Curriculum Guide

2019-2020

Our Motto

PRO VITA NON PRO SCHOLA DISCIMUS

▪ LEARNING—NOT JUST FOR SCHOOL BUT FOR LIFE ▪

Our Core Values

CURIOSITY

INTEGRITY

RESPECT

INCLUSION

PERSEVERANCE

RESILIENCE

Guided by our Mission

Rooted in an inspiring natural setting, Berkshire School instills the highest standards of character and citizenship and a commitment to academic, artistic, and athletic excellence. Our community fosters diversity, a dedication to environmental stewardship, and an enduring love for learning.

Contents

Academic Program

Course of Study
At the heart of Berkshire's academic program is a rigorous and comprehensive college preparatory curriculum that fosters critical thinking, problem-solving, and intellectual curiosity across all disciplines. Five academic courses are the standard full load for most students. Students are strongly encouraged to pursue a subject to the most advanced level possible, which for many means taking courses well beyond those required for graduation. Each student's course of study is planned by the advisor, Form Dean, and Dean of Academics. Form Deans and the Dean of Academics oversee and support the academic progress and performance of each student.

Graduation Requirements
Students earn one credit upon successful completion of a yearlong course and one-half credit upon successful completion of a semester course. To graduate, students must earn 18 credits and meet the following distribution requirements:

English: Four years of English, including English VI

Arts: One credit of visual and/or performing art

History: Two years, including Modern World History and U.S. History. In addition, Third Formers must complete World History.

Languages: Three years of the same language through level III

Mathematics: Three years of mathematics, including Algebra I, Geometry, and Algebra II

Science: Two core laboratory sciences (Biology, Chemistry, Physics, Environmental Science)

To pass a yearlong course, the average of the first and second semesters must be a passing grade. In addition, Sixth Formers must pass all course work undertaken during the second semester to graduate.

Advanced Courses
Students who have demonstrated a strong commitment and aptitude in a particular subject may be placed in an advanced section of a course. Advanced courses are accelerated and extend the curriculum of a regular course, challenging the student to apply concepts and skills at a higher level. Placement in an advanced course is determined by the department in consultation with the Dean of Academics.

Advanced Placement Courses
All departments at Berkshire offer Advanced Placement (AP) courses that can help a motivated and qualified student prepare for the College Board Advanced Placement Exams. Selection for an Advanced Placement course requires the successful completion of all course prerequisites and is determined by the department. Students who score successfully on the examination may be eligible for advanced standing in many colleges and universities. All students enrolled in Advanced Placement courses are required to take the AP Examination for that course.

Black Rock Scholars Program
The goal of the Black Rock Scholars Program is to encourage students to engage fully in experiences, both curricular and extracurricular, that develop skills and attitudes that prepare them to be exemplary citizens of the global community. Black Rock Scholars engage in five areas central to our mission:

- sustainability
- diversity and inclusion
- community service and philanthropy
- sense of place
- global awareness

To meet curricular requirements, Black Rock Scholars must successfully complete two Black Rock **focused** courses. A Black Rock focused course is one in which the content is concentrated explicitly and intentionally in one of the five core areas (indicated with 🐾🐾): *Sustainability; Leadership: Politics and Society; Economics and Philanthropy; English VI: The Mountain and Me; Global Leadership Studies*.

A Black Rock Scholar must also successfully complete two academic experiences in Black Rock **related** courses. A Black Rock related course is one that includes experiences concentrated on one of the focus areas (indicated with 🐾). For example, *English V*, which includes a student-driven i-Cubed project, is a Black Rock related course, as a student may opt to concentrate on one or more of the five areas.

Independent Study
Motivated students who demonstrate the commitment and aptitude to work independently at an advanced level may develop an independent study project in consultation with a faculty sponsor. An independent study may be taken as a sixth course, either as a semester or yearlong course, and requires department approval.

English

The English Department emphasizes 21st century skills by building on traditional ones. We teach students to read carefully and appreciatively and to write clearly and expressively, emphasizing critical thinking and problem solving throughout our curriculum. Each Form has a course theme, which expands upon that of the year before and is developmentally consistent with the achievements and interests of our students. We use both canonical and more contemporary texts in the service of addressing these themes, scaffolding skills as our students prepare for study, work, and life in the world beyond Berkshire.

Consistent with our mission we keep close watch over our students' progress by assigning, evaluating and returning academic writing such as analytical, persuasive, and personal essays as well as original stories, poems, and scenes. Our students gain additional writing practice through frequent quizzes, short reading responses and journal entries. We teach grammar in both formal and performative sense. We have our students review etymology and vocabulary in a structured manner, and we review strategies for standardized tests.

Paying attention to the traditional building blocks of communication while engaging our students in Web research, online discussion sites and interactive presentations, we prepare them for the varied demands of college and life. While reading important works of literature in a thoughtful manner, our students can develop a more informed and compassionate perspective toward the larger community, with special regard to issues of sustainability. Our fundamental assumption is that by working with language, literature and ideas in a dynamic fashion, students will develop their abilities not only to communicate but also to think and reason critically. By stressing the relationship between writers and readers, we make our students more aware of the multiple aspects of communication in a complex world.

English III: Individual as Hero
Covering classic and contemporary texts in a variety of genres, such as *Into the Wild, The Odyssey, Their Eyes Were Watching God, and Henry IV, Part 1*, the English III curriculum focuses thematically upon essential elements of the hero's journey at a time when our students are setting forth on their own missions of self-discovery as readers, writers and thinkers. In English III, third formers receive a thorough grounding in principles of grammar and vocabulary while mastering the structures of various kinds of paragraphs and essays. Throughout the year, third-form teachers stress fundamental study skills important to all Berkshire classes, including critical reading, detailed note-taking, organization of course materials, and timely completion and submission of work.

English IV: Individuals in Communities
(Regular and Advanced)
In the English IV reading curriculum, students develop critical reading skills through the study of a variety of literary genres—fiction, drama, poetry and personal narrative—in their structural elements; representative works include *Oedipus Rex, Macbeth, City of Thieves* as well as numerous short stories, poems, and a memoir. Building on the English III theme of the hero's journey, fourth formers broaden their focus to the role of the individual in larger communities. Students continue to review grammar and usage, but exclusively in context of strengthening and revising their own writing, and acquire knowledge of Latin and Greek etymology. English IV's writing curriculum expands on the range of the third-form assignments, focusing on more complex and formally structured expository/ analytical essays, but also includes a personal memoir and a poetry portfolio. Students perform a Shakespearean scene as a means to understanding as well as participate in "Poetry Out Loud," a national recitation project, in order to learn about poetry from a performance perspective.

English V: American Identities
(Regular and Advanced)
The fifth-form year concentrates on the American identity in literature from the nineteenth century to the present day. Representative authors include Whitman, Dickinson, Thoreau, and Fitzgerald, in addition to more contemporary writers such as Toni Morrison and Tony Kushner. Expanding on the genres studied in earlier years, this course includes screenplay, film, and audio essays. Students continue to build their working vocabularies through careful attention to course texts, especially focusing on words that regularly appear on

standardized tests, and improve other skills relevant to the SAT and ACT exams. As with the fourth-form year, critical analysis is a central component of the written work, and fifth formers begin to work more extensively with secondary sources at this level. Written work includes journals and blogs, expository essays, personal reflection, screenwriting, and research papers. In the second semester, students write and record "This I Believe" essays, in preparation for personal writing critical to the college application process and beyond.

Advanced Placement English Language and Composition
Advanced Placement English Language and Composition is a yearlong course for qualified fifth formers who wish to become skilled readers of prose written in a variety of rhetorical contexts and to become skilled writers who compose for a variety of purposes. The course emphasizes the expository, analytical, and argumentative writing that forms the basis of academic and professional communication, as well as the personal and reflective writing that fosters the ability to write in any context. In preparation for the AP English Language and Composition examination, students become acquainted with a wide variety of prose styles from many disciplines and historical periods, and gain understanding of the connections between writing and interpretive skill in reading.
Prerequisite: Permission of Department

English VI: British Literature
(Regular and Advanced)
English VI is divided into two semesters: a British literature course in the first semester and electives, as follows, in the second semester. Throughout the first semester, students continue to hone their critical thinking skills while focusing on various genres of British literature, be it drama, poetry, fiction, or essays. Representative authors include William Shakespeare, Aphra Behn, Thomas Hardy, T.S. Eliot, Emily Brontë, and Mary Shelly. A strong emphasis continues to be placed on various modes of written and oral expression. For "Hamlet Night," students create and perform personal adaptations of Shakespeare's play and write persuasive essays. As a culminating project to the semester, students craft a substantial analytical essay comparing *Hamlet* to a work of contemporary British literature. Mirroring writing asked of students in college literature courses, sixth formers analyze structure, style, and usage of figurative language as well as employ secondary sources to support their literary analyses.

English VI: Second Semester Electives
(Italicized offerings below will vary each year)

Contemporary Environmental Literature and Film
(Semester 2)
In this course, students study the relationship between humans and nature by reading contemporary environmental literature. We consider a range of genres—from fiction and essays to travelogues and poetry—and also view films in order to make sense of the social significance of "wilderness" in (and beyond) America during our current digital age. The course provides opportunities to learn about Native American relationships to the natural world as well as issues concerning social justice and environment degradation. While we begin by briefly engaging classic writers such as Henry David Thoreau, Aldo Leopold, and Rachel Carson, students primarily focus on contemporary authors such as Percival Everett, Joan Naviyuk Kane, and Elizabeth Kolbert.

Contemporary Memoir
(Semester 2)
This course explores the memoir genre through a global lens of Asian, African, European, Middle Eastern, and South American cultures. Students read and analyze both short and long-form memoir in an effort to better gain an understanding of the experiences related to the development of one's identity and the exploration of self (across a wide range of writers) as it appears in the memoir. Students also explore their own unique story as it relates to the course material. Authors may include: Azar Nafisi, Trevor Noah, Ngugiwa Thiong 'O, Thi Bui, Abeer Hoque and Yiyun Li. In addition to reading and critically responding to course texts, students draft their own memoir focusing on understanding oneself within the global community.

The Mountain and Me
(Semester 2)
This course is designed to take a literary look at the relationship between the out-of-doors, specifically our local landscape, and the individual. Students read fiction and nonfiction related to the outdoors. Authors may include John Muir, Annie Dillard, Jack London, Jon Krakauer, Rachel Carson, Edna St. Vincent Millay and Henry David Thoreau. Writing assignments ask students to engage with class texts through analytical, persuasive, and personal writing. In addition, the culminating writing assignment asks students to write about their own interactions with the natural world as those interactions relate to their experience under the Mountain. In keeping with the focus of the class, students spend some time outside of class engaging with the Mountain in various ways.

Postcolonial Caribbean Literature
(Semester 2)
Comprised of a matrix of languages, cultures, and people, the Caribbean is a complex region with a long history of imperial control. A range of issues therefore characterize much Caribbean writing, such as the struggle of Caribbean people to establish independent cultures in the face of both former colonial rule and present foreign powers. Over the last century, this region has been home to an astounding range of brilliant writers such as Aimé Césaire, Kamau Brathwaite, Jamaica Kincaid, Derek Walcott, Edwidge Danticat, V.S. Naipaul, Ishion Hutchinson, and Kei Miller, among many others. In this course, students study and learn about some of these writers by paying careful attention to historical and cultural contexts while also emphasizing critical engagement with their work in different genres.

Twentieth Century Wars in Literature
(Semester 2)
This course explores how conflict has been represented and remembered in 20th century war literature. It focuses on the First World War, Second World War, and the Vietnam War, investigating the relationship between literature, photography, and film. The course encourages students to read both canonical and less well-known literary works in conjunction with other discourses of conflict: psychoanalysis, gender, and ideology. Possible readings include: Erich Maria Remarque's *All Quiet on the Western Front*; Kurt Vonnegut's *Slaughterhouse-Five*; and Philip Caputo's *A Rumor of War*.

Advanced Placement English Literature and Composition
This college-level course is designed for qualified sixth formers who wish to undertake a rigorous and intensive study of British and Postcolonial literature in preparation for the AP English Literature and Composition exam. Students engage in the careful reading and critical analysis of imaginative literature (fiction, poetry, and drama) through the study of each work's structure, style, and themes, as well as such smaller-scale elements as the use of figurative language, imagery, symbolism, and tone. Writing is an integral part of the course since the exam is weighted toward student writing about literature. In order to preserve the sense of common experience among the sixth-form students as a class, most aspects of English VI are also included: timed writing in preparation for standardized tests, college application essay practice, and "Hamlet Night."
Prerequisite: Permission of Department

Advanced Humanities Research
Advanced Humanities Research is a full-year course for talented students who have a desire to pursue guided, but independent, research in the humanities. The first half of the course is a seminar on critical theory introducing students to the theoretical framework that shapes the work of humanities scholars. The first semester also includes an introduction to qualitative research methods to help students master the tools required for advanced research in the humanities. The second half of the course is more student-directed, with each student working on an intensive piece of research, along with an identified expert in their chosen field, with the goal being to submit their research for publication. *This course may only be taken in addition to the student's Form-appropriate English course.*
Prerequisite: Selection by Department Chairs

College Writing I, II
(Semester 1 and/or 2)
This course focuses upon writing and research skills essential for success in college writing. Basing the course on the theme of villains and villainy, students quickly grasp the crux of the source material, allowing more time and effort devoted to polishing their writing. Drawing on disciplines like philosophy, psychology, religious studies, and literary theory, students examine cultural theories of evil and villainy. We like to think that we recognize evil, but why do we often disagree about who is the villain? How does the concept of villainy facilitate and obstruct our judgments? Students read fairy tales, short stories, and myths, analyze historical studies of major figures, and engage in scholarly arguments about what characteristics create villains and heroes. During each semester, students work on a variety of skills essential for successful college writing: annotating articles and essays, creating annotated bibliographies, criticizing appropriate sources. They also learn and practice key components of successful essay writing. *This elective course may only be taken in addition to the student's Form-appropriate English course. Open to Forms V and VI.*

Creative Writing I, II
(Semester 1 and/or 2)
This course is designed for students who, already experienced with writing poetry, fiction or creative nonfiction on their own, believe they would benefit from the structure and guidance provided by a workshop environment. Drafting, revision, and peer critique are emphasized as students develop a portfolio of their own writing across the entire semester. *This elective course may only be taken in addition to the student's Form-appropriate English course. Open to Forms IV, V and VI.*

Arts

Visual arts students may pursue a wide range of artistic disciplines, including studio art, ceramics, photography and digital art. They may study a particular medium in depth or sample several from a broad offering of courses. While a strong technical foundation is stressed, equal emphasis is placed upon creative self-expression and developing the artist's unique voice. Advanced studies include a strong emphasis on critical and creative thinking, as well as portfolio preparation.

Performing arts courses offer students the opportunity to explore a variety of disciplines through both active participation in group ensembles and through classroom study. Courses of study are available for every level of student, from the beginner to the most advanced artist, in music, theater, and film. The programs emphasize technical proficiency, collaboration, creative expression and stage presence, with the opportunity to perform in a variety of concerts, recitals and performances throughout the year.

One credit of visual and/or performing art is required for graduation.

Visual Arts

Studio Art I, II
(Semester 1 and/or 2)
Studio Art I and II are semester-long courses that introduce students to a variety of fine art-making processes. Students develop conceptual and technical skills while studying drawing, painting, sculpture and mixed media. Studio Art I and II are survey courses that teach an understanding of the elements of art and principles of design. Studio work is supplemented with critiques, field trips to museums and local artist studios, as well as group public art projects.

Studio Art III, IV
(Semester 1 and/or 2)
These intermediate-level art courses expand upon each student's understanding of the elements of art and principles of design. Intermediate studio art courses encourage self-discovery through individual assignments based on each student's unique interests and talents. Students continue to build their portfolios by examining their own strengths and weaknesses on a regular basis. Studio work is supplemented with critiques, field trips to museums and local artist studios, and group public art projects.

Advanced Studio Art V, VI
(Semester 1 and/or 2)
Studio Art V and VI are advanced courses designed for the highly motivated artist. A commitment to independent work and a high level of technical competence are expected as students work with the instructor to build their breadth portfolios and develop a concentrated body of work with a theme and technique(s) of their own. Advanced studio art students may also seek recommendations to the Advanced Placement program in Drawing, 2-D Art and Design, or 3-D Art and Design.

Ceramics I, II
(Semester 1 and/or 2)
Ceramics I and II introduce the student to the many aspects of clay work. Students explore texture, form, and function through a variety of hand-built techniques such as pinch, coil and slab. Students gain an understanding of the many stages of clay from plastic to leatherhard, bone-dry, bisqueware and glazeware. They explore a variety of glazing and finishing techniques used in electric kiln firing. In Ceramics II, students begin to explore throwing techniques on the wheel. With an eye toward ethnic, historic, and contemporary considerations, classroom assignments challenge the blossoming potter/sculptor to embrace creative thinking while developing basic skills.

Ceramics III, IV
(Semester 1 and/or 2)
These intermediate-level courses allow time for the dedicated potter/sculptor to further develop and refine the skills begun in previous levels. These courses also provide an opportunity for students to take part in studio management through loading the kiln, pugging clay and making glaze test tiles. At this level, students begin developing more conceptual art, as well as refining their technique. The creative process is emphasized and expanded as each student risks failure to find success.

Advanced Ceramics V, VI
(Semester 1 and/or 2)
Ceramics V and VI are advanced courses for the especially motivated artist. A commitment to independent work and a high level of technical competence are expected, as students work with the instructor to develop and complete a series of original projects. We encourage students at this level to begin developing a portfolio, if they're interested in pursuing

the Advanced Placement program in 3-D Art and Design. Projects are very open-ended and demand a high degree of critical and creative thinking, problem-solving and time to succeed.

Digital Art I, II
(Semester 1 and/or 2)
Digital Art I introduces students to techniques for making fine art through technological processes. Digital cameras, scanners, stylus and tablets, and professional software including Adobe Photoshop, Illustrator, and Flash are used to create both still and animated work. Student work is printed on large-format printers, including an Epson 9890 with a 44-inch span. The digital art curriculum is supplemented with exploratory lessons, field trips to museums and local design firms, and a graphic design competition. Digital Art II builds on the foundation gained at the beginning level. Students develop their portfolios while learning more advanced techniques.

Digital Art III, IV
(Semester 1 and/or 2)
Students continue to build upon their foundations in the elements of art and principles of design in Digital Art III and IV. Exploration and experimentation are emphasized through projects that encourage independent research and original concept development. Digital Art III and IV are also supplemented with critiques, field studies in digital photography, online investigations into the work of cutting edge digital artists, and field trips to museums and local design firms.

Advanced Digital Art V, VI
(Semester 1 and/or 2)
Digital Art V and VI are advanced courses for the dedicated artist. A commitment to independent work and a high level of technical competence are expected as students work with the instructor to complete their breadth portfolios and develop a concentrated body of work with a theme and technique(s) of their own. Advanced digital art students may also seek recommendations to the Advanced Placement program in 2-D Art and Design.

Photography I, II
(Semester 1 and/or 2)
Photography I is an introduction to basic photography, exploring both digital and traditional darkroom techniques. Utilizing digital SLR cameras, iMac computers and Photoshop software, students explore basic camera operation, editing techniques and aesthetic concerns. Students are introduced to the darkroom through pinhole camera projects. In Photography II, students build upon their earlier introduction, exploring a variety of projects in both black/white and color. Digital and 35mm film cameras are provided to students during the course.

Photography III, IV
(Semester 1 and/or 2)
These intermediate-level courses explore representation and visual interpretation through black/white and color photography. Through a series of short-term assignments, students develop their photographic "eye" and build their portfolios of work. Coursework is supplemented with field trips to museums and galleries, as well as onsite shooting trips. Cameras are provided, but students are strongly encouraged to have their own digital SLR camera.

Advanced Photography V, VI
(Semester 1 and/or 2)
Photography V and VI are advanced courses for the dedicated photographer. Sophisticated techniques and thematic assignments are emphasized, and a commitment to independent work is expected. Students continue developing their unique artistic vision, with an eye toward enrolling in the Advanced Placement program in 2-D Art and Design. A digital SLR camera is required.

Sculpture and 3-D Design I, II, III, IV
(Semester 1 and/or 2)
In this course, students explore artistic expression and problem solving through three-dimensional form and space. In addition to traditional materials, such as wood, metal, plaster and recyclables, students also work with our STEAM program and high-tech tools (3-D printers, laser cutters, Arduino boards, projection) to integrate light, sound and movement into their work.

Advanced Placement 2-D Art and Design I
Advanced Placement 3-D Art and Design I
This yearlong Advanced Placement course is for committed students with a strong interest in developing as artists and creative thinkers. Students concentrate on either two-dimensional media (drawing, painting, printmaking, photography) or three-dimensional work (ceramics, sculpture), with the goal of preparing and submitting a strong final AP portfolio. *Recommended for Form V or VI*
Prerequisite: Permission of Department

Advanced Placement 2-D Art and Design II
Advanced Placement 3-D Art and Design II
This yearlong Advanced Placement course is for students who complete Advanced Placement Art and Design in their fifth-form year and wish to continue developing their skills for a second year of artistic growth. The dedicated art student can further explore and expand his or her portfolio with an eye towards majoring in art in college.
Prerequisite: Advanced Placement Art and Design I and permission of Department

Performing Arts

Improvisation
(Semester 1 and/or 2)
This course teaches the rudiments of improvisation in a low-pressure, inclusive environment. Focused mostly on sketch comedy (a la "Whose Line is it Anyway?"), students learn exactly how the pros make it look so easy. Through unique games and exercises, participants learn the guiding principles behind good improv and develop valuable acting skills through simple warm-up games and performance improv structures. Perfect for the beginner as well as the seasoned performer, students may take improvisation for more than one semester.

Chamber Music, Advanced Chamber Music
(Semester 1 and/or 2)
Chamber Music emphasizes small ensemble skills including musicianship, intonation, interpretation, and performance practice. Students are encouraged to practice as an ensemble. The course is open to all string, brass, woodwind, keyboard and pitched percussion instrumentalists. The Chamber Music Ensemble performs regularly throughout the year.
Prerequisite: Two-year study of an instrument or permission of instructor

Digital Music I, II, III, IV
(Semester 1 and/or 2)
Using keyboard synthesizers and computers, students work independently to create original musical compositions. Each course covers the study of MIDI (Musical Instrument Digital Interface), as well as digital audio techniques including live recordings and digital wave editing. Students create a CD of their own compositions by the end of each semester. No musical experience is required.

Music Theory I
(Semester 1)
Music Theory allows students to explore music outside of our performing ensemble groups. This course is an introduction to the study of functional harmony including scales, intervals, chord constructions, harmonic progression, counterpoint, and ear-training. No musical experience is required. *Open to Forms IV, V and VI*

Advanced Music Theory II
(Semester 2)
This second semester of Music Theory continues the study of functional harmony with an introduction to twentieth century music theory. Students analyze chorales, sonatas, symphonies and other works, and they begin creating simple compositions including chorales and solo piano compositions.
Prerequisite: Music Theory I or permission of instructor

Chorus, Advanced Chorus
(Semester 1 and/or 2)
The Berkshire Chorus sings madrigals, motets, popular arrangements, folk music of Africa, music from the Balkans, shape-note hymns of North America and much, much more. Students learn basic musicianship skills including intonation, vocal blending, diction, vocal production, breath control, and phrasing. The course emphasizes singing in a cappella style, as well as with instrumental accompaniment. Berkshire Chorus performs regularly throughout the year, both on and off campus. No musical experience is required. Placement in Advanced Chorus is by audition only.

Jazz Ensemble, Advanced Jazz Ensemble
(Semester 1 and/or 2)
Students develop musicianship and ensemble performance skills working with fellow musicians on a wide range of music, ranging from concert band arrangements to jazz and rock standards. The ensemble performs regularly throughout the year. Placement in Advanced Jazz Ensemble is by audition only.
Prerequisite: Two-year study of an instrument or permission of instructor

Private Voice, Instrumental and Dance Lessons
Private non-credit lessons may be arranged through the Music Director or Arts Department Chair. An additional fee will be charged.

History

The goal of the History Department is to introduce students to the rich cultural variety of the human community, to acquaint them with the development of the major traditions underlying civilization, and to provide them with an opportunity to read history in depth. Topics studied include the recent development of societies around the globe as well as the organization and dynamics of social, economic, religious, and political institutions that shape the world today.

The students learn through multimedia presentations which include the use of Smartboards and tablets that help to spark debate and discussions. Our students progress each year through a planned curriculum focused on maximizing reading and writing levels, while developing both the critical and creative thinking skills needed to meet the challenge of collegiate academics.

Two years, including Modern World History and U.S. History, are required for graduation. In addition, Third Formers must complete World History.

World History
This third-form course helps students understand how five major world religions have shaped past, current, and future historical events on a global scale. More specifically, students study the basic tenets of Hinduism, Buddhism, Judaism, Christianity, and Islam in relation to historical examples and more contemporary events. While content plays an important role in this course, a great deal of focus is put on the development and utilization of the following core skills: effective note-taking, critical reading and writing, primary and secondary source analysis, cogent public speaking, and basic research methods.

Modern World History *(Regular and Advanced)*
Modern World History acquaints students with the major events, concepts, and trends that have developed around the world from the Scientific Revolution to the modern day. The course examines themes and events in Europe, Africa, the Middle East, the Americas, and Asia. The primary themes of the course include political and social systems, global interactions, religious and ethical systems, and scientific and technological innovations. Students develop the skills to read critically and research effectively through the use of primary and secondary sources; they also become comfortable with presentation technology and public speaking. Students master thesis-based essays and write a research essay on a topic in world history as a culmination of their studies. A portion of class each week is dedicated to studying current events, thus encouraging them to relate historical topics to the issues facing the post 9-11 world. Through demanding readings, group discussions, research projects and presentations, students come to learn about their roles in the larger global community.

United States History *(Regular and Advanced)*
Required for graduation and usually taken during the fifth-form year, this course is a chronological survey of U.S. history from the colonial period to the present. Topics studied include the colonization of British America, the American Revolution, the establishment of the Federal Republic, territorial expansion and the growth of sectionalism, the Civil War, the development of the United States as an industrial and world power, and the Cold War. Although the course focuses on political development, students also examine the key economic and social developments in U.S. history. Students develop research skills and the ability to use documentary evidence in developing a thesis and are required to write essays, short papers and a significant, college-level research project.

Economics and Philanthropy
The class begins in the first semester by providing students with a foundation in micro and macro-economic principles: supply, demand, market equilibrium, subjective value theory, theory of production, theory of cost, and different forms of industrial organization. The second semester turns toward a project-based curriculum focusing on the non-profit sector and the needs of our local community. Through field trips, visiting speakers, and exchanges with Berkshire alumni, students gain a better understanding of the important social role that charitable organizations play. Students, working with a Berkshire donor who has established an endowment for philanthropy, invite local organizations to apply for the funds. Students ultimately determine where the funds will be applied, thus gaining real-world experience that can make an actual difference in the lives of around us.
Prerequisite: U.S. History or permission of Department

Advanced Economics
Advanced Economics blends a traditional, theory-based approach to economics with the practical applications of business management and planning. In addition to discussing and debating micro- and macroeconomic concepts, students form groups to devise and write a business plan for a product or service of their own choosing. Groups compete for the Sabin Entrepreneurial Prize, to be awarded in the spring. Business plans are evaluated by a team of judges on the basis of their ingenuity, soundness, and sustainability.
Prerequisite: U.S. History and permission of Department

Ethics
This yearlong course encourages students to contemplate the nature of morally right behavior. After initial discussion and debate of the central ethical theories (including cultural relativism, utilitarianism, and Kantianism), students examine several applied topics. Controversial issues considered previously in the course have included abortion, euthanasia, animal rights, cloning, the ethics of war, world hunger, and the death penalty. Students are expected to formally direct much of the class during the final quarter of the course by selecting, researching, and leading a debate about a controversial ethical topic.
Prerequisite: Modern World History or permission of Department

Leadership: Politics and Society
(Semester 1 and/or 2)
This course examines the revolutionary nature of female leadership across time and cultures. Students examine great female leaders throughout history, looking at specific powerful women who led groups of individuals for various political, cultural, and social reasons. We explore what it means to be a leader, how our understanding of that has/has not changed over time, as well as contemporary and historical narratives that shape our understanding of how society accepted/viewed these women. We compare their accomplishments with their contemporaries--men and women--to understand whether these women were really unique as leaders in their societies and during their time.
Prerequisite: Modern World History or permission of Department

Modern East Asia
(Semester 1)
This one-semester course examines the emergence of modern societies in East Asia during the expansion of Western imperialism at the end of the nineteenth century and the endeavors of China, Japan, and Korea to respond to the challenges of the new world order. Special attention is given to the Chinese Revolution, the emergence of Japan as a global power, the Second World War in East Asia, and the economic transformation of the Pacific Rim in the second half of the twentieth century. Students write a research essay to fulfill the requirements of the course.
Prerequisite: Modern World History or permission of Department

U.S. History After 1945
(Semester 2)
"History is not the past. It is the present." This course looks at the American experience of the last seventy-five years and endeavors to discern the impact of the Cold War, the human rights campaigns, the environmental movement, the "culture wars," the deindustrialization of the economy, and the "war on terror" in American culture, society, and politics. For example, we explore the historical context for expressions and terms such as 'Give 'em hell, Harry!", "Better dead than Red," the "Farce on Washington," "end poverty in our time," "Sisterhood is powerful!", "blue-collar blues," "family values," "McWorld," and the "American Dream" through images as well as the printed word. Students write a research essay to fulfill the requirements of the course.
Prerequisite: Modern World History or permission of Department

Advanced Placement Comparative Government and Politics
This yearlong course introduces students to fundamental concepts used by political scientists to study the processes and outcomes of politics in a variety of country settings. The course aims to illustrate the rich diversity of political life, to show available institutional alternatives, to explain differences in processes and policy outcomes, and to communicate to students the importance of global political and economic changes. Six countries form the core of the AP Comparative Government and Politics course: China, Great Britain, Iran, Mexico, Nigeria, and Russia. By using these six countries, the course can move the discussion of concepts from abstract definition to concrete example, noting that not all concepts will be equally useful in all country settings.
Prerequisite: U.S. History or permission of Department

Advanced Placement United States History
This yearlong course provides students with the analytical skills and enduring understandings necessary to deal critically with the problems and materials in United States history. Students are prepared for success on the AP examination as well as intermediate and advanced level college courses. Emphasis is on determining the relevance, reliability, and importance of evidence used in historical scholarship. Students develop the skills necessary to develop an informed judgment and to present reasons and evidence clearly and persuasively in an essay format. *Not recommended for students who have already taken U.S. History.*
Prerequisite: Permission of Department

Advanced Placement United States Government and Politics

This course gives students a critical perspective on government and politics in the United States. Students begin by briefly studying the history that led to the formation of the republic and the vision that the framers of the Constitution had for the United States. During the remainder of the course, students are expected to become familiar with the various institutions, groups, beliefs, and ideas that constitute the American political process. There is a focus on the three branches of the federal government, the relationship between the federal government and the states, and how actors in government and among the citizenry shape public policy. Analysis of general concepts used to interpret American politics is complemented by examination of specific case studies. *Prerequisite: U.S. History and permission of Department*

Languages

The Languages Department aims to prepare its students to live in a constantly evolving, global society. The Department's goal is to encourage each student to become a culturally-aware individual and to communicate and relate effectively with a diverse linguistic community. The Department not only provides the opportunity for a language student to become proficient, but also focuses on developing students' sensitivity to the cultural and linguistic heritage of others, as well as raising awareness of how these differences influence their own culture. Each class is taught in the target language and the Department encourages each student to participate in immersion outlets such as clubs, language-based trips, and exchange programs.

The Languages Department offers Chinese, French, Latin, and Spanish. To support our students and to help them develop their interpretive, presentational, and interpersonal skills in all modes of communication, we use a range of audiovisual materials obtained from authentic sources. In addition to effective communication, our content-based teaching encourages collaboration across disciplines, provides place-based experiences, and fosters inclusion and diversity.

Three consecutive years of the same language (through level III) are required for graduation.

Chinese I
Chinese I is an introductory Mandarin Chinese course designed for students with no Chinese background. This course provides basic training in listening, speaking, reading and writing Mandarin Chinese. The goal of this course is to lay a solid foundation for further Chinese language study and to strive for well-rounded development of communicative skills in listening, speaking, reading and writing as well as developing an understanding of Chinese culture.

Chinese II
Students continue to develop their communication skills in listening, speaking, reading and writing via student-centered activities. Chinese word-processing is introduced. Students further explore Chinese culture through various multimedia projects (posters, Chinese language films, etc.) and continue to build the foundation for more advanced study.

Chinese III
Chinese III aims to continue to develop the students' communicative skills in listening, speaking, reading and writing in Mandarin Chinese through task-based activities. Students start to read Chinese without Pinyin except for new words. Common idioms and ancient stories behind them are introduced and students continue to gain a better understanding of Chinese culture.

Chinese IV
Chinese IV promotes mastery of the language beyond the three-year language requirement and prepares students for further language studies in college. All the reading is in Chinese characters with more sophisticated grammar and syntax. The goal is to further enhance students' linguistic skills as well as their appreciation for Mandarin Chinese language and culture. Modern prose is introduced. Since the course is conducted entirely in Chinese, students are required to speak only the target language for the duration of the class.

Chinese V
The Chinese V course focuses on further developing students' full range of language skills and interweaves appropriate cultural content. The wide variety of cultural topics includes school, family, food, sports, holidays and customs, travel, famous people, history, literature, and arts. Students explore both contemporary and historical Chinese culture via the Mandarin Chinese language in order to prepare them for college-level studies in Chinese. Since the course is conducted entirely in Chinese, students are required to speak only the target language for the duration of the class.

French I
French I is designed to introduce students to the French language and Francophone cultures as well as help students to develop the ability to speak, read, write, and listen to French. Course themes are presented and discussed through a variety of media, including online learning platforms. Teaching methods include reading and discussing cultural documents in class as well as practicing vocabulary and new grammatical structures in context, all of which enables students to begin to understand French and express themselves in the language. The course is conducted entirely in French.

French II *(Regular and Advanced)*
French II builds upon French I, emphasizing the four core language skills and improving the language proficiency of students. Course themes are presented and discussed through a variety of media, including online learning platforms. Teaching methods include reading and discussing cultural documents in class as well as practicing vocabulary and new grammatical structures in context, all of which enables students to further understand and express themselves in French. The course is conducted entirely in French.

French III *(Regular and Advanced)*
French III students continue to increase students' proficiency in listening, speaking, reading and writing. Project-based, the course encourages students to further express themselves using all of the tenses and a rich vocabulary. Teaching methods include reading and discussing cultural documents in class as well as practicing vocabulary and new grammatical structures in context, all of which enables students to further understand and express themselves in French. The course is conducted entirely in French.

French IV, V *(Regular and Advanced, IV only)*
French IV and V students continue to develop the skills and knowledge necessary to speak French clearly and to read and write it critically, taking into consideration the interpersonal, interpretive, and presentational modes of communication. The course centers around student-driven projects addressing French and Francophone themes such as cooking, fashion, sports, and art. Students watch films and newscasts, analyze authentic texts, and articulate themselves clearly and expressively during debates and presentations. Themes alternate from year to year so as to allow students the opportunity to pursue a fifth year of study.

Advanced Placement French Language and Culture
The AP French course is designed to elevate the students' communicative and analytical skills, improve their cultural awareness, and prepare them for the interpersonal, interpretive and presentational modes of communication demanded by the AP exam. Students are immersed in the French language during class, and they engage in many activities designed to improve their oral fluency. French, as an expression of the Francophone cultures in this interconnected world, creates a bond with those diverse communities for students along the way. The speaking, reading and written elements of the AP course center around global challenges, science and technology, contemporary life, personal and public identities, families and communities, and finally, beauty and aesthetics. Since the course is conducted entirely in French, students are required to speak only the target language for the duration of the class.
Prerequisite: Permission of Department

Latin I
Latin I is designed for students who have had no previous instruction in Latin. Students receive a thorough grounding in basic grammatical forms, including the five noun declensions and agreement of nouns and adjectives; pronouns; and the six verb tenses in the active and passive voice as well as elementary vocabulary. Students also learn about Roman civilization and the importance of the Latin language in Western culture.

Latin II
Students in Latin II complete their study of basic Latin grammar and syntax, as well as expanding their vocabulary. Students begin to read extended prose passages to prepare them for reading classical Latin prose in their third year.

Latin III
Students in Latin III undertake a comprehensive review of basic Latin grammar and vocabulary in the first semester. Students also read and translate modified passages in the first semester in preparation for translating true prose during the second half of the year. These works include, but are not limited to, Caesar, Eutropius, and Cicero.

Latin IV, V
Students electing Latin IV, V are committed to developing a mastery of the language beyond the three-year language requirement. Latin IV, V is primarily a translation course that focuses on Latin poetry and Roman comedy. The course alternates from year to year in material covered, allowing students the opportunity to pursue a fifth year of study if they so choose.

Spanish I
This introductory course is designed for students who have had no previous instruction in Spanish or for those in need of additional study before meeting the demands of Spanish II. The course emphasizes the acquisition of basic oral and literacy skills by teaching the use of Spanish in daily situations such as meeting people, telling time, expressing likes and dislikes, and going shopping. Students are expected to participate actively in class and to be adventurous in the usage of simple expressions and verbs. The course is taught entirely in Spanish.

Spanish II *(Regular and Advanced)*
Spanish II continues to develop oral and listening proficiency, literacy skills and cultural knowledge through a variety of activities. The course focuses on the continued acquisition of grammar structures and vocabulary and covers the following topics: imperfect, imperfect/preterite contrast, subjunctive, perfect tenses, future, and conditional. Thematic vocabulary is integrated into each lesson. The use of audio and visual

materials in class encourages conversation in the target language. Spanish culture, art history and literature are incorporated extensively through supplementary readings and multimedia activities. The course is taught entirely in Spanish.

Spanish III *(Regular and Advanced)*
Spanish III students continue to develop strong listening, oral, reading and writing skills by intensive immersion in a language classroom conducted completely in Spanish. After a comprehensive review during the first few weeks, emphasis is placed on a systematic review of Spanish grammar and the acquisition of the subjunctive. Emphasis is also placed on studying Hispanic culture and society through short films, reading and discussion, and online learning platforms. The course is taught entirely in Spanish.

Spanish IV *(Regular and Advanced)*
Spanish IV students continue to develop the skills and knowledge necessary to speak Spanish clearly and to read and write it critically, taking into consideration the interpersonal, interpretive, and presentational modes of communication. The course centers around level readers, engaging students in stories using Spanish in authentic and cultural contexts. Students analyze video, newscasts, songs and supplementary texts, and learn to better articulate themselves clearly and expressively in the target language.

Spanish V
Spanish V focuses on the dual themes of our place in society and how external factors influence our development as human beings. Students read from works such as *El Ingeniosos Hidalgo Don Quijote de la Mancha* by Miguel de Cervantes, *Doña Perfecta* by Benito Pérez Galdós, *Romancero Gitano* by Federico García Lorca, *Canto General* by Pablo Neruda as well as selections from Jorge Luis Borges, Julio Cortázar, Jose Donoso, Gabriel García Márquez, and others. Students also watch and discuss films and study current world events. Writing essays and giving oral presentations about the topics covered in class allow students to continue improving their writing and speaking skills. Since the course is conducted entirely in Spanish, students are required to speak only the target language for the duration of the class. Qualified students may take the AP Spanish Language and Culture exam with permission of the instructor. The course is taught entirely in Spanish.

Advanced Placement Spanish Language and Culture
The Advanced Placement Spanish Language and Culture course is designed to elevate the students' communicative and analytical skills, improve their cultural awareness, and prepare them for the interpersonal, interpretive and presentational modes of communication demanded by the AP exam. Students are immersed in the Spanish language during class, and they engage in many activities designed to improve their oral fluency. The acquisition of cross-cultural awareness is an important objective since there is great diversity in the Spanish speaking world as seen in the organization of the Course, which is divided into six thematic units. Each unit is developed using authentic written sources, news segments and class activities, including radio segments broadcast throughout campus. Discussion is an important requirement in class, and spontaneous participation is encouraged. Grammar is reviewed briefly in context. Since the course is conducted entirely in Spanish, students are required to speak only Spanish for the duration of the class.
Prerequisite: Permission of Department

Global Leadership Studies
(Semester 1 and/or 2)
In an era of increasing interconnectedness, this course explores emerging topics and themes related to theories and practices of leadership in a global context. It provides students with an educational experience that cultivates knowledge, skills and dispositions needed to become globally competent individuals. We offer and explore tangible skills, approaches, and frameworks that can immediately be applied to the learner's leadership practice. Students use their knowledge to take a leadership role in identified local, regional, or global issues. Grounding the action in disciplinary and interdisciplinary study allows students to demonstrate their knowledge of the world and teaches them how to be part of a global community. *Open to Forms V and VI or permission of Department.*

Mathematics

The mathematics curriculum is designed to provide a rigorous foundation in the basics of mathematics and the tools to foster logical thought and analysis. We want students to appreciate the nature, beauty, and scope of mathematics and to understand its potential in dealing with the world's increasing technological complexities. Critical thinking, collaboration and mathematical modeling are emphasized at all levels. In all mathematics courses, faculty help students develop successful study skills and effective test-preparation techniques.

For students whose backgrounds and aptitudes are strong, there are advanced sections of courses in our core curriculum. These include Advanced Placement Calculus BC, Multivariable Calculus and Differential Equations, and Advanced Math/Science Research. Each of these courses allow students who are passionate about mathematics to pursue excellence in the subject at the highest level.

Three years of mathematics, including Algebra I, Geometry, and Algebra II, are required for graduation.
A TI-Nspire CX CAS graphing calculator is required in all courses.

Algebra I
This course provides a thorough introduction to the language of algebra, including its symbols and the axioms and laws which govern its structure. Emphasis is given to the understanding and manipulation of all manner of algebraic expressions, from performing standard operations to factoring polynomials and simplifying radical expressions. Among the primary goals are competence in solving linear equations and inequalities in one variable, systems of linear equations in two variables, and simple quadratic equations. Experience is provided in graphing in the Cartesian plane and in applying algebraic methods to the solution of practical problems.

Geometry *(Regular and Advanced)*
Devoted to plane Euclidian geometry, this course also extends into solid geometry. The subject is treated as a structured system and emphasizes deductive reasoning and mathematical proofs, whereby intuition and proofs are blended. Topics such as congruence, perpendicularity, geometric inequalities, parallelism, quadrilaterals, geometric proportions and similarity, circles, spheres, and surface areas and volumes of solids are studied.

Algebra II
This course begins with a brief review of Algebra I and extends to include number systems, polynomials, rational expressions, linear equations and inequalities, systems of equations, elementary exponential and logarithmic functions, right-triangle trigonometry, and elementary probability and statistics.

Advanced Algebra II and Trigonometry
Advanced Algebra II and Trigonometry includes all the topics in Algebra II as well as binomial theorem, trigonometric functions, analytic trigonometry, the concept of function, and a detailed examination of the logarithmic and exponential functions.
Prerequisite: Permission of Department

Precalculus *(Regular and Advanced)*
This course reviews the concepts from Algebra II that are central to calculus and explores several discrete math topics. Calculus topics focus on the study of functions: polynomial, trigonometric, logarithmic, and exponential. Discrete topics include polar coordinates, sequences and series, permutations and combinations, the Binomial Theorem, and conic sections. Throughout the course, students are expected to use the graphing calculator to solve problems in each topic area. The advanced section extends the curriculum and explores topics in greater depth. An additional study of vectors and probability is included.

Advanced Precalculus Accelerated
The course is intended for students who have demonstrated an exceptional commitment and aptitude in mathematics. Topics are explored more rapidly, challenging students to apply concepts and skills at the highest level. The first three chapters of the AP Calculus BC curriculum are covered in the fourth quarter.
Prerequisite: Permission of Department

Calculus
This course is an introduction to the fundamental concepts of calculus. The first semester consists of a review of analytic geometry and trigonometry, and the study of the derivative, continuity and limits, and differentials. The second semester includes a study of integration, logarithmic and exponential functions, techniques of integration, and applications of integration.
Prerequisite: Precalculus

Discrete Mathematics
This course offers an introduction to four branches of discrete mathematics: combinatorics, sequences, symbolic logic, and graph theory. Students practice applied mathematics through group projects on election theory, fair division, population growth, supply chain optimization, recursion, game theory, and the Monte Carlo method. Students explore the intersection of discrete mathematics and computer science. Throughout the course, students utilize several software packages along with the Ti-Nspire calculator to assist in finding solutions.
Prerequisite: Algebra II

Statistics
Topics for study in this course include the organization of data into patterns and the interpretation of them using regression and correlation. Emphasis is on designing experiments and utilizing probability and randomness to establish inference. Students explore confidence testing in both distributions and proportions and employ modern technology to achieve these ends.
Prerequisite: Algebra II

Advanced Placement Statistics
The AP Statistics course is built around four main topics: exploring data, planning a study, probability as a foundation for the procedures of statistics, and inferential reasoning. These four broad conceptual themes are studied in depth to prepare students for the Advanced Placement exam given by the College Board. Students use the computer and a TI-Nspire CX CAS graphing calculator to examine distributions, to plan studies, to make conjectures, to study random behaviors, and to analyze and draw conclusions from data. This course is more theoretical, more demanding, and requires a higher level of conceptual understanding than the Statistics course. This course may be taken concurrently with any of the calculus courses.
Prerequisite: Advanced Precalculus and permission of Department

Advanced Placement Calculus AB
This is a college-level course that follows the syllabus of the College Board and is for students who intend to take the Advanced Placement examination in Calculus AB. Included are the rate of change of a function, limits, derivatives, integration, applications of the definite integral, transcendental functions and their derivatives and integrals, further methods of integration, and applications.
Prerequisite: Advanced Precalculus and permission of Department

Advanced Placement Calculus BC
This is a college-level course that prepares students to take the Advanced Placement examination in Calculus BC. It follows the syllabus of the College Board and is for students who have successfully completed the first year of Calculus, Calculus AB, or who have completed Precalculus and have their instructor's approval. Topics covered include a review of basic integral and differential calculus and techniques of integration, applications of the definite integral, polar coordinates, indeterminate forms and improper integrals, Taylor polynomials, approximation and interpolation, sequences and series, vectors, differentiation and integration of vector functions, and ordinary differential equations.
Prerequisite: Advanced Placement Calculus AB or permission of Department

Linear Algebra
Offered in alternate years in relation to Multivariable Calculus, this course in advanced mathematics includes the core components of linear algebra. Topics covered include matrices, rank, determinants, linear equations, vector spaces, linear independence, eigenvectors, and linear transformations. The course includes applications to linear programming, differential equations, and computer graphics, and students explore the overlap between computer science and mathematics.
Prerequisite: Advanced Placement Calculus AB or BC and permission of Department

Multivariable Calculus and Differential Equations
Offered in alternate years in relation to Linear Algebra, this course in advanced mathematics includes core components of multivariable calculus, linear algebra, differential equations, and statistics. The use of mathematical software (Matlab), as well as TI-Nspire CX CAS graphing calculators, is emphasized. Satisfactory completion of an assigned final project is required. The course is also designed to complement the Advanced Math/Science Research course; for those students enrolled in both, the two courses can be interdisciplinary, if so desired, focusing on the area of mathematics that students often encounter in their research projects. The most common area is statistics, but other mathematical strands can be developed as needed. Completion of an individualized curriculum satisfies the project requirement of this course.
Prerequisite: Advanced Placement Calculus BC and permission of Department

Computer Science and AI
This yearlong course introduces students to the fundamental concepts of computer science and artificial intelligence. Through a hands-on, multidisciplinary approach, the course teaches students to problem-solve, develop creativity, and collaborate on solutions to real-word issues using the power of CS and AI. Topics covered in this course include, but are not limited to, programming languages and systems, graphics and games design, image recognition and machine learning.
Prerequisite: Algebra II

Science

Scientific knowledge has grown so quickly in the last century that no single individual can be in command of all of the facts of even a single scientific discipline. At the same time, citizens must be able to make sense of science to be able to make informed decisions concerning technology, environmental concerns and medical questions, to name but a few. The overarching mission of the Science Department is to teach students the skills of logical and critical thinking, problem solving, research, and clear communication and to prepare students to find patterns underlying collections of facts.

No matter what course or what level, students not only see presentations from their teachers, but make presentations to their peers. They learn how to use an array of instruments, both in and out of the laboratory, to collect and analyze data and to present their results in professional scientific formats. Once students have completed their basic requirements in science, they can choose to pursue another year of biology, chemistry or physics; take a course in environmental science; or choose an elective that focuses more narrowly on a specific aspect of scientific inquiry.

Two core laboratory sciences (biology, chemistry, physics, environmental science) are required for graduation.

Biology
This survey of biology includes investigations of the campus and mountain ecosystems, cell structure and function, genetics, evolution, and human anatomy and physiology. In addition to classroom presentations, demonstrations and laboratory experiments, students carry out research on a study plot in the forest on the slopes of Mt. Everett.

Chemistry *(Regular and Advanced)*
Topics covered in the course include chemical formulas and equations, physical states of matter, solutions and suspensions, carbon and its compounds, chemical reactions, the periodic chart, and nuclear reactions. Laboratory exercises cover stoichiometry, measurement, empirical formulas, chemical reactions, heats of reaction, quantitative studies of reactions, gas laws, molecular reactions, rates, acid-base reactions, electrochemical cells, oxidation-reduction reactions, and qualitative chemistry.
Prerequisite: Algebra I

Physics *(Regular and Advanced)*
Physics is designed for the student who desires a deeper understanding of the physical world. Topics include linear mechanics, heat, light, sound, electromagnetism and selected concepts of twentieth-century physics. Because the course applies mathematics to physical systems, students should have an adequate background in mathematics.
Prerequisite: Algebra II (may be taken concurrently)

Environmental Science
Students in this course study environmental science through place-based immersion in the local environment, spending considerable class time outside, learning from Berkshire's 400 acres of land. The class is taught tech-free and out of Chevalier Lodge, a unique teaching space with easy access to the Mountain. Through detailed observation, scientific study, readings and discussions, students develop a unique sense of place and the skill set necessary to be stewards of the environment.
Prerequisite: Two core laboratory courses or permission of Department

Advanced Math/Science Research
This yearlong course offers students seeking an independent laboratory experience an opportunity to design and execute an original research project of their choice in the biological, physical, or social sciences. Each student works in collaboration with a faculty mentor and a professional research scientist in a format determined by the student, the mentor, and the instructor. Students are required to work two weeks during the summer preceding their enrollment in the class. Students write a critical review paper and a research paper, both in scientific journal format, and present the results of their year's research to members of the department and others in the Berkshire community. Enrollment in the class is limited.
Prerequisite: Two core laboratory courses, Precalculus, and permission of Department

Aviation Science
(Semester 1 and/or 2)
During the first semester, students study topics including engineering, aerodynamics, airspace and weather. Students learn to safely fly drones, launch a weather balloon into the upper atmosphere, fly the School's state-of-the-art aircraft simulator and participate in other aviation related hands-on activities. During second semester, students prepare for the FAA Knowledge Exam for Private Pilot and take that exam at the end of the semester. Topics in this semester include navigation, radio communication, aviation weather, instrumentation, and aircraft engines and systems. Additionally, every Sunday students have the opportunity to receive flight instruction at the local Great Barrington Airport. Students may elect to take one and/or both semester courses.
Prerequisite: Two core laboratory courses

Engineering
(Semester 1 and/or 2)
This course teaches students how to independently and creatively solve real problems through the engineering design cycle, an iterative process of designing, building and testing solutions. The engineering design cycle fosters curiosity and perseverance, and the engineering process fosters in students the confidence to tackle and solve a variety of problems through troubleshooting and design thinking. The course is project-based and topics covered may include electrical, mechanical, aeronautical and structural engineering. Computer-aided-design and fabrication techniques such as wiring, soldering and small-scale construction are taught.
Prerequisite: Biology and Chemistry (may be taken concurrently)

Advanced Engineering
(Semester 1 and/or 2)
Advanced Engineering takes the skills learned in Engineering to the next level. Students use their knowledge of mechanics, computer programming, circuits and microcontrollers, and apply them to solving team design problems. Students encounter complex challenges and learn to break them into solvable pieces. Platforms to build and work with may include quadcopters and underwater remotely operated vehicles (ROVs). This is a hands on course that requires students to be independent as well as team players.
Prerequisite: Engineering or permission of Department

Psychology
(Semester 1 and/or 2)
In first semester, students explore topics in neuroscience, child development, sensation, and perception. By semester's end, students recognize the parts of the brain associated with everyday functions such as eating and sleeping, and understand why children cannot lie or recognize race and gender until a certain age. Students also examine illusions and discuss theories on how we see color and experience pain. In second semester, students study topics in learning, memory, personality, social and abnormal psychology. Students engage with famous psychologists such as Pavlov and Skinner, look into the controversial studies of Zimbarbo and Milgram, and explore the ideas of Freud and Jung. Throughout the semester, students consider how advertisers use the information psychologists have discovered to sell products and analyze the effectiveness of eyewitness testimonies. Students conclude the semester by working to understand the cause of disorders such as schizophrenia and obsessive compulsive disorder.

Sustainability
(Semester 1 and/or 2)
Sustainability encompasses the intersections of social, environmental, and economic systems, and promotes the healthy practices and leadership skills that are necessary to build a sustainable future. It encourages mindsets that value diversity, equity, and action; it helps students develop cultural competencies as they encounter the complexities of ecological realities, global relationships, and the vast interconnections of all life on earth. Through inquiry, project, and place-based learning, students have many opportunities to share their process, ideas, and questions within and beyond the Berkshire School community.
Prerequisite: Two core laboratory courses

Advanced Environmental Science Research
Advanced Environmental Science Research is designed for students who have already completed the AP Environmental Science course and are interested in applying their background knowledge to research projects related to ecology. During the first semester, students master ecological lab techniques through local exploration of Berkshire's 400 acres. In the second semester, students turn their attention to the development of a culminating research project to submit for publication. In addition to lab, field, and class work, the course features several guest speakers and field trips to take advantage of the resources available in the Berkshires.
Prerequisite: AP Environmental Science or permission of Department

Advanced Placement Biology
Designed for second-year biology students with a strong interest in biological science, this college-level offering prepares students to succeed on the Advanced Placement exam in Biology. Topics covered include biochemistry, cell structure and function, genetics, botany, evolution, ethology, ecology, and human physiology and anatomy. To afford extra time to meet AP curriculum requirements and to prepare for the examination, the class also meets one night each week.
Prerequisite: Biology, Chemistry and permission of Department

Advanced Placement Chemistry
This course prepares students to succeed on the Advanced Placement exam in Chemistry. Topics covered are the same as in the introductory course, but the approach is more formal and in greater detail. Strong performances in previous math and science courses are essential for success. Laboratory exercises are modeled on those designed for college freshmen; the mathematical skill level is appropriate for engineering and physical science majors. Topics include stoichiometry, acid-base equilibria, spectroscopy, and redox equilibria. A premium is placed on accuracy, precision and reproducibility in measurement and data analysis as such emphasis is essential for a heightened level of quantitative chemical analysis.
Prerequisite: Two core laboratory courses (one must be Chemistry), Advanced Algebra II and Trigonometry, and permission of Department

Advanced Placement Environmental Science
This yearlong course is the equivalent of a one-semester, introductory college course in environmental science and prepares students for the Advanced Placement exam in Environmental Science. Students undertake a more advanced study of topics in ecology and environmental science by exploring the scientific principles, concepts, and methodologies required to understand the relationships of the natural world. The course includes a strong laboratory and field investigation component, allowing students to understand the environment through firsthand observation. Topics include ecosystem concepts, the biosphere, the atmosphere, human population dynamics, air, water and soil pollution, global climate changes, soil science, and choices for the future. *Not recommended for students who have already taken Environmental Science.*
Prerequisite: Two core laboratory courses (one must be Chemistry) and permission of Department

Advanced Placement Physics C: Mechanics
This course is a preparation for the C-level Advanced Placement exam in Physics. The course offers a broad foundation in physics and is designed for those with interest in majoring in the physical sciences or engineering. Classical mechanics (kinematics through rotational motion and oscillations) are covered. Time permitting, electricity and magnetism are also studied.
Prerequisite: Two core laboratory courses (one must be Physics), Calculus and permission of Department

Virtual High School

Berkshire School has joined forces with Virtual High School (VHS), one of the nation's longest running, and most successful online learning communities. The VHS Collaborative has found that VHS classes offer more time to be reflective about discussions. Students have the opportunity to work with other students in a virtual classroom space, and VHS students (and teachers) are from a variety of other states, other countries, and other cultures. VHS classes also help students better prepare for college and careers. Many students take a VHS course and find their passion for careers or college majors. VHS students say that they feel better prepared for college because through VHS they learn to advocate for themselves, work independently and manage their time and learning. Many colleges are now using online courses to enhance face-to-face college courses, and VHS students have a head start because they are already accustomed to learning in an online environment. VHS offers a terrific way for students to broaden their educational horizons and take classes that would otherwise be unavailable to them, in an environment that is safe, challenging, and fun.

Below are some examples of courses taken by Berkshire students from the 150+ options available through VHS.

Anatomy and Physiology Honors
(Semester 1 or 2)
How can the results of an ECG (EKG) indicate heart pathology? How does a bone grow? What are the latest developments in reproductive medicine? How does the histology of a normal lung compare to that with emphysema? These are among the questions that are addressed in Anatomy and Physiology. This is an honors level course that is designed to investigate the anatomy and physiology of the 11 major body systems. This course begins with a quick review of biological levels of organization and microscopy and then focuses on both structure and function of the following systems: skeletal system, muscular, respiratory, circulatory, digestive, urinary, reproductive, immune, endocrine and nervous. The course culminates with a look at how the systems work together to ensure homeostasis for the body and what happens when one or more of these systems don't function correctly.
Prerequisite: Biology

Advanced Placement Computer Science A
Advanced Placement Computer Science A is designed to prepare students for the College Board's AP Computer Science A Exam. The course curriculum covers the topics and activities of a first-year computer science course at the undergraduate level. The course introduces the Java programming language while emphasizing universal language techniques like syntax, semantics and readability. Students gain mastery in programming concepts by using a subset of Java features that are covered when needed throughout the course content. This allows the student to understand and master important concepts that will apply to programming problems in many additional languages.
Prerequisite: Algebra II

CAD: Computer Aided Design
(Semester 1 or 2)
CAD introduces students to the world of engineering drawings. The focus of CAD is to create 3D drawings of mechanical objects, layered with dimensions and annotations. All drawings are prepared to the standards of the industry. Students will create 3D models, assemblies, and formal 3-view drawings with dimensions. Each week, students will be introduced to a new set of drawing skills. Students will use the free educational version of Autodesk Inventor, a respected industry-level CAD software platform.

Computer Science Honors
(Semester 1 or 2)
This course is an introduction to computer science, covering the basic concepts and elements of the Java programming language and introducing object-oriented programming. Students gain experience writing programs that are well documented according to industry standards and have the opportunity to create Java Applets and learn about Graphical User Interface programming with Swing. Additionally, the students are encouraged to work both independently and collaboratively to solve practical problems that illustrate application-building techniques.
Prerequisite: Algebra I

Genes and Disease Honors
(Semester 1 or 2)
Buried in the cells of each newborn is a unique set of genetic instructions. These molecular blueprints not only shape how the child will grow and develop and whether it will have brown eyes or blue, but what sort of medical problems it might encounter. Errors in our genes, our genetic material, are responsible for an

estimated 3,000-4,000 hereditary diseases, including Huntington disease, cystic fibrosis, and Duchenne muscular dystrophy. What's more, altered genes are now known to play a part in cancer, heart disease, diabetes and many other common diseases. Genetic flaws increase a person's risk of developing these more common and complex disorders. The diseases themselves stem from interactions of genetic predispositions and environmental factors, including diet and lifestyle.
Prerequisite: Biology

Peacemaking
(Semester 1 or 2)
Peacemaking is about power. It is about realizing and utilizing your personal power, by recognizing that there are alternatives to violence and to a "win-lose" philosophy of life. Peacemaking is an active process, not a passive exercise. This is an interdisciplinary course exploring Peace and Peacemaking in four interrelated ways - the personal, interpersonal, communal and global. Through exploration, evaluation, reflection and discussion students will better understand their own roles and responsibilities as peacemakers. Topics covered will include: service for the sake of peace, forgiveness, understanding, contemplation, philosophies of non-violence, and peacemakers past and present among the Nobel Peace Prize Laureates. Readings include works by Thich Nhat Hanh, Martin Luther King, The 14th Dalai Lama, Mohandas Gandhi, Simon Wiesenthal and others.

Video Game Design Using GameMaker
(Semester 1 or 2)
This course provides an opportunity for students to immerse themselves in the world of video game design and development. Participants learn key programming constructs using GameMaker software (a robust, yet easy-to-use game creation tool). In addition, students learn to use software to create original graphics and sound engineering software to create and edit sounds for their games. By the end of the course, students will have created a wide variety of video games. Each class celebrates their accomplishments regularly, by sharing games with their peers for feedback and enjoyment. This course is an introductory-level class that does not require a background in computer programming.

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