities, Families and Communities, and Beauty and Aesthetics) in the AP French Language and Culture Curriculum Framework, and provides opportunities for students to demonstrate their proficiency and ability to interpret and synthesize information from authentic resources in each of the three modes of communication (Interpersonal, Interpretive, and Presentational). The use of French is required at all times and students will be given frequent presentational writing and speaking assignments. Grammar is reviewed as needed throughout the year. The course prepares

students to take the Advanced Placement French Language and Culture examination in May.

***There is a supplemental charge to take an AP exam that will be the responsibility of the student to pay. Financial aid is available.***

***The AP French class and Advanced Topics: Le Monde Francophone will run together. Consequently, the topics covered in both classes will vary from year to year to avoid duplication, and assessment expectations will be differentiated by level.***

#### **Advanced Topics: Le Monde Francophone**

Year Course or Fall Semester

Prerequisite: AP French Language and Culture and/or departmental approval

This post-AP elective allows French students to explore and more fully develop language while also increasing their understanding of the Francophone world. Using a variety of materials, short readings, novels, press, films, podcasts and technology, students will discover the history, literature, culture and current issues of various French-speaking countries.

***Advanced Topics: Le Monde Francophone and The AP French class will run together. Consequently, the topics covered in both classes will vary from year to year to avoid duplication, and assessment expectations will be differentiated by level.***

### **LATIN**

#### **Latin I**

Year Course

In Latin I, students will begin to study the language, history, and culture of the ancient Romans. Students will begin to build the foundational skills needed to read an inflected language, which requires students to use word endings over word placement to guide meaning.

In Latin, our primary modes of communication are reading and writing, and students will develop critical thinking skills by engaging in our activities and readings about mythology, history, and culture in Rome. In addition to gaining an understanding of ancient Roman culture, students will begin to make connections between the Roman world and our modern one.

***Please note that a minimum enrollment is needed to run this class.***

#### **Latin II**

Year Course

Prerequisite: Latin I

In Latin II, students will continue to study the Latin language, history and culture through more advanced readings and the analysis of more complex grammar. By the end of this course, students will have a complete understanding of Latin grammar and be able to translate mostly unedited Latin from Roman authors.

#### **Latin III**

Year Course

Prerequisite: Latin II

Latin III is a yearlong translation course designed to synthesize the application of Latin grammar learned in Latin I and II with the interpretation and study of authentic Latin texts. During the first semester, students will delve into selections from Livy's *Ab urbe condita*, specifically stories concerning the foundation and early years of Rome. During second semester, students will move from prose to poetry, reading selections from Martial, Catullus and Ovid. During their exploration of poetry, students will also learn about meter, rhetorical devices, and the expectations of poetic genres.

#### **Latin: Readings in Roman History**

Year Course

Prerequisite: Latin III

*This course will be offered during the 2019-2020 academic year and every third year thereafter.*

This is an advanced translation course. Students will translate and analyze Latin texts from various Roman authors in order to gain a deeper understanding of Roman history, from the founding through the fall of Rome, all while solidifying their understanding of Latin grammar. Authors may include Eutropius, Cicero, Caesar, and Livy. In addition to translating texts, students will conduct research on a variety of aspects of Roman history and its lasting impact on the modern world. In the final quarter, students will have the opportunity to select an author or topic from the course for more in-depth study.

#### **Latin: Readings in Roman Culture**

Year Course

Prerequisite: Latin III

*This course will be offered during the 2020-2021 academic year and every third year thereafter.*

This is an advanced translation course. Students will translate and analyze Latin texts from various Roman authors in order to gain a deeper understanding of Roman culture, while solidifying their understanding of Latin grammar. Topics may include religion, daily life, family life, education and slavery. In addition to translating texts, students will conduct research on a variety of aspects of Roman culture and the impact of that culture on the modern world. In the final quarter, students will have the opportunity to select an author or topic from the course for more in-depth study.

#### **Latin: Readings in Roman Biographies**

Year Course

Prerequisite: Latin III

*This course will be offered during the 2021-22 academic year and every third year thereafter.*

This is an advanced translation course. Students will translate and analyze Latin texts about Roman men and women; real and fictional, written by various authors in order to gain a deeper understanding of Roman history and culture. Vocabulary and grammar concepts will also be reviewed in the context of the Latin texts. Romans to be studied may include Caesar, Cicero, Lucretia, and the Emperors. In addition to translating texts, students will conduct research on a variety of topics to provide a broader context for the Romans being studied. In the final quarter, students will have the opportunity to select an author for more in-depth study.

#### **Latin: AP Vergil and Caesar**

Year Course

Prerequisite: Latin III and departmental approval

Latin AP Vergil and Caesar is a year-long course devoted to the study of Vergil's epic poem, the *Aeneid*, and Caesar's *De bello Gallico* (*Gallic War*). Over the course of the year, students translate selections from both texts, working to hone strategies specific to reading both epic poetry and prose. In addition to the Latin text, students are also expected to read selections from the *Aeneid* and the *Gallic War* in English. While this course remains an advanced translation course, students will also learn to analyze and interpret the Latin text as literature. Student-led discussions, journal entries and regular short response papers allow students to articulate and refine their evolving interpretation of each author. The course of study prepares students to take the Advanced Placement Latin Examination in May. ***There is a supplemental charge to take an AP exam that will be the responsibility of the student to pay. Financial aid is available.***



### **Advanced Classics: The Age of Augustus and Empire**

Year Course

Prerequisite: *Latin: AP Vergil* and/or departmental approval

*This course will be offered in alternate years. It will be offered during the 2019-2020 academic year.*

This is a yearlong translation course that explores the literature, history, social dynamics and architecture during the Principate of Augustus, and the emperors who followed him. Students in this course translate from authors including, but not limited to: Suetonius, Augustus, Tacitus, Pliny, Horace, Ovid and Vergil. During this course, students also write papers, prepare presentations and engage in student-led discussions covering various topics dealing with the Roman Empire.

***Please note that a minimum enrollment is needed to run this class.***

### **Advanced Classics: Politics and Poetry**

Year Course

Prerequisite: *Latin: AP Vergil* and/or departmental approval

*This course will be offered in alternate years. It will be offered during the 2020-2021 academic year.*

This is a yearlong translation course that, in addition to translation of texts, incorporates elements of composition and dialogue about the role of a translator. During first semester, students will primarily study Cicero and the political scene during the Roman Republic. While reading Cicero, students will also delve into Latin prose composition. In the second semester, students will read Ovid while parsing out the role of a translator and the importance of that role. There will be various student-led projects throughout the year, such as preparing a Latin text, presenting compositions, and creating polished translational work.

***Please note that a minimum enrollment is needed to run this class.***

### **Beginning Ancient Greek**

Year Course

Prerequisite: Completion of *Latin III* and entering 12<sup>th</sup> grade

Beginning Ancient Greek will use the *Athenaze* book series to begin the study of this classical language. By reading about Dikaiopolis and his family, students will discover how Greek functions as well as learn about the culture of Ancient Greece. We will also read several tragedies in English translation to discuss both religious and philosophical beliefs of the ancient Greeks.

***Please note that a minimum enrollment is needed to run this class.***

## **MANDARIN CHINESE**

### **Mandarin I**

Year Course

This is an introduction to Modern Standard Chinese (Mandarin Chinese) and to the cultures of China. With an emphasis on speaking and listening, this course also addresses reading and writing in simplified characters. Students also learn the Pinyin spelling system. Students in this course learn to talk about themselves and their families. They also use computer software programs to look up characters that share common elements, and find new words that are formed with a given character. Students will understand some common signs written in simplified Chinese, and they will also learn about Chinese holidays and festivals and the distinctive foods associated with them.

***Please note that we need a minimum enrollment to run this class.***

### **Mandarin II**

Year Course

Prerequisite: *Mandarin I*

This is a continuation course for students who have completed Mandarin I, or who can demonstrate that they have acquired a knowledge of the language to the required level. Emphasis will continue to be on the spoken language. This course is taught

primarily in Chinese. The study of Chinese characters will focus on the simplified forms. Topics include shopping, talking about past and future events, daily and leisure activities, and home and school. Students will understand brief messages and notes written in simplified Chinese characters that they have studied previously. Supplementary materials and technology will support this course.

### **Mandarin III**

Year Course

Prerequisite: *Mandarin II*

Mandarin III is an intermediate course that is taught entirely in Chinese. Vocabulary and sentence structures from Mandarin I and II will be further developed. Topics will include home and school, going to the doctor, ordering dishes in a restaurant, getting around town and narrating a sequence of events. Students will begin to read short stories, advertisements and other authentic materials. With the use of computer software this course will offer additional practice in extended writing. Students will be working with a textbook and authentic text in simplified characters. Other resources will include music, film, and digital media.

### **Mandarin IV**

Prerequisite: *Mandarin III*

Year Course

In this course, taught entirely in Chinese, students will be working with a college level textbook and authentic Chinese texts to further develop their reading and writing in simplified character, as well as listening and speaking skills. Readings and digital media will be supplemental resources for this class.

### **Mandarin V**

Prerequisite: *Mandarin IV*

Year Course

This is a Pre-AP course designed for advanced students who are interested in furthering their knowledge of the language and culture and is taught entirely in Chinese. In order to provide a content-rich environment, this course includes short stories, poetry, non-fiction readings, current events, cultural activities, digital media, films, and songs. Students are introduced to different writing styles. Grammar practice is reviewed in the context of the readings and by additional reinforcement exercises. Emphasis is given to developing effective communication skills, and students write compositions and make oral presentations on a regular basis.

## **Advanced Placement Chinese Language and Culture**

Year Course

Evidence of readiness: B in *Mandarin V*, or A in *Mandarin IV* and a score of 90% on the *Advancement test*.

The AP Chinese Language and Culture course deepens students' immersion into the language and culture of the Chinese-speaking world. This course provides students with ongoing and varied opportunities to further develop their proficiencies across the full range of language skills within a cultural frame of reference reflective of the richness of Chinese language and culture. Instructional materials and activities are carefully and strategically adapted from authentic sources to support the linguistic and cultural goals of the course. The course prepares students to take the Advanced Placement Chinese Language and Culture examination in May. ***There is a supplemental charge to take an AP exam that will be the responsibility of the student to pay. Financial aid is available.***

***The AP Chinese class and Advanced Topics: Chinese Culture and Literature will run together. Consequently, the topics covered in both classes will vary from year to year to avoid duplication, and assessment expectations will be differentiated by level.***

## Advanced Topics - Chinese Culture and Literature

Year Course or Fall Semester

Prerequisite: AP Chinese Language and Culture and/or departmental approval.

This post-AP elective allows students of Chinese to explore and more fully develop language while also increasing their understanding of the Chinese speaking world. Using a variety of materials, short readings, novels, press, films, podcasts and technology, students will discover the history, literature, culture and current issues of the Chinese speaking world.

*The AP Chinese class and Advanced Topics: Chinese Culture and Literature will run together. Consequently, the topics covered in both classes will vary from year to year to avoid duplication, and assessment expectations will be differentiated by level.*

## SPANISH

### Spanish I

Year Course

This course is an introduction to the Spanish language and to our textbook series. The curriculum is context-based and addresses culture as well as the four language skills: listening, speaking, reading, and writing. By the end of the year students will have gained enough Spanish so that they can express themselves in simple conversation on very familiar topics. The curriculum is supported by a robust online platform which allows students the flexibility to do a lot of additional practice outside of class.

*Please note that we need a minimum enrollment to run this class.*

### Spanish II

Year Course

Prerequisite: Spanish I

This course continues with the textbook series. Students will acquire standard language and grammar and develop communication skills largely through the context of the course content and activities. Oral and written stories, current events, active listening, note-taking and writing, and lots of interpersonal communication are the vehicles for delivering this content. In addition, the textbook series provides rich online audio and video content that will be assigned for homework. In class, listening, engagement, and participation are a daily expectation. By the end of this course, students will be able speak and write about everyday and familiar topics in both the present and past tenses, and they will have had fun along the way.

### Spanish III

Year Course

Prerequisite: Spanish II

Spanish III is an intermediate level course that is taught entirely in Spanish. Some time is devoted to reviewing the many structures and verb tenses introduced in Spanish II. New units will include more vocabulary topics, compound verb tenses, cultural information and longer readings. The general format of the textbook sequence continues throughout the publisher's materials supported by a robust online platform. Classroom activities and conversation will reinforce the daily homework exercises. Some work will involve culture projects, digital media, and online assignments.

### Spanish IV

Year Course

Prerequisite: Spanish III

More interdisciplinary and content-based than Spanish III, Spanish IV focuses on increased proficiency in language communication skills and global competence. A review of grammar structures, as well as new concepts, vocabulary enrichment, and reading practice will continue throughout the year. Arranged thematically, the course allows students the opportunity to interpret authentic texts and produce language in diverse contexts. Through literary excerpts and articles, students are exposed to a variety of cultural contexts from

around the world. Time is devoted to the development of reading strategies. Speaking skills improve greatly through daily discussion and attention to oral expression as all elements in class are conducted in Spanish. Writing skills are enhanced through compositions and journals that accompany all thematic units.

### Spanish V

Year Course

Prerequisite: Spanish IV and department approval

This is a pre-AP course conducted in Spanish. Course content is comprised of current events, short stories, a novel, non-fiction readings, and film. Students will read and write often, research and present to small groups, read for pleasure, act out original skits, and sing and play instruments. Discussion and participation are a daily expectation. Emphasis is on the development of effective communication skills while exploring topics of interest. Students will increase their language proficiency largely through the context of the course content and activities. Students will be expected to relate their own lives to the course themes and content, and they should be prepared to share their lived experiences and ideas with their classmates.

### AP Spanish Language and Culture

Year Course

Prerequisites: B in Spanish V, or A in Spanish IV and a score of 90% on the Advancement test.

The AP Spanish Language and Culture course strives to promote both fluency and accuracy in language use while providing students an opportunity to expand their exposure to and deepen their knowledge of the cultures in the Spanish-speaking world through critical study of authentic materials. Taught completely in Spanish, this course engages students in an exploration of culture in both contemporary and historical contexts. Students will work with a variety of current instructional materials, including digital media, journalistic and literary sources. Literary selections will include complete plays, poems and short stories from Spain and Latin America. Readings are intended to be a catalyst for active class discussion. The use of Spanish is required at all times and students will be given frequent presentational writing and speaking assignments. The course prepares students to take the Advanced Placement Spanish Language and Culture examination in May. ***There is a supplemental charge to take an AP exam that will be the responsibility of the student to pay. Financial aid is available.***

### Advanced Hispanic Culture and Literature

Year Course

Prerequisite: AP Spanish Language and Culture and/or departmental approval.

*This course will be offered during the 2019-2020 academic year and alternate years thereafter.*

This course is taught entirely in Spanish and is intended to further enrich the students' knowledge and appreciation of literature and culture in the Hispanic world. Course content includes: literary selections, fiction and non-fiction, on a variety of cultural topics. Students will demonstrate their understanding of course content through a variety of mediums, for example, dramatic presentations, analytical writing, formal presentations, creative writing, in-class discussion, and digital media. Grammar instruction is not an explicit part of the curriculum of this course. However, it is expected that students use clear and accurate language, and that they make every effort to develop and hone their language skills.

***Please note that a minimum enrollment is needed to run this class.***

## Advanced Topics – Hispanic Theater and Film

Year Course

Prerequisite: AP Spanish Language and Culture and/or departmental approval

*This course will be offered during the 2020-2021 academic year and alternate years thereafter.*

This class includes short films, feature films, and plays that focus on both historic and contemporary issues of cultural, socioeconomic, and philosophical relevance. Main themes in the course will address topics such as, politics, religion, gender, migrations, historic and current events, and social concerns. Students will analyze, perform in and create short films and literary plays, they will work on improving their pronunciation, intonation, and dramatic expression, and they will develop a more complete understanding and appreciation of the complexities of the Spanish-speaking world. Grammar instruction is not an explicit part of the curriculum of this course. However, it is expected that students use clear and accurate language, and that they make every effort to develop and hone their language skills.

***Please note that a minimum enrollment is needed to run this class.***

## SCIENCE

### DEPARTMENTAL REQUIREMENT:

*Introductory Biology* (grade 9) and at least one semester of chemistry and one semester of physics sometime during grades 10, 11 or 12. The Science Department strongly recommends continued enrollment in science courses during the junior and senior year.

## BIOLOGY

### Introductory Biology Year Course (Grade 9)

This course provides a background in basic biological concepts, theories and vocabulary. The major topics studied include the scientific process, chemical basis of life, cells, genetics, and evolution, energy and body systems. Class activities include lab experiments, simulations, presentations, projects and discussions. The focus of the laboratory experience is to allow students to investigate the basic concepts of biology and to develop skills in data collection and analysis.

### Advanced Biology – Human Genetics First Semester Course

Prerequisites: *Introductory Biology* and *Chemistry* (any level)

How are genes inherited? How do genes affect human health? How can we use genetic information to personalize medicine? How do direct-to-consumer genetic tests intersect with the medical marketplace? This course focuses on how genes impact human health. We will explore the human health outcomes of monosomies and trisomies. We will dive into medical genetic tests (such as BRCA 1 and 2) and what they can predict about health outcomes over a lifespan. Furthermore, through Journal Club discussions, we will focus on the ethics of genetics and stay current with recent discoveries in the field. *This course is offered every other year, alternating with Advanced Biology - Molecular Genetics Offered 2019-2020*

### Advanced Biology – Molecular Genetics First Semester Course

Prerequisites: *Introductory Biology* and *Chemistry* (any level)

This skills based course will introduce students to molecular biology techniques. Through instructor planned labs and student designed labs, students will gain first hand knowledge of these techniques. We will focus on the processes of DNA isolation, Polymerase Chain Reaction (PCR), gel electrophoresis, and transforming *E. coli*. Inherent in these laboratory experiences will be a focus on analyzing and presenting data as well as troubleshooting any unexpected results. Journal club article discussions will keep our focus on current trends and discoveries in the field. *This course is offered every other year, alternating with Advanced Biology - Human Genetics. Offered 2020-2021*

### Advanced Biology: Human Anatomy & Physiology

First or Second Semester Course

Prerequisites: *Introductory Biology* and *Chemistry* (any level)

*Human Anatomy and Physiology* covers the structure and function of the human body. The course begins with an introduction to the human body and the key chemistry concepts needed to understand its processes. Body systems will be covered in detail and an understanding of how these systems coordinate with one another will be developed. Emphasis will be placed on the structure and function of organs. Lab work, including dissection, will be a core part of the course.

## CHEMISTRY

### Chemistry

Year Course

Prerequisite: *Introductory Biology*

In this college preparatory course, topics covered will include the study of matter, atomic structure, periodic table, bonding, stoichiometry, chemical reactions, gas laws and thermochemistry. Laboratory experiences will be an important part of the course. This is a year-long course and cannot be taken for only one semester.

### Honors Chemistry

Year Course

Prerequisites: Minimum grade of B+ in *Introductory Biology*, and completion of *Honors Algebra II* or department approval.

*Honors Chemistry* is a rigorous, year-long course designed for those students who have demonstrated an interest and aptitude in science and are willing to commit themselves to the study of chemistry at a very high level. The course will deal with the usual topics of chemistry in a manner emphasizing strong problem solving skills and should give the student an extensive preparation for further study of chemistry or related sciences in college. Laboratory experiments play an important role in the development of the concepts studied. This course is a prerequisite for *AP Chemistry*.

### Advanced Chemistry: Forensic Science

First Semester Courses

Prerequisites: *Chemistry* or *Honors Chemistry*

This course builds on topics introduced during the first year chemistry course as well as introduces new topics that are outside of the scope of Introductory Chemistry. The discipline of Forensics is the use of science and technology to investigate and establish facts in criminal or civil courts of law. This course will explore different facets of forensics including DNA testing, organic chemistry, redox chemistry, chemical equilibrium, nuclear chemistry and kinetics. Skills that will be incorporated into the course that are not Chemistry-specific will include: non-routine problem solving, analytical thinking and the concise and precise communication of scientific information. We will be utilizing case studies and lab analyses as a means of exploring forensic science.

### Advanced Chemistry: Science of Foods

Second Semester Course

Prerequisites: *Introductory Biology* and *Chemistry* (any level)

See your food in a different way. This interdisciplinary course approaches food through varying scientific lenses: the chemical changes produced by cooking, the biology and physiology of nutrition, the physics of food preparation, the microbiology of the kitchen and the gut, and the genetics of agriculture, and the ecological effects of food production. With a modern, integrated, scientific approach to what traditionally would be called "Home Economics," this course will not merely teach cooking, but will deconstruct the farm-to-table food production process and the science it is based upon.



## PHYSICS

### Physics: Mechanics

First Semester Course

Prerequisites: *Introductory Biology* and *Chemistry* or department approval

**NOTE:** While *Physics: Mechanics* satisfies the one semester graduation requirement, students are **strongly** encouraged to register for the second semester of the two-semester series, *Physics: Electricity and Magnetism*. Class activities in both courses include laboratory investigations, concept development through small-group collaborative work, and real world problem solving. The pace is that of a typical college-preparatory course.

*Physics: Mechanics* is a lab-centered course that focuses on building graphical and mathematical models to better understand relationships among forces, motion, energy, and momentum. The course routinely incorporates technology, using probes with computer interfaces to collect data, and software to analyze it. The emphasis of each unit is on the co-construction of physics principles based on experimental evidence. Subsequent activities focus on concept development and problem solving. The course has a significant semester project that integrates data analysis with models of Newtonian mechanics.

### Physics: Electricity & Magnetism

Second Semester Course

Prerequisite: *Physics: Mechanics* or department approval

*Physics: Electricity & Magnetism* focuses on developing conceptual models and reasoning skills to understand life in the Electric Age. Topics include electric charge behavior, D.C. electric circuits, behaviors of permanent and ferromagnetic materials, electromagnetism in speakers and motors, physical waves, light, color, and mirror and lens optics. Much of the lab work involves using observation to construct qualitative models. Students apply models to solve quantitative problems, as well. The course includes a semester project in which students use principles developed during the term to detail how a modern electrical device works.

### Honors Physics

Year Course

Prerequisites: *Honors Chemistry* and completion of, or concurrent enrollment in *Honors Pre-Calculus*, or department approval

This rigorous yearlong course serves as the introduction to physics for juniors who both have high interest in science and math, and are very academically motivated. The course addresses topics in Newtonian mechanics including kinematics, dynamics, conservation of energy and momentum, rotation, simple harmonic motion, physical waves, sound, charge behavior, and electric circuits. The lab component requires good functionality in a laboratory environment, and focuses on developing skills to analyze experimental data graphically and mathematically. Each unit has at least one associated lab experiment. In addition, there is a strong emphasis on problem solving at the pre-calculus level that requires a high comfort level with mathematics. Most topics are treated with significantly more rigor than a typical high school course. The pace is that of a college freshman non-calculus-based introductory physics course. *Students have the option to sit for the AP Physics I exam in May.*

## ADVANCED PLACEMENT SCIENCE

Juniors and seniors who have demonstrated both interest and excellence in science have the opportunity to take Advanced Placement courses in biology, chemistry and physics. Students taking these courses will meet the objectives of an introductory-level college course and, by taking the AP Exam in the spring, may have the opportunity to receive college credit for their work. Students interested in AP Science courses should confer with the teachers of these courses prior to registration. Students in AP Science courses are expected to sit for the AP Exam for that course in May. ***There is***

***a supplemental charge to take an AP Exam that will be the responsibility of the student to pay. Financial aid is available.***

### AP Biology

Year Course

Prerequisites: Completion of either *Honors Chemistry* or *AP Physics I* with a minimum grade of B+, or departmental approval.

This college-level course explores fundamental biological principles at various levels of organization, from molecules to ecosystems. Laboratory work involves demonstrations and the collection and analysis of experimental data. This course will require occasional laboratory work outside the normal class times throughout the year.

### AP Chemistry

Year Course

Prerequisites: A minimum grade of B+ in *Honors Chemistry* or department approval.

This college course in introductory chemistry presents a critical approach to macroscopic properties, origins of atomic theory and stoichiometry, kinetics, chemical equilibrium, oxidation and reduction, electronic structure and bonding. Students are expected to carry out some summer work in advance of the fall semester, basically in the form of reviewing some chemistry topics.

### AP Physics II: Modern Physics

First Semester Course

Prerequisite: *Honors Physics* or *Physics (Mechanics and E&M)* with a minimum grade of B+ or departmental approval

*Modern Physics* is the first semester of a two-semester sequence. It is an Advanced Placement algebra-based course designed for students who would like to take a second year of physics, but due to their math level, would best be served by a non-calculus-based physics course. The curriculum covers a broad range of topics and prepares students for further work in sciences in college. The primary objectives of *Modern Physics* are: (1) to introduce the ideas and concepts of modern physics, (2) to provide an historical perspective on the development of key scientific ideas, and (3) to further develop scientific reasoning skills. Students will be introduced to the major experimental findings that led to the development of current theories of light and matter. The course will include selected topics on special and general relativity, the quantization of energy, particle-wave duality, theories of the atom, fundamental particles and interactions, selected applications of modern physics theories, and an overview of the most recent theories that have been proposed to account for the nature and existence of matter.

### AP Physics II: Electricity & Magnetism, Thermodynamics, and Fluids

Second Semester Course

Prerequisites: *Honors Physics* with a minimum grade of B+ or department approval

*Electricity & Magnetism, Thermodynamics, and Fluids* is an Advanced Placement algebra-based course that builds upon the work students have done in their first year of physics and *AP Physics II: Modern Physics*. The focus of this course is on electrostatics (including fields and potentials), electromagnetism, geometrical and physical optics, thermodynamics, and fluid dynamics. Student will develop problem-solving techniques for approaching comprehensive problems in physics, and use laboratory work to further their understanding of theoretical content. The college equivalent of this course is normally taken by a wide range of students including pre-med students and those interested in careers in the biological sciences. The course is also an excellent preparation for students who wish to enter engineering fields, but have not yet taken calculus.

**AP Physics (C Level): Mechanics** First Semester Course  
**AP Physics (C Level): Electricity and Magnetism** Second Semester Course

Prerequisites: A minimum grade of a B+ in *Honors Physics* and concurrent enrollment in *BC Calculus* or *AB Calculus* with departmental approval.

*AP Physics C* is a calculus-based second year physics course that examines principles and problem solving at a significantly more sophisticated level than Honors Physics. The course is divided into two parts: Mechanics, and E&M (Electricity and Magnetism). Mechanics topics are finished by winter break, and E&M topics are completed by mid-April. Late April and May are used for review and practice exams leading up to the AP exam. Students are expected to have a high level of comfort with mathematics, as both differential and integral calculus are used extensively from the beginning of the *AP Physics C* curriculum. There is an ambitious lab component to the course that includes a quarter-long independent laboratory research project.

*Note: Only capable students who are strongly motivated and highly self-disciplined with a history of successful independent work are encouraged to enroll in this course. Students should register for both or seek permission from instructor.*

**ADDITIONAL SCIENCE ELECTIVES**

**Astronomy** First Semester Course  
Prerequisites: Both semesters of *Physics*, *Honors Physics* or departmental approval.

This course takes a hands-on, multimedia approach to a subject that asks some of the most basic and profound questions about the cosmos. What explains the apparent motions of the moon, sun, stars and planets? Why do stars shine, and what happens when they die? Why do astronomers say that we are made of “star stuff?” What is the ultimate fate of the universe? Videos, computer activities, observation projects and hands-on inquiry labs supplement traditional textbook study. If weather permits, numerous “sky watching” nights are also scheduled. Learn the constellations, look at objects through a large telescope and witness various astronomical current events; students who would like to participate in such activities are especially encouraged to enroll.

**Engineering** Second Semester Course

Engineering will introduce students to a variety of different fields that fall under the wide umbrella of engineering through class activities, projects, design challenges, field studies, and class speakers. Most importantly, students will engage in the engineering process to gain vital experience in problem solving, design, prototyping, and implementation. Along the way, students will learn about and apply mechanics principles, coding, CAD, budget proposals, and project bidding

**Environmental Science** First and/or Second Semester Courses  
Prerequisites: *Introductory Biology* and *Chemistry*

Environmental Science is divided into two semester long courses, and students may enroll for either or both semesters. The goal of these interdisciplinary courses is to provide students with the scientific principles, concepts, methods and experiences required to understand the interrelationships of the natural world. Students will identify and analyze environmental problems both natural and human-made, evaluate the relative risks associated with these problems, and examine alternative solutions for resolving and/or preventing them. An overarching focus will be the human influence on the environment, coupled with the exploration of basic ecological concepts. In addition, the courses will concentrate on the “real science” behind environmental problems and issues. Classroom, laboratory, and field study will include the following topics:

**Environmental Science: Understanding the Earth**

First Semester Course

Topics included: Ecosystems, matter and energy in living systems, atmosphere and weather, geology, soil, water, population dynamics, human populations, local field work.

**Environmental Science: People and the Planet**

Second Semester Course

Topics included: Ecosystems review, biodiversity, climate and global warming, pollution, solid waste, food, energy, ozone depletion, urbanization, local field work.

**Geology** Second Semester Course  
Prerequisites: *Introductory Biology* and *Chemistry*

Geology will take you on an exciting journey through the Earth’s past 4.6 billion years as we work to understand the question: “What is the universe, and what is Earth’s place in it?” We will explore the concept of geologic time as we unwrap the past, present, and future of our evolving planet. We will also ask the question “How and why is Earth constantly changing?” as we unpack the processes acting on and in the earth to produce change. Emphasis will be placed on understanding how we humans affect our geologic environment in our ever-increasing need for natural resources. Topics could include plate tectonics and large-scale system interactions, surface-water dynamics and flooding, groundwater and groundwater contamination, pollution and waste management, landslides, volcanic and earthquake hazards, and global climate change. This course will incorporate classroom, laboratory, and field study. Many topics will be explored specifically from a social justice lens, and will require you to frame your scientific understanding of these complex ideas from a viewpoint of race, culture, equity, gender, ability, socioeconomics, and/or inclusion.

SOCIAL STUDIES

DEPARTMENTAL REQUIREMENT:

1 year World History Course (grade 9), 1 year U.S. History (grade 10), and at least two semesters of department electives (grades 11 and 12). Students must take at least one Social Studies Elective course and one Global Elective course during grades 11 and 12.

GRADE 9

Modern World History Year Course

This course prepares students to analyze world events and their historical and contemporary causes through targeted practice in reading, thinking and writing like an historian. Students engage deeply with a selected set of historical turning points and core concepts from 1500 to the present. Students will also investigate a world history topic of their own choosing during the research-intensive fourth quarter. This course is coordinated with the ninth grade English course, World Literature.

Ancient Roots of Modern Thought Year Course

This year-long interdisciplinary course will look at the “big ideas” that shape our interconnected world in the 21st century. We will explore questions like: What does it mean to be human? What are the overarching philosophies of human existence? Because modern history has many roots in ancient stories and sacred texts, we will study how modern interpretations of those texts expose the values and structures of the civilizations that created them. Most days we will have combined class meetings, team-taught by English and Social Studies faculty, emphasizing the inter-disciplinary nature of the course and its assessments. This is not an *answers* course; it is a *questions* course that will generate complexities, priming every student for a life of curiosity, discovery, and inquiry. This course will develop the same skill set as World Literature /World Cultures, emphasizing the development of discussion, reading, writing, and research skills, and also culminates with a historical research paper in the fourth quarter. This course is taken with English 9: Ancient Roots of Modern Literature.

GRADE 10

Tenth Grade Social Studies focuses on American history. Students will choose between three year-long courses, one of which is Advanced Placement U.S. History, a political/economic survey approach to topic. U.S. History electives are a collegiate-style, year-long investigation of focused themes in U.S. History. Students will learn the foundational knowledge of a survey course, while also having the opportunity to deepen their reading, research, writing, and discussion skills on topics in American history of high interest to the students. *In a change from previous years when students chose an elective each semester, students will now choose between the following 2 full year courses.*

U.S. History: Land, Property, Wealth Year Course

*This course represents a merging of previously titled semester courses “Contested Ideals in Founding America and “Innovation and Technology.”*

In the first semester of this year-long course, students will compare and contrast native and European worldviews and values regarding land and resources in North America, first by looking at the clashes between the European colonists and native nations in the 17th and 18th century, and then grappling with the invention, evolution, and legacy of slavery as a source of property and wealth prior to the Civil War. In the second semester, students will recognize the vast changes that are wrought by a rapidly industrializing society in the 19th and early 20th century, radiating from technological

innovations, and trace the shifting class struggles, myths of the American Dream, and political ideologies related to property and wealth in 20th and 21st century America.

U.S. History: Empires, Nations, Citizens Year Course

*This course represents a merging of previously titled semester courses “America in a World of Empires” and “Movement and Peoples.”*

In the first semester of this year-long course, students will explore the influence of Britain, France, and Spain’s colonial empires in shaping the trajectory of the American continent, delve into the causes and consequences of the American Revolution within the world system of empires in the 17th, 18th and 19th centuries, and grapple with the conflicts and consequences around native land rights and the institution of slavery that the expansion of European empires brought to North America. In the second semester, students will explore the ongoing question of “Who is an American?” by looking at the evolving debates about immigration (historical and modern), racial and religious pluralism, and other relevant social and legal developments through the 19th, 20th, and 21st centuries that have expanded our notions of citizenship and tested our nation’s commitment to its founding ideals.

AP U.S. History Year Course

This college-level course surveys U.S. history chronologically from the pre-colonial era to the recent past. Not all eras of U.S. history will be studied in the same depth; however, by the end of the course, students will have knowledge of the major events and themes of U.S. history and will have enhanced their historical-thinking skills. The course is designed to prepare students for the A.P. U.S. History exam in May, and accordingly it will entail extensive reading assignments, which will begin over the summer, in the textbook and other secondary sources as well as primary sources. Students will also complete several research and other writing assignments and are expected to start the course with proficient to mastery-level skills in historical research and writing. While there is no pre-requisite in order to enroll in this course, the department offers the guidance that students who have been easily earning a B+ or above in their 9<sup>th</sup> grade history course will be the students who will most likely find success in AP U.S. History. ***There is a supplemental charge to take an AP Exam that will be the responsibility of the student to pay. Financial aid is available.***

GRADES 11 AND 12: Electives

Students must take AT LEAST ONE course from each of the following categories during grades 11 and 12.

<i>Social Studies Electives (denoted as “SS”)</i>	<i>Global Electives (denoted as “G”)</i>
AP Microeconomics AP US Government & Politics Class and Race in the U.S. Constitutional Studies Gender Studies Moral Issues Social Psychology	AP European History Comp. Politics & Economics Global Theories, Local Realities History of Ancient World International Relations Media Studies: Mod. Mid. East World Religions

## FIRST SEMESTER COURSES

### AP European History

Year Course (G)

This rigorous and writing intensive course is intended for strong social studies students. The course examines major political, cultural and social trends in European history from the fall of Rome to the French Revolution. The course explores the medieval social order, the rise of nation states and the transition to a modern capitalist economy, the achievements of the Renaissance, the bloody conflicts of the Reformation, the discoveries and conquests of the age of exploration, the study of the new ways of perceiving the world created by the scientific revolution and the Enlightenment and the triumphs and tragedies of the French Revolution. Students will engage with these topics through a variety of highly challenging projects, readings and activities. ***There is a supplemental charge to take an AP Exam that will be the responsibility of the student to pay. Financial aid is available.***

### AP Microeconomics

First Semester Course (SS)

*\*This course is a retitling of Economics CIS, with minimal change to the syllabus, content, and expectations of the course.*

How does Apple decide what to charge for an iPhone? Why do baseball players earn more money than high-school teachers? Should you stay to the end of a movie you're not enjoying in order to get your money's worth out of the ticket you bought? Explore the answers to these and many other questions in this advanced-level economics course. The course introduces students to the principles of microeconomics and includes such topics as supply and demand, market mechanisms and competition, taxation and income distribution. The course also develops students' familiarity with the operation of product and factor markets, distributions of income, market failure, and the role of government in promoting greater efficiency and equity in the economy. Students learn to use graphs, charts, and data to analyze, describe, and explain economic concepts. ***There is a supplemental charge to take an AP Exam that will be the responsibility of the student to pay. Financial aid is available.***

### Class and Race in the U. S.

First Semester Course (SS)

Which is more influential in our society – class or race? Students will investigate this question by using theoretical lenses to examine the origin, development, and contemporary manifestations of race and class as categories in the United States. We will combine history and current issues to study how race and class have become interconnected with education, migration, and employment practices. The course will integrate readings, discussions, experiential activities, speakers, film and research to help students examine the power of class and race in contemporary America and our own personal development. Students will craft an inquiry project on an issue of their choice.

### Gender Studies

First or Second Semester Course (SS)

In this course, we will examine three key questions: 1) How is gender constructed? 2) How does gender intersect with race, class, sexuality, nationality and ethnicity? 3) How do power structures maintain gendered realities? Topics of exploration will include the role of gender as it relates to work, the media, school, reproductive rights, and violence. Through investigation of perspectives espoused in both academia and popular culture and sharing of personal experience, students will build an understanding of the role that gender has played in shaping their lives and the opportunities available to them.

## Global Theories, Local Realities

First Semester Course (G)

The students in this course will undertake a critical and comparative analysis of several theories of global citizenship. Students will then apply theory to practice through hands-on field experiences, case studies and social action projects. The course will include action-oriented research and collaboration with local organizations that have developed innovative responses to challenging global issues (e.g. poverty, education for all, environmental sustainability, human rights, terrorism, disease, cultural conflicts, gender inequality, etc.). As many solutions to complex issues are multi-faceted, context dependent, and interdisciplinary, students will consider multiple perspectives, engage with others from different cultural backgrounds, and draw on expertise from other academic disciplines. Students should expect to spend working time outside of class connecting and collaborating with local entities. At the end of the course, students will present their research findings and recommended solution-oriented responses.

### International Relations

First Semester Course (G)

Divided territories have shaped numerous contemporary global conflicts. Using border disputes as a common thread, this course will engage in a rigorous examination of current international issues and events. Through an ongoing United Nations simulation, we will study the development of international boundaries, current controversies and efforts to resolve these disputes. We will focus our attention on the experiences of the tens of millions who have been unsettled by conflict across the globe, including Kurdistan, Crimea, Korea, Kashmir and Ireland.

### U.S. Constitutional Law

First Semester Course (SS)

Students will learn about significant historical and current constitutional topics. The first part of the course will focus on the philosophical and historical foundations of the constitution, the criminal justice system, including the rights of the accused, trial procedure, and the court system. Students will participate in Mock Trials. The second part of the course will take a broader look at contemporary constitutional issues, focusing on the Supreme Court. Students will also prepare and present briefs in preparation for an appeals case (moot court experience) and explore many of the landmark decisions of the Supreme Court over the past two hundred years.

### World Religions: Faith and Society

First Semester Course (G)

This course delves into the seminal ideas, practices, and relationships that define Hinduism, Buddhism, Judaism, Christianity, and Islam. Students are asked to deepen their understanding of each religion with openness to their own traditions and curiosity about others. We will explore the powerful impact of religion on our lives as citizens of the United States and the world, using a religious pluralism framework that is informed by The Pluralism Project at Harvard [www.pluralism.org]. Current events are incorporated into the course on a regular basis and speakers from a variety of religious backgrounds will share their perspectives. Students will engage in a final inquiry project investigating a tradition or problem of their choice.



## SECOND SEMESTER COURSES

**AP European History** Year Course (G)  
*See description under first semester courses*

**AP U.S. Government and Politics** Second Semester Course (SS)

What is the proper role of government in U.S. society? Students in this advanced course will consider how the government institutions and electoral systems promote and limit equality and freedom. Using current domestic and international realities, students will engage in practical politics to understand how to attain change at the local and national level. Students will examine the development of the U.S. system of democracy and assess the interplay between the legislative, executive and judicial branches of the federal government. Along with learning about how political leaders fashion public policy, students will learn how individuals and groups develop attitudes about political life. We will closely follow the presidential primaries this spring, as well as make connections to local and state elections coming up in November. ***There is a supplemental charge to take an AP Exam that will be the responsibility of the student to pay. Financial aid is available.***

**Comparative Politics & Economics** Second Semester Course (G)

*\*This is a new course offered by the department in 2019-20.*

How do governments affect economic development through their policies? What trade-offs do societies make as they pursue their economic goals? How do order, freedom, and equality shape the political experiences of a society? What is globalization, and how do international institutions function in a globalized world? This course will use a comparative approach to examine the political and economic institutions and social challenges among four selected countries, including the United States, China, and at least one country where Blake students have visited in global immersion programs in recent years (Sierra Leone, Dominican Republic, Rwanda). Students can expect policy simulations within the case study units and the opportunity to research the political and economic systems in a country of their own choosing in the final project, testing the concept of globalization as a sustaining model for world stability and prosperity.

**Gender Studies** First or Second Semester Course (SS)  
*See description under first semester courses*

**History of the Ancient World** Second Semester Course (G)

This course will compare and contrast the development of Greece and Rome and the impact of both on the Ancient World, as well as place these western civilizations in context with imperial civilizations in China, India, the Middle East and the Americas prior to the 1<sup>st</sup> century CE. Students will trace the development of durable social, economic, political, religious and artistic paradigms in these societies. In addition to understanding the consolidation of power and the development of empire, this course also seeks to examine the lives of all members of ancient societies through the examination of art, literature, archaeology and primary sources. Reading, research, and collaborative projects and presentations make up the bulk of the assessments in this course.

**Media Studies: The Modern Middle East**  
Second Semester Course (G)

*\*This is a new course offered by the department in 2019-20.*

How did the region we now know as “the Middle East” come to be known as such? How have representations of the Middle East produced western understandings of the region as well as justifications for western intervention (and still do)? In this course, students will use primary and secondary sources, as well as films and contemporary media, to understand the histories, religions, ethnicities, and nationalities of the Middle East, with special focus on effects of colonial intervention and the dynamics of neocolonialism and globalization in the region during the 20th and 21st centuries.

**Moral Issues** Second Semester Course (SS)

This course is designed to help you determine who you are, what you believe and how you want to live your values. We will read great philosophers from John Stuart Mill to Immanuel Kant, who will inform our consideration of controversial topics such as war, abortion and the death penalty. A final project will explore current events topics of students’ choosing. This is a discussion-based course in which we will learn to disagree both vigorously and respectfully. Heavy emphasis will be placed on refining discussion and writing skills.

**Social Psychology** Second Semester Course (SS)

This course focuses on the relationship between the individual and society. To what degree can individuals determine the direction of their own lives? Concepts from social psychology are used to examine topics relevant to these questions: social influence, social stratification, socialization, human development, mental illness, racism, bias and stereotypes. Students will have the opportunity to complete a research project on a topic of personal interest in the field of social psychology.

## GENERAL EDUCATION

### DEPARTMENTAL REQUIREMENT:

*Health* in grade 10

*Senior Seminar* in Grade 12

Senior Seminar: Communication & Society or the equivalent (see below) is required for all students during grade 12.

### HEALTH

First or Second Semester Course

This course will deliver health and wellness information aimed at promoting healthy behaviors, increasing responsible decision-making, and encouraging healthful living. As a result of this course, students will gain an understanding of how to make positive lifestyle changes in the areas of physical wellness, mental health, chemical health and relationships/sexual health, and they will work toward personal application of the information into their daily lives. The overarching theme of this course is to allow students to practice and model making healthy decisions (short and long term) that will reduce the risk of future health concerns. In addition to taking personal responsibility for their health and well-being, students will also use the knowledge that they have acquired to educate their friends and family.

Health is also available as a Blake Summer Programs course for students entering grades 10-12. This summer course fulfills the Health graduation requirement. For more details, please see the Summer Academic Courses section of this catalog.

### JOURNALISM (SPECTRUM NEWSPAPER)

First or Second Semester Course  
0.25 semester elective credit

This course enables the editorial staff of *Spectrum*, Blake's student newspaper to work on the writing, editing, and layout of the paper using InDesign. Fundamentals of print and online newspaper design and press law will be discussed. Enrollment for this course is open to all students in grades 10-12 who would like to contribute to the production of this award-winning school newspaper. In addition to the print publication, students will maintain the online extension of the media, [www.blakespectrum.org](http://www.blakespectrum.org), which includes broadcast journalism. Students who intend to apply for editorial positions are strongly encouraged to enroll for the full year. Co-curricular involvement on the Spectrum staff prior to joining this editorial class is encouraged, but not required. Course may be repeated.

### Yearbook

First Semester or Year Course  
2 classes/week; 0.25 semester elective credit

This course provides an opportunity to work on the design and production of a tangible publication: *Reflections*, the Blake Upper School yearbook. Students will learn multiple aspects of book production: concept, design, layout, photography, and copywriting. Using an all-online workflow – meaning you can work on the book anywhere at any time – students will create a publication that defines the personality and character of each class. The final product will be a lasting collection of memories, events, and relationships.

This course is open to grades 10-12. Leadership positions exist for juniors and seniors; students with leadership positions must enroll for the full year. Course may be repeated.

## SENIOR SEMINAR: COMMUNICATION & SOCIETY

First or Second Semester

This course provides seniors an opportunity to investigate advanced communication strategies and contexts to help the move to college and professions and to provide guidance and advice for the Senior Speech and the Senior Program.

Course objectives include: demonstrating an understanding of basic theories and concepts of public speaking and be able to adapt them to the Senior Speech; demonstrating advanced research skills that help build the Senior Speech and Senior Program; evaluating the implications of cultural dynamics and communication behaviors and their influences on individuals and groups in intercultural, professional, interpersonal, and public speaking contexts; and, demonstrating what it means to be an ethical communicator in interpersonal and social advocacy contexts. The course will offer seniors a method to reinforce the school's commitment to pluralism, cultural competence and the exploration of identity.

The Senior Program is an individual learning opportunity that offers students the space and time to execute a self-designed project that falls outside the standard school day and/or curriculum. Each senior must meet academic and attendance eligibility requirements to participate in a self-designed senior program. Please consult the Upper School Handbook for details. In their Senior Seminar course, seniors will write a persuasive project proposal and defend their proposal through an oral defense to a committee of faculty and administrators. Once approved, the project will be conducted during the last two weeks of the school year.

### Exemption

A very small number of students will qualify for exemptions from Senior Seminar: Communication & Society. Eligible students must apply for an exemption during the spring of junior year using the form available from the Director of Speech and Debate. Exempt students are required to work independently with the Director of Speech and Debate on the Assembly Speech and the Senior Program project.

Exemption Eligibility -- Departmental approval and one year or more of Advanced Debate prior to the senior year and enrollment in Advanced Debate during the senior year.



Global Online Academy is a consortium of top national and international independent schools offering students rigorous courses taught by a member school faculty. Class size is limited to 18; no more than two students from each school may enroll in a given course. Coursework takes place asynchronously—via blog posts, voice streams and independent projects—and students also engage in real-time discussions with teachers and classmates via Skype and other technologies.

The academic experience is collaborative, creative, and demanding; therefore, Blake students who wish to enroll in a GOA course should consider it as a replacement for a Blake course, not as an addition to a full course of study. Juniors and seniors are eligible to enroll;

occasionally, sophomores with a strong history of successful, self-directed academic work may also be eligible.

Blake students will earn graduation credit for GOA courses (0.5 credits per course) as they would for a semester-length Blake course; GOA courses do not, however, satisfy Blake's departmental graduation requirements. GOA courses will appear on students' transcripts, and the final grades will be included in their Blake Grade Point Averages. Students may not enroll in a GOA course that replicates an existing Blake course (e.g. Social Psychology), except in the rare instance that a scheduling conflict prohibited them from enrolling in that Blake course; students are eligible for all GOA courses listed below. Courses offered in the summer require additional fees on the family's part.

Students may indicate their interest for these courses via online registration, but they will need to contact Blake's GOA Site Director, Jim Mahoney, to formally enroll.

Please see [www.globalonlineacademy.org](http://www.globalonlineacademy.org) for additional information about the program.

## Year-Long Courses

### World Languages

Arabic Language Through Culture I  
Arabic Language Through Culture II

Japanese Language Through Culture I  
Japanese Language Through Culture II

### Summer Courses

9/11 in a Global Context  
Abnormal Psychology  
Computer Science I: Computational Thinking  
Computer Science II: Java  
Fiction Writing  
Introduction to Investments  
Introduction to Psychology  
Medical Problem Solving I  
Microeconomics  
Number Theory

## Fall 2019 Courses

### Art, Media, and Design

iOS App Design  
Graphic Design

### Mathematics and Technology

iOS App Design

### Science and Health

Bioethics  
Global Health  
Introduction to Psychology  
Medical Problem Solving I  
Positive Psychology

### Social Sciences

9/11 in a Global Context  
Advocacy  
Applying Philosophy to Modern Global Issues  
Business Problem Solving  
Introduction to Investments

## Spring 2020 Courses

### Art, Media, and Design

Architecture  
Graphic Design  
iOS App Design

### Mathematics and Technology

Computer Science II: Analyzing Data with Python  
iOS App Design

### Science and Health

Abnormal Psychology  
Bioethics  
Global Health  
Introduction to Psychology  
Medical Problem Solving I  
Medical Problem Solving II  
Neuropsychology  
Positive Psychology

### Social Sciences

9/11 in a Global Context  
Advocacy  
Climate Change and Global Inequity  
Comparative Politics  
Entrepreneurship in a Global Context  
Genocide and Human Rights  
Macroeconomics  
Prisons and the Criminal Law

## ART, MEDIA, AND DESIGN

Art, Media, and Design courses focus on developing students' creative and practical skills in fields such as graphic design, architecture, and digital photography.

### Architecture

Second Semester Course

In this course, students will explore the field of architecture through a series of units covering elements architectural design, materials and structure, architectural analysis and 3D design. The course will start with students learning the basic elements of Architectural design and then using Google SketchUp to build models of these elements. In the second unit students will study buildings like the Stonehenge, the Parthenon in Athens, the Roman Aqueduct of Pont du Gard in France, and the Pantheon in Rome to develop an understanding of materials and structures. At each stage students will learn how changes in materials, technology and construction techniques lead to the evolution of architecture over time. In the third unit students will learn how to analyze structures using Ancient Greek temples as an example. The course will end with a final project in which each student will have the opportunity to design and build a sacred structure of their choice based on their new understanding of architecture, construction, and engineering.

### IOS App Design

First or Second Semester Course

Learn how to design and build apps for the iPhone and iPad and prepare to publish them in the App Store. Students will work much like a small startup: collaborating as a team, sharing designs, and learning to communicate with each other throughout the course. Students will learn the valuable skills of creativity, collaboration, and communication as they create something amazing, challenging, and worthwhile. Coding experience is NOT required and does not play a significant role in this course. *Prerequisite: For this course, it is required that students have access to a computer running the most current Mac or Windows operating system (Mac OS X is necessary only if you plan to try your hand at publishing). An iOS device that can run apps (iPod Touch, iPhone, or iPad) is also highly recommended.*

### Graphic Design

First or Second Semester Course

This course will explore the relationship between information and influence from a graphic design perspective. What makes a message persuasive and compelling? What helps audiences and viewers sort and make sense of information? Using an integrated case study and design-based approach, this course aims to deepen students' design, visual, and information literacies. Students will be empowered to design and prototype communication projects they are passionate about. Topics addressed include: principles of design & visual communication; infographics; digital search skills; networks and social media; persuasion and storytelling with multimedia; and social activism on the internet. Student work will include individual and collaborative group projects, graphic design, content curation, some analytical and creative writing, peer review and critiques, and online presentations.

## MATHEMATICS AND TECHNOLOGY

Mathematics and Technology courses are focused on the application of quantitative reasoning, logic, and associated skills.

### IOS App Design

First or Second Semester Course

Learn how to design and build apps for the iPhone and iPad and prepare to publish them in the App Store. Students will work much like a small startup: collaborating as a team, sharing designs, and learning to communicate with each other throughout the course. Students will learn the valuable skills of creativity, collaboration, and communication as they create something amazing, challenging, and

worthwhile. Coding experience is NOT required and does not play a significant role in this course. *Prerequisite: For this course, it is required that students have access to a computer running the most current Mac or Windows operating system (Mac OS X is necessary only if you plan to try your hand at publishing). An iOS device that can run apps (iPod Touch, iPhone, or iPad) is also highly recommended.*

### Computer Programming II: Analyzing Data with Python

Second Semester Course

In this course, students will utilize the Python programming language to read, manipulate and analyze data. The course emphasizes using real world datasets, which are often large, messy, and inconsistent. The prerequisite for this course is familiarity with and hands-on experience using some high-order programming language, such as Java, C++, VisualBasic, or Python itself. Because of the powerful data structures and clear syntax of Python, it is one of the most widely used programming languages in scientific computing. There are a multitude of practical applications of Python in fields like biology, engineering, and statistics. Prerequisites: Completion of an introductory programming course OR permission from the instructor.

## SCIENCE AND HEALTH

Science and Health courses focus on understanding the natural world from both biological and sociological perspectives.

### Abnormal Psychology

Second Semester or Summer Course

This course focuses on psychiatric disorders such as schizophrenia, eating disorders, anxiety disorders, substance abuse, and depression. As students examine these and other disorders, they learn about their symptoms, diagnoses, and treatments. Students also deepen their understanding of the social stigmas associated with mental illnesses. This course may be taken as a continuation of Introduction to Psychology, although doing so is not required.

### Bioethics

First or Second Semester Course

Ethics is the study of what one should do as an individual and as a member of society. In this course students will evaluate ethical issues related to medicine and the life sciences. During the semester, students will explore real-life ethical issues, including vaccination policies, organ transplantation, genetic testing, human experimentation, and animal research. Through reading, writing, and discussion, students will be introduced to basic concepts and skills in the field of bioethics, will deepen their understanding of biological concepts, will strengthen their critical-reasoning skills, and will learn to engage in respectful dialogue with people whose views may differ from their own. In addition to journal articles and position papers, students will be required to read Rebecca Skloot's *The Immortal Life of Henrietta Lacks*.

### Global Health

First or Second Semester Course

What makes people sick? What social and political factors lead to the health disparities we see both within our own community and on a global scale? What are the biggest challenges in global health and how might they be met? Using an interdisciplinary approach to address these two questions, this course hopes to improve students' health literacy through an examination of the most significant public-health challenges facing today's global population. Topics addressed will be the biology of infectious disease (specifically HIV and Malaria); the statistics and quantitative measures associated with health issues; the social determinants of health; and the role of organizations (public and private) in shaping the landscape of global health policy. Students will use illness as a lens through which to examine critically such social issues as poverty, gender, and race. Student work will include analytical and creative writing; research,



and peer collaboration; reading and discussions of nonfiction; and online presentations.

**Introduction to Psychology** First or Second Semester Course  
Summer Course

What does it mean to think like a psychologist? With this question anchoring Introduction to Psychology, students explore three central psychological perspectives -- the behavioral, the cognitive, and the sociocultural -- in order to develop a multi-faceted understanding of what thinking like a psychologist encompasses. The additional question of "How do psychologists put what they know into practice?" informs study of the research methods in psychology, the ethics surrounding them, and the application of those methods to practice. During the first five units of the course, students gather essential information that they apply during a group project on the unique characteristics of adolescent psychology. Students similarly anticipate a case study on depression, which also enables application of understandings from the first five units. The course concludes with a unit on positive psychology, which features current positive psychology research on living mentally healthy lives. Throughout the course, students collaborate on a variety of activities and assessments, which often enable learning about each other's unique perspectives while building their research and critical thinking skills in service of understanding the complex field of psychology. This course is an excellent partner with, but not a prerequisite for, Neuropsychology and Abnormal Psychology.

**Medical Problem Solving I** First or Second Semester Course  
Summer Course

In this course students will collaboratively solve medical mystery cases, similar to the approach used in many medical schools. Students enhance their critical thinking skills as they examine data, draw conclusions, diagnose, and treat patients. Students will use problem-solving techniques in order to understand and appreciate relevant medical/biological facts as they confront the principles and practices of medicine. Students will explore anatomy and physiology pertaining to medical scenarios and gain an understanding of the disease process, demographics of disease, and pharmacology. Additional learning experiences will include studying current issues in health and medicine, building a community-service action plan, interviewing a patient, and creating a new mystery case. Students interested in continuing their studies in Semester 2 are encouraged to take Medical Problem Solving II.

**Medical Problem Solving II** Second Semester Course

This course is an extension of the problem-based learning done in Medical Problem Solving I. While collaborative examination of medical case studies will remain the core work of the course, students will tackle more complex cases and explore new topics in medical science, such as the growing field of bioinformatics. Students in MPS II will also have opportunities to design cases based on personal interests, discuss current topics in medicine, and apply their learning to issues in their local communities. **Prerequisite: completion of Medical Problem Solving I.**

**Neuropsychology** Second Semester Course

This course is an exploration of the neurological basis of behavior. It will cover basic brain anatomy and function as well as cognitive and behavioral disorders from a neurobiological perspective. Examples of illnesses to be covered include: Alzheimer's disease, traumatic brain injury, and stroke. Diagnostic and treatment issues (including behavioral and pharmaceutical management) will be addressed. Additional topics include: professional standards and the code of ethics governing all psychologists; psychometrics; and the history of neuropsychology. This course can be taken as a continuation of Introduction to Psychology, although it is not required.

**Positive Psychology** First or Second Semester Course

What is a meaningful, happy, and fulfilling life? The focus of psychology has long been the study of human suffering, diagnosis, and pathology, but in recent years, however, positive psychologists have explored what's missing from the mental health equation, taking up research on topics such as love, creativity, humor, and mindfulness. In this course, we will dive into what positive psychology research tells us about the formula for a meaningful life, the ingredients of fulfilling relationships, and changes that occur in the brain when inspired by music, visual art, physical activity, and more. We will also seek out and lean on knowledge from positive psychology research and experts, such as Martin Seligman's Well Being Theory, Mihaly Csikszentmihalyi's idea of flow, and Angela Lee Duckworth's concept of grit. In exploring such theories and concepts, students will imagine and create real-world measurements using themselves and willing peers and family members as research subjects. As part of the learning studio format of the course, students will also imagine, research, design, and create projects that they will share with a larger community. Throughout the development of these projects, student will collaborate with each other and seek ways to make their work experiential and hands-on. Students will leave the class with not only some answers to the question of what makes life meaningful, happy, and fulfilling, but also the inspiration to continue responding to this question for many years to come.

**SOCIAL SCIENCES**

Social Sciences courses focus on questions of human decision-making in today's global societies.

**9/11 in a Global Context** First or Semester Course

September 11, 2001 was a tragic day that changed the world in profound ways. In this course students will explore the causes of 9/11, the events of the day itself, and its aftermath locally, nationally, and around the world. In place of a standard chronological framework, students instead will view these events through a series of separate lenses. Each lens will represent a different way to view the attacks and will allow students to understand 9/11 as an event with complex and interrelated causes and outcomes. Using a variety of technologies and activities, students will work individually and with peers to evaluate each lens. Students will then analyze the post-9/11 period and explore how this event affected the U.S., the Middle East, and the wider world.

**Advocacy** Second Semester Course

This skills-based course explores the creativity, effort, and diversity of techniques required to change people's minds and motivate them to act. Students learn how to craft persuasive arguments in a variety of formats by developing a campaign for change around an issue about which they care deeply. We explore a number of relevant case studies and examples as we craft our campaigns. Units include persuasive writing, social media, public speaking, informational graphics, and more. The culminating project is a multimedia presentation delivered and recorded before a live audience.

**Applying Philosophy to Modern Global Issues** First Semester Course

This is an applied philosophy course that connects pressing contemporary issues with broad-range philosophical ideas and controversies, drawn from multiple traditions and many centuries. Students will use ideas from influential philosophers to examine how thinkers have applied reason successfully, and unsuccessfully, to many social and political issues across the world. In addition to introducing students to the work of philosophers as diverse as Confucius, Kant, John Rawls and Michel Foucault, this course also aims to be richly interdisciplinary, incorporating models and methods

from diverse fields including history, journalism, literary criticism, and media studies. Students will learn to develop their own philosophy and then apply it to the ideological debates which surround efforts to improve their local and global communities.

### **Business Problem Solving**

First Semester Course

How could climate change disrupt your production and supply chains or impact your consumer markets? Will tariffs help or hurt your business? How embedded is social media in your marketing plan? Is your company vulnerable to cybercrime? What 21st century skills are you cultivating in your leadership team? Students in this course will tackle real-world problems facing businesses large and small in today's fast changing global marketplace where radical reinvention is on the minds of many business leaders. Students will work collaboratively and independently on case studies, exploring business issues through varied lenses including operations, marketing, human capital, finance and risk management as well as sustainability. As they are introduced to the concepts and practices of business, students will identify, analyze and propose solutions to business problems, engaging in research of traditional and emerging industries, from established multinationals to startups.

### **Climate Change and Global Inequality**

Second Semester Course

Nowhere is the face of global inequality more obvious than in climate change, where stories of climate-driven tragedies and the populations hit hardest by these disasters surface in every news cycle. In this course students will interrogate the causes and effects of climate change, and the public policy debates surrounding it. In case studies, we will research global, regional, and local policies and practices along with the choices of decision makers and what they mean to the populations they serve. Who benefits, who suffers, and how might we change this equation? Following the Learning Studio model, in the second half of the course, students will work with their teacher to design their own independent projects reflecting their individual interests and passions. We will collaborate in workshops with classmates to deepen our collective understanding of the complex issues surrounding climate change. Throughout the semester we will also build and curate a library of resources and share findings in varied media, engaging as both consumers and activists to increase knowledge, challenge and advocate for sustainable norms. Finally, students will have the opportunity to reach a global audience by participating in GOA's Catalyst Conference in the spring 2019, as they present their individual projects to spark change in local communities through well-informed activism.

### **Comparative Politics**

Second Semester Course

In 2012, the Economist issued a report entitled "Democracy at a Standstill." This course uses the comparative model to ask students to consider whether democracy is in fact at a standstill, but more importantly, if and why we should care. By looking at current events, reading scholarly research, analyzing data, conducting personal interviews and engaging in a series of debates, students will assess the status of democracy in the world and also explore the challenges and alternatives to democratic systems. In so doing, they will constantly reevaluate their own beliefs and understandings about how power should be distributed and utilized.

### **Entrepreneurship in a Global Context**

Second Semester Course  
Summer Course

How does an entrepreneur think? What skills must entrepreneurs possess to remain competitive and relevant? What are some of the strategies that entrepreneurs apply to solve problems? In this experiential course students develop an understanding of entrepreneurship in today's global market; employ innovation, design, and creative solutions for building a viable business model; and learn to develop, refine, and pitch a new start-up. Units of study

include Business Model Canvas, Customer Development vs. Design Thinking, Value Proposition, Customer Segments, Iterations & Pivots, Brand Strategy & Channels, and Funding Sources. Students will use the Business Model Canvas as a roadmap to building and developing their own team start-up, a process that will require hypothesis testing, customer research conducted in hometown markets, product design, product iterations, and entrepreneur interviews. An online start-up pitch by the student team to an entrepreneurial advisory committee will be the culminating assessment. Additional student work will include research, journaling, interviews, peer collaboration, and a case study involving real world consulting work for a current business.

### **Genocide and Human Rights**

First Semester Course

Students in this course study several of the major genocides of the 20th century (Armenian, the Holocaust, Cambodian, and Rwandan), analyze the role of the international community in responding to and preventing further genocides with particular attention to the Nuremberg Tribunals, and examine current human rights crises around the world. Students will read primary and secondary sources, participate in both synchronous and asynchronous discussions with classmates, write brief papers, read short novels, watch documentaries and develop a human rights report card website about a nation in the world of their choice.

### **Introduction to Investments**

First Semester Course  
Summer Course

In this course, students simulate the work of investors by working with the tools, theories, and decision-making practices that define smart investment. We explore concepts in finance and apply them to investment decisions in three primary contexts: portfolio management, venture capital, and social investing. After an introduction to theories about valuation and risk management, students simulate scenarios in which they must make decisions to grow an investment portfolio. They manage investments in stocks, bonds, and options to learn a range of strategies for increasing the value of their portfolios. In the second unit, they take the perspective of venture capital investors, analyzing startup companies and predicting their value before they become public. In the third unit, students examine case studies of investment funds that apply the tools of finance to power social change. Throughout the course, students learn from experts who have experience in identifying value and managing risk in global markets. They develop their own ideas about methods for taking calculated financial risks and leave this course not just with a simulated portfolio of investments, but the skills necessary to manage portfolios in the future.

### **Macroeconomics**

Second Semester Course

In this course, students will study macroeconomic theory as it relates to domestic and global policies on employment, national income, government spending, and the impact of foreign spending on domestic economies and foreign exchange markets. Students will use real world events and data as case studies in order to develop a better understanding of the driving forces behind domestic and international macroeconomic markets. In the final portion of the course, students will have the opportunity to develop their own solutions to a local/global issue of their choice (such as poverty, environmental pollution, and limited access to education) based on their new understanding of macroeconomic theory. This course is an excellent partner with, but not a prerequisite for, Microeconomics. It can serve as a prerequisite for Advanced Topics in Economics.

### **Prisons and the Criminal Law**

Second Semester Course

Criminal courts in the United States have engaged in an extraordinary social experiment over the last 40 years: they have more than quintupled America's use of prisons and jails. Has this experiment

with “mass incarceration” produced more negative effects than good? Is it possible at this point to reverse the experiment without doing even more harm? In this course, students become familiar with the legal rules and institutions that determine who goes to prison and for how long. Along the way, students gain a concrete, practical understanding of legal communication and reasoning while grappling with mass incarceration as a legal, ethical, and practical issue. In an effort to understand our current scheme of criminal punishments and to imagine potential changes in the system, we immerse ourselves in the different forms of rhetoric and persuasion that brought us to this place: we read and analyze the jury arguments, courtroom motions, news op-eds, and other forms of public persuasion that lawyers and judges create in real-world criminal cases. Topics include the history and social functions of prisons; the definition of conduct that society will punish as a crime; the work of prosecutors, defense attorneys, and judges in criminal courts to resolve criminal charges through trials and plea bargains; the sentencing rules that determine what happens to people after a conviction; the alternatives to prison when selecting criminal punishments; and the advocacy strategies of groups hoping to change mass incarceration. The reading focuses on criminal justice in the United States, but the course materials also compare the levels of imprisonment used in justice systems around the world. Assignments will ask students to practice with legal reasoning and communication styles, focused on specialized audiences such as juries, trial judges, appellate judges, sentencing commissions, and legislatures. The work will involve legal research, written legal argumentation, peer collaboration, and oral advocacy.

*Note: This course is offered through Wake Forest University School of Law and is designed by Ronald Wright, the Needham Y. Gulley Professor of Criminal Law. Prof. Wright is also part of the teaching team for this course. Students who take this course should expect a college-level workload (8-10 hours a week). Successful completion of this course will be rewarded with a certificate from the law school.*

## WORLD LANGUAGES

Intercultural Studies courses focus on the study of cultural perspectives, religion, and world languages.

### Arabic I: Language Through Culture

Year Course

This full-year course will highlight Modern Standard Arabic and some of the spoken dialect of the Levant. With an emphasis on Arabic culture, students will learn commonly used expressions and phrases from the Levant area. Students will develop their skills in listening, reading, writing, forming grammatically correct structured sentences, and most importantly, conversation. This will be accomplished through podcasts, videos, culture circles discussions, web conferencing, and collaborations in group projects. In addition, students will have direct conversations with native speakers of Arabic through a virtual club called “Shu Fe Maa Fe,” where students are required to meet online with their assigned partner and learn about a certain cultural topic every week, such as traditional food, greetings, gestures, values, history and more. Since Arabic is becoming one of the most functional languages in the world, especially in the areas of commerce, business, and trade, students participating in this course can avail themselves of the opportunity to learn the language in a highly stimulating and rich cultural context.

### Arabic II: Language Through Culture

Year Course

This full-year course continues the work of Arabic Language Through Culture I, highlighting Modern Standard Arabic and the spoken dialect of the Levant. Grammar topics include continued exploration of the essential structures of Arabic (root/pattern systems) and verbs. Mastery of the alphabet (writing and reading) is an early goal of the course as it underlies more sophisticated work on sentence-writing skills. As in the first course, students develop their

skills in listening, reading, writing, forming grammatically correct structured sentences, and, most importantly, conversation. Using these fundamental skills, students will explore and discuss current events related to cultural topics and have the opportunity to design their own inquiry projects to simultaneously build language skills and cultural understanding. The focus of this course is 60 percent on language and 40 percent on culture. *Prerequisite: Arabic Language through Culture I or permission from the instructor.*

### Japanese I: Language Through Culture

Year Course

This full-year course is a unique combination of Japanese culture and language, weaving cultural comparison with the study of basic Japanese language and grammar. While examining various cultural topics such as literature, art, lifestyle and economy, students will learn the basics of the Japanese writing system (Hiragana and Katakana), grammar and vocabulary. Through varied synchronous and asynchronous assignments, including hands-on projects and face-to-face communications, students will develop their speaking, listening, reading and writing skills. The cultural study and discussion will be conducted in English, with topics alternating every two to three weeks. The ultimate goal of this course is to raise awareness and appreciation of different cultures through learning the basics of the Japanese language. The focus of this course will be 60 percent on language and 40 percent on culture. This course is appropriate for beginner-level students.

### Japanese II: Language Through Culture

Year Course

Through language learning, students in this course share their voices, cultivate global perspectives, and foster appreciation of self and others. Students expand their knowledge of the basic skills introduced in Japanese Language Through Culture I while further developing their speaking, listening, writing, and reading skills. Each unit follows the IPA model (Integrated Performance Assessment), blending three modes of communication: interpretation of authentic material in Japanese, synchronous and asynchronous practice in speaking and writing, and oral and written presentations. Each unit focuses on one of the following cultural topics: Design and Expression, Ecology, Entertainment, East meets West, Harmony, and Nature. In addition, students will have the opportunity to select and pursue topics of their own interest. Grammar topics will cover the essential forms that are typically introduced in the second and third year of a high school Japanese program. By learning the Dictionary Form, Nominalizer, TE form, TA form, NAI form, and Noun Modifier, students are able to add more complexity to their sentence construction. In doing so, they shift from forming simple sentences to communicating in a coherent paragraph. As online learners, students are expected to exhibit superb time management and communication skills, as well as to take ownership of their learning. While grammar instruction will be delivered through asynchronous work and face-to-face meetings, much of the course content will be curated and created by students through their research and collaboration. The focus of this course is 60 percent on language and 40 percent on culture. *Prerequisite: Japanese Language through Culture I or permission from the instructor.*

## ATHLETICS

### DEPARTMENTAL REQUIREMENT:

Participation as a playing member of a Blake athletic team for one season during both grades 9 and 10.

Students involved in a significant and ongoing individual sport or physical activity may petition the Athletic Director to use this sport or activity to fulfill the athletic requirement. Students can also fulfill their athletic requirement by participating on Blake club teams such as the Blake Area Equestrian Team, Blake Sailing Team, Ultimate Frisbee Team and Synchronized Swimming.

#### FALL

Cross Country (Boys and Girls)

Football (Boys)

Soccer (Boys and Girls)

Swimming (Girls)

Tennis (Girls)

Volleyball (Girls)

#### WINTER

Alpine Skiing (Boys and Girls)

Basketball (Boys and Girls)

Fencing (Boys and Girls)

Hockey (Boys and Girls)

Nordic Skiing (Boys and Girls)

Swimming (Boys)

#### SPRING

Baseball (Boys)

Golf (Boys and Girls)

Lacrosse (Boys and Girls)

Softball (Girls)

Tennis (Boys)

Track & Field (Boys and Girls)

**28 total sports (14 Boys, 14 Girls)**

## COLLEGE SEMINAR: SOPHOMORES

In the fourth quarter of the sophomore year and continuing into the fall of the junior year, the College Seminar introduces the different phases of the college search process. The College Counseling Office staff objectives for each student follow:

- Develop an understanding of self and how that impacts college criteria and the process in general
- Develop an understanding of how colleges review student files and determine outcomes
- Identification and understanding of application format, admission plans, visits, interviews, essays, resumes and recommendations
- Develop familiarity with exploration resources
- Understand standardized tests: PSAT, ACT, SAT Reasoning Test and SAT Subject Tests
- Develop an understanding of roles of the student, college counselor and parent(s) in the college search process

## COLLEGE SEMINAR: JUNIORS — STANDARDIZED TEST PREP COURSE

Blake's test prep course for the ACT test begins in September of the junior year and includes two weeks of PSAT preparation. Although enrollment in this prep course is optional, we strongly encourage all juniors to register for this course, which is offered at no additional charge. Registration for ACT prep occurs along with the regular class registration process. Some of the materials for the course come from actual ACT tests used in recent years, and the goal of the class is to maximize test-taking speed without sacrificing accuracy. The primary advantage of this type of course is reduction in test anxiety. Many students become so worried about the test they can't concentrate or work effectively. The 14 weeks of practice greatly reduces stress and boosts confidence, which leads to better results



## INDEPENDENT STUDY

An independent study program is an opportunity for a student to explore an area of study that is not offered in our curriculum. It is open primarily to seniors, but sophomores and juniors may apply. An Independent Study program should be a rigorous course of study that adheres to high academic standards.

Students must apply by the middle of the quarter prior to the beginning of the proposed independent study program. A proposal form is submitted to the supervising faculty member, the department head and the Grade Dean for approval. They will review the proposal along with the student's entire academic program, and if they support the proposal, it will be submitted to the US Director for approval. If approved, meeting times between the student and the advisor will be determined, but they should occur for at least two hours per week.

Student will maintain a minimum course load (five classes) in addition to an independent study program. An independent study program may not satisfy a departmental requirement. A student is permitted to pursue only one independent study program at a time. The pass/fail option is available for independent study programs under the same guidelines as other courses.

## P.S.E.O. (Post-Secondary Education Option)

The State of Minnesota's Post-Secondary Education Option Program (PSEO) enables high school juniors and seniors who have exhausted the curriculum of their schools an opportunity to take college courses for high school credit. As Blake reserves the right to define its own graduation requirements and academic standards, juniors and seniors are eligible to participate in PSEO under the following conditions:

- The course is not offered in The Blake School curriculum.
- A student must remain enrolled in at least four full credit courses each semester at Blake.
- Participation must have the approval of the Grade Dean, the College Counseling Office and the Director of the Upper School.
- Students interested in participating in a PSEO program must inform the Grade Dean at least two months prior to the proposed enrollment date.
- Students are solely responsible for contacting the prospective colleges to get information about the application process for the PSEO program.

Note: Deadlines for the PSEO program vary from college to college and admission into these programs is very competitive. We recommend that students who are interested in these programs inquire early.

## SUMMER COURSES FOR UPPER SCHOOL GRADUATION CREDIT

The Blake School is excited to offer summer courses for academic credit. Students successfully completing a course described below will earn a semester credit that can be applied to departmental requirements or elective credits. Consistent, regular attendance is essential to earning credit due to the intensive nature of the courses; please review our website for attendance policies prior to registering. Students can register for summer classes with their other 2019-20 selections. Registration and payments for the courses are made online at <http://www.blakeschool.org/summer>.

### Health

This course will explore topics aimed at promoting healthy behaviors, increasing responsible decision-making and encouraging healthful living. Coursework and discussion will focus on the areas of physical, mental, chemical and sexual health. Students will gain an understanding of how to make positive lifestyle choices based on their personal values and work toward personal application of the information into their daily lives. Overarching themes of this course include accessing reliable wellness resources and learning to make healthy decisions that will reduce the risk of future health concerns. This course fulfills the Blake health requirement.

For: ages 15 – 18, entering grades 10 – 12  
Dates: June 10 – June 28  
Time: 9:00 a.m. – 2:00 p.m. (includes lunch break)  
Homework Expectation: 1 – 1.5 hours/day  
Location: Minneapolis campus  
Cost: \$1,880 per student  
Min/Max Students: 5/16

### Woodworking I

This intensive, shop-based course will engage artists in the design and craft of wood sculpture and furniture. The physical properties of wood and its potential as an expressive medium will be explored. Students will be introduced to power and hand tools used for woodworking and will develop an understanding of the social and environmental implications of materials used for furniture design and production. This course fulfills an arts requirement for Blake students.

For: ages 14 – 18, entering grades 9\* – 12  
Dates: June 17 – June 28  
Time: 9:00 a.m. – 4:00 p.m. (includes lunch break)  
Homework Expectation: .5 – 1 hour/day (design tasks)  
Location: Hopkins campus, Middle School  
Cost: \$1,880 per student  
Min/Max Students: 5/12

\*Students entering 9<sup>th</sup> grade must seek approval from the Art Department at The Blake School.

**THE BLAKE SCHOOL**  
**COURSE PLANNING WORKSHEET**

- The recommended course load is six classes, including an arts class, each semester. The minimum required course load is five classes each semester (5 total credits per year).
- Write course names on the appropriate department lines. Use elective lines for additional courses in a department. Each grade has different required courses and those should be included as you plan your registration.
- **Arts and Senior English Courses, as well as Math, Science and Social Studies semester electives:** It is imperative that you choose **one** alternate course for each of these selections.

***Semester One Courses***

<b>Department</b>	<b>Course</b>	
<b>Art</b>		<b>Alt:</b>
<b>English</b>		<b>Alt: (for grade 12)</b>
<b>Modern and Classical Language</b>		
<b>Math</b>		<b>Alt: (if choosing an elective)</b>
<b>Science</b>		<b>Alt: (if choosing an elective)</b>
<b>Social Studies</b>		<b>Alt: (if choosing an elective)</b>
<b>Elective(s)</b>		<b>Alt:</b>

***Semester Two Courses***

<b>Department</b>	<b>Course</b>	
<b>Art</b>		<b>Alt:</b>
<b>English</b>		<b>Alt: (for grade 12)</b>
<b>Modern and Classical Language</b>		
<b>Math</b>		<b>Alt: (if choosing an elective)</b>
<b>Science</b>		<b>Alt: (if choosing an elective)</b>
<b>Social Studies</b>		<b>Alt: (if choosing an elective)</b>