BELMONT HILL SCHOOL
Curriculum Guide
2022-2023

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Curricular Vision

Belmont Hill School strives to give its students a rigorous program of study that provides a firm grounding in skills, values, and vital content while also including curricular and pedagogical innovation that will make its students well prepared to thrive in the complex, fast-changing world in which they live today and will work tomorrow.

The curriculum provides our students with a modernized liberal arts education rooted in traditional and innovative coursework. It includes required classes in the humanities, arts, sciences, and mathematics along with a rich elective program across the disciplines.

Transcending particular courses or disciplines, the curriculum is designed to foster intellectual curiosity, growth, and a love of learning. It aims to develop distinctive qualities of mind and to pass on essential skills, values, and knowledge to our boys.

SKILLS, VALUES, KNOWLEDGE

SKILLS
• Analyzing and Synthesizing Information
• Problem Solving, and Critical Thinking
• Writing and Research
• Collaboration and Communication Across Multiple Platforms
• Interdisciplinary Learning
• Adaptability, Design, and Creativity

VALUES
• Character, Empathy, and Resiliency
• Leadership and Teamwork
• Lifelong Love of Learning
• A Process-Oriented Approach to Education
• Global Citizenship, Multiculturalism, and Environmental Sustainability

KNOWLEDGE
At Belmont Hill, we believe that content forms the basis of a 21st century education anchored in imparting key skills and values to our boys.

A firm understanding of grammar and vocabulary, combined with a focus on writing throughout the curriculum, enables our boys to communicate skillfully across multiple platforms. Grounding our math and science courses in foundational content provides Belmont Hill students with the requisite knowledge to do meaningful work in science labs and maker spaces. Furthermore, rich content
in the arts, humanities, classics, and modern languages equips students with the context and cultural understanding required to analyze the world through an empathic lens.

Thus, we empower our teachers to expose their students to content they deem fundamental to their respective fields and to leverage that content to reinforce skills and values essential to our boys’ success both at and beyond Belmont Hill.

Credit and Promotion Requirements

Each student in Forms I-V is expected to carry a program of study equivalent to five full courses. Beginning in Form III, one credit is awarded for every full year course and one half credit for every semester-length course completed with a grade of D- or above. Students in Form VI may reduce their programs to four courses during one semester. Enrollment in six courses in any given semester requires special permission.

To be promoted to the next form, a student must complete the year with no grades of F, no more than two full credits at D level, and with enough credits to graduate by taking no more than five courses in each of the ensuing years.

Diploma Requirements

A diploma is awarded to those in Form VI who have completed the following:

1. 18 1/2 units of credit in the last 4 years. 1 full year’s study = 1 unit

   No more than 6 of these credits may be D’s.

   No credit is given for a course repeated to raise a D.

   No credit is given for an F.

2. At least 4 1/2 units of credit in the senior year. Of these, no more than 2 may be D’s and none may be F. With the approval of the Senior Projects Committee, a student in Form VI may withdraw from one or more designated second semester or year-long courses during the final quarter of the academic year to undertake a Senior Project. Successful completion of such a project (with a grade of Pass) shall then become a requirement for Graduation.

3. Advanced Algebra 2 and Trigonometry or Algebra 2 and Trigonometry, and Geometry A or Geometry.
4. English must be studied in each semester. In Forms V and VI, semester-length elective courses chosen must include English 15 and three courses drawn from the groups English 16-20 and 21-33, two from one group and one from the other.

5. Completion of the third level of one foreign language, either modern or classical. Those who enter in Form I are expected to study both Latin and a modern language.

6. 1 1/2 years of History in Forms V and VI.

7. Two year-long courses drawn from Biology, Chemistry, Physics, AP Environmental Science, Advanced Marine Biology, Geology/Astronomy.

8. A semester course in Art History, Music Appreciation, or a level II participatory art. Music Composition, Digital Music Production, or Theory of Jazz may satisfy either a participatory or appreciation requirement, but not both. Students may also complete their requirement through two years of participation in B-Flats or Jazz Band.

9. A semester course in participatory arts

10. The carving and finishing of a wooden panel to be permanently displayed at the School.

Grading System and the Honor List

A is given for academic work of excellence. B is an honor grade and C a college-certifying grade. D is a minimal passing grade, suggesting the need for supplemental work before moving ahead in the subject. F is a failing grade, and courses in which it is given earn a student no credit.

The school posts Honor and High Honor lists at the conclusion of the first semester and academic year. In the computation of honor standing, passing grades are assigned a point value in the range of D- (.33) to A+ (4.33). Courses in the Upper School designated as Advanced or AP earn an additional .33. Students also receive an additional .33 for taking Advanced Action Research.

To qualify for the High Honor list, a student must earn an average in a four or five course program of a 3.83 or above, with no D's or F's. To qualify for the Honor list, a student must earn an average in a four or five course program between and including 3.3 and 3.829 with no D's or F's.

A Certificate is awarded at Commencement to special or visiting students in Form VI as evidence of attendance.
**Diploma Designations**

At the conclusion of the Form VI year, a Cum Laude diploma is awarded for a cumulative academic average for Forms IV-VI between 8.8-9.9 on the 12-point Honor List scale.

A Magna cum laude diploma is awarded for a cumulative academic average for Forms IV-VI between 10.0-10.49.

A Summa cum laude diploma is awarded for a cumulative academic average for Forms IV-VI of 10.5 or above.

**Cum Laude Society**

The Belmont Hill chapter of the Cum Laude Society, established in 1928, annually may elect for membership in this national independent school honor society Sixth Formers of good character who stand in the top fifth of their class in academic achievement.

**Courses Information**

Courses labeled \( f \) are given in the Fall semester only.

Courses labeled \( s \) are given in the Spring semester only.

Advanced and AP Courses represent the most rigorous course of study.

A grid of subject sequences appears on pages 6-7.

A list of elective opportunities appears on pages 8-9.
## Sequence of Courses

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### COLLABORATIVE PROGRAMS

*Acceleration possible in Mathematics and Modern Language, based on testing upon entry. Courses are full year, unless noted.*
## UPPER SCHOOL

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### English 4
- Am. Literature
  - English Elective
  - AP American Studies

### Algebra 2
- Intro to PreCalculus
- PreCalculus

### Latin 2, 2A, 3 or 3A
- Chinese 2 or 3
- French 2 or 3
- Spanish 2, 2A, 3, 3A

### History or Humanities Elective
- U.S. History
  - AP U.S. History
  - AP American Studies

### History or Humanities Elective
- Advanced African Am. Studies
- Inqury

### Math Courses
- Statistics, Calculus
- AP Calc AB, AP Calc BC
- AP Statistics
- Linear Algebra/ Multivariable Calculus

### Two Year-Long Lab Science Courses in Forms IV-VI:
- Bio, AP Bio, Usually Form IV
- Chem, AP Chem, Usually Form V
- AP Env. Sci., Physics, AP Physics, AP Physics C, Usually Form VI

### Electives

### Latin 3, 3A, 3-4 or AP
- Chinese 3 or 4
- French 3, AP or Cs
- Spanish 3, 3A, 4, AP or Cs

### Latin 3-4, AP, or 5 Advanced Elementary Greek
- Chinese 4, 4A, 5, 5A
- French AP
- Spanish 4, AP, 5, Advanced Spanish 5

### Health
- Seasonal
- TYSK "Things You Should Know"

### Independent Study: Forms IV-VI
- Advanced Action Research
- Biomedical Engineering

Cours es are full year, unless noted.  **F** ALL  **S** PRING

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**F**  **S**  
**v4/8/22**  

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Elective Opportunities

Full year courses are indicated by *. All other listings are one-semester courses. Before registration each spring, students learn which electives will be offered each semester.

**FORM III ONLY**
- Latin I* (new students)
- Chinese*, French*, or Spanish*
- Facing History and Ourselves
- Conceptual Physics
- Computer Science 1
- Introduction to Engineering

**FORMS III-VI**
- Acting
- Ceramics
- Digital Video
- Music Technology
- Drawing and Painting
- Photography
- Piano I, II
- Vocal I, II
- Woodworking
- Ceramics II
- Photography II
- Woodworking II
- Digital Video + Film II
- Drawing and Painting II
- B-Flats I, II, III, IV
- Jazz Band I, II, III, IV
- Digital Music Production
- Music Appreciation
- Music Composition
- Theory of Jazz
- Independent Study

**FORM IV ONLY**
- 20th Century World History *F or S*
- AP Modern European History*

**FORMS IV-VI**
- Intro Pre-Calculus
- Pre-Calculus*/ Pre-Calculus A*
- Calculus
- Statistics
- AP Calculus AB*
- AP Calculus BC*
- AP Statistics*
- Linear Algebra
- Multivariable Calculus
- Geology
- Marine Biology
- Biology*/AP Biology*
- Chemistry*/AP Chemistry*
- Computer Science 1
- Marine Biology

**FORMS V and VI**

**ENGLISH ELECTIVES**
- Advanced Contemporary Literature
- African-American Literature
- Contemporary Literature
- Creative Writing
- Faulkner and the Southern Tradition
- The Hero in Literature
- Gothic Literature
- Inner Voyages
- Literature and Social Justice
- Modern American Literature (*not offered 2022-2023*)
- Science Fiction

**SCIENCE ELECTIVES**
- Advanced Science Research I, II
- AP Computer Science Principles
- AP Computer Science A
- Geology
- Marine Biology
- Quantitative Physiology
FORM VI ONLY

CLASSICS
Advanced Elementary Greek

ENGLISH ELECTIVES
Advanced Medieval Literature
Advanced Narrative Writing
Comedy
Inner Voyages
Non-Fiction Writing
Page and the Stage
Shakespeare

HISTORY ELECTIVES
Advanced Macroeconomic Theory and 21st Century Conflict
American Politics and Policy
AP Art History
AP Human Geography
Global Economics
The History of South Africa
International Relations
World Religions

HUMANITIES COURSES
Advanced African American Studies
Native American Studies

SCIENCE ELECTIVES
Physics
AP Physics I, C

INQUIRY COURSES
Advanced Science Research
Breaking Down the 4th Wall: Exploring Contemporary Culture Through Film, Music and Writing
Evolutionary Psychology
God, Myth and Humanity
Immigration Today
Literature and Film
Maine Coast
Restorative Justice
Statistical Revolution in Sports

Courses of Instruction

ARTS

The purpose of the Arts Department is to offer formalized and individual instruction in studio arts, art history, and music. Departmental courses are organized sequentially, and we hope students will progress to an advanced level in order to develop more skills as well as a thematic approach or concept in their work.

Ultimately, we hope students find joy and passion in the work they produce. The goal of the courses, separately and together, is to provide skills while nurturing a boy’s own creative imagination and to instill in him an appreciation of art, music, and culture.

Unless otherwise indicated, all arts courses given above the Form II level count fully toward the 18 1/2 units required for graduation and are taken as a part of the regular course load.

Courses marked with an asterisk (*) are taken in addition to the regular course load.

FIRST FORM ART*
This is a course required of all boys in Form I. It meets daily throughout the first quarter serving as an introduction to studio work at Belmont Hill. Fostering active observation and creative thinking, the course focuses on projects in two and three-dimensional media with an introduction to specific skills in drawing, painting and sculpting. Studio work draws upon subject matter from other courses to help unify the learning experience across disciplines.

FORM I-II
ART, MUSIC AND PERFORMANCE
Students in Form I and II are required to participate in both visual and performing
arts activities. Students in Form I must choose to participate in a performing arts based elective in either the winter or spring season. Students in Form II must choose one season of visual art activity or one season of performing art activity (fall, winter or spring) during the course of the year. Participation in a year-long instrumental program or theatrical production may also satisfy the requirement. Annually, a list of activity choices will be published during the course selection process.

Participatory Arts Courses

**ACTING**
Forms III-VI
A course that approaches acting via acting technique, character development and script analysis. It makes no difference whether students are experienced actors and, indeed, a class of mixed experiences is best. The student, though, must be willing to approach acting seriously and with rigor, eager to learn by doing, and accepting of the belief that acting is ultimately a team endeavor not an individual one. Assignments include improvisations, monologues, two-man and group scene work, text reading, script analysis, and short role memorization. Final projects include public performance and a written analysis of a play and one of the characters within that play.

**CERAMICS**
Forms III-VI
This course is designed to give an introduction to work in clay. Hand-building and wheel work are covered as well as the proper application of simple glazes. With an emphasis on an understanding of the relationship between design and function, the coursework begins with the construction of traditional pottery vessels and moves towards a development of style. A final project will take the place of an examination.

**CERAMICS II**
Forms IV-VI
This course allows students an opportunity to further develop their skill in working with clay and the making of more challenging forms. Not only will students be asked to make significant works but they will also be required to research both traditional and current trends within the field of ceramic art. The course concludes with each student displaying a related body of work. This class is open to students who completed Ceramics with a B- or better.

**DIGITAL MUSIC PRODUCTION**
Forms III-VI
This course covers the basics of music technology, with particular focus on digital keyboards, MIDI, and computer music programs. In the first quarter, students examine basic acoustics, the history of music technology, synthesizers, and microphone and speaker design. In the second quarter we learn how to sequence music on a computer, record live sound, and create music for films. Assignments and projects range from the study of topics to the creation of original music, and students are assessed based on quizzes, composition assignments, live recording projects, presentations, and their participation in group projects. At the end of the course, students complete a final project utilizing what they have learned in the areas of live recording, computer sequencing, and music production.

This course is designed for students of Forms III-VI. No prior experience playing an instrument is necessary. Music Technology fulfills one semester of the diploma requirement in arts as a ‘participatory’ course.
DIGITAL VIDEO AND FILM
Forms III-VI
We live in an age where digital video is everywhere: how does video affect the way we communicate, learn and form opinions about the world? TV and online video strive to shape our understanding of the world through storytelling. In this class, students examine different methods of communication through video and create stories of their own. The course introduces students to the basic principles and practices of video production. They learn storyboarding, script writing and camera skills, along with the use of iMovie editing software. Boys work in teams to create several video projects, including an independent project which may be suitable for entry in film festivals held across the country.

DIGITAL VIDEO AND FILM II
Forms IV-VI
Advanced Digital Video and Film Studies expands on the technical elements covered in Digital Video while introducing students to the process of viewing and analyzing films from a technical and conceptual perspective. Students utilize a number of techniques to elevate the technical components of their work and begin to introduce a deeper conceptual understanding of how a film comes to fruition. Students will utilize resources, such as The Criterion Collection, to expand their working knowledge of film and directors. Such resources will allow students to isolate movements, thematic inspirations, and connections to their own work to provide them with a solid foundation of work that came before them. Students will engage in a number of individual and collaborative assignments meant to challenge and force them to think outside of the box. The class will conclude with a final project, a short 20-minute film directed and written in their style of choice. A written statement will accompany this piece describing the impetus behind their work along with the direction and conceptual inspiration that allowed the piece to come together.

DRAWING AND PAINTING
Forms III-VI
Many believe that drawing and painting are specialized skills attainable only by the few, but all people can learn to draw and paint with proper instruction, allowing them to observe the world more closely and to envision the worlds they wish to create. This course breaks the component lessons of drawing and painting: space and interspace, light and dark, coloration, and texture into component parts that can be mastered and added together to create a clear and expressive language. Students use pencil, charcoal, brush, and paint on projects in the studio and out on the campus to sharpen perception and develop expressive skills. Additional work in Google SketchUp allows students to draw and model invented and imagined forms.

DRAWING AND PAINTING II
Forms IV-VI
Open to students who have completed Drawing and Painting I, this course will focus on further developing skills in perception and expression. While continuing to use the studio and campus as a focus, this course will encourage the development of an individual artistic voice and the production of a portfolio of work.

PHOTOGRAPHY
Forms III-VI
A comprehensive course in introductory photography, students will learn the basics of camera operation, film development and traditional silver printing in a wet darkroom. SLR film cameras, film, chemistry and paper will be supplied by the department. Weekly shooting assignments on a range of topics assure a breadth of experience and a variety of techniques.
Students will also explore the world of digital photography on a personal camera of any format. Each student will work toward the completion of a portfolio of mounted prints demonstrating mastery of both the technical and artistic elements of making photographs.

**PHOTOGRAPHY II**  
Forms IV-VI  
Advanced Photography builds on the experiences learned in the introductory photography class by exploring digital, large and medium format and alternative processes in printing.

Students will learn to scan and process film images into digital files, and will develop more comprehensive photo editing skills. Students should expect to capture images daily, and will be assessed on the body of work generated and diversity of formats explored. A majority of the coursework focuses on a student’s ability to develop an artistic and technically sound portfolio.

Most supplies for the course will be supplied by the department, but a personal DSLR camera is recommended. This class is open to students who have completed Photography I or have the permission of the instructor.

**PIANO I & II**  
Forms III-VI  
Piano class is an opportunity for a beginner or an advanced student to participate in music-making in a classroom setting. The course is available for students with a range of musical ability and offers students a degree of independence in their learning, as they will have the opportunity to choose which songs they would like to master. The course covers basic piano techniques and music theory. There will be opportunities for students to share their music achievements in and outside of the classroom. The Prenatt Music Center provides the perfect facility to practice piano throughout the school day.

**VOCAL ENSEMBLE**  
Forms III-VI  
Vocal Ensemble will be focused on helping students learn to use and improve their voices. The course will cover basic singing as well as music theory. Song choice will be based on student interest. Boys will be expected to sing as a group, in duets, and as soloists. Whenever possible, prepared students will share their musical achievements with the school community. Practice rooms in the Prenatt Music Center provide ideal spaces to rehearse and prepare for class.

**WOODWORKING**  
Forms III-VI  
In addition to being an introduction to the art of fine woodworking, the course serves to develop a sense of design and an awareness of the relationship of form and function. Students will design, plan, and complete projects in wood, learning the care and use of various hand and power tools. The aesthetics of design, craftsmanship, and careful planning are stressed in the course work and in evaluation procedures. Facilities limit the class size to a maximum of 10 students.

**WOODWORKING II**  
Forms IV-VI  
This course provides students with an opportunity to further their experience with woodworking techniques. The material covered in class will include design criteria, drafting for woodworking and advanced machine operations and safety. The typical semester requires a student to design and construct a significant project of either furniture or sculpture primarily in wood. This class is open to students who completed Woodworking with a grade of B or better.
Art Appreciation Courses

AP ART HISTORY
FORMS V–VI
The AP Art History course is designed to empower students with an understanding of the ways in which the backdrop of politics, religion, function, and patronage help to shape works of art, and how these works, in turn, influence the societies around them. Students, regardless of their level of experience in the arts, will have the opportunity to develop and refine formal visual analysis skills as well as a deep and lasting appreciation for various styles, techniques, and individual works of art; they will become thoughtful and observant travelers for when they come into contact with art around the world; and they will learn valuable interdisciplinary skills as they encounter connections between visual art and politics, religion, geography, economics, technology, language, literature, gender studies, race, and ethnicity. By studying works of art from diverse cultures well beyond the traditional Western Canon, students will develop a broad understanding of global artistic styles and traditions.

This course will be credited as a full-year Advanced Placement course, and will fulfill one semester of the Upper School arts requirement as an “appreciation” course as well as one semester of the History elective course requirement.

MUSIC APPRECIATION: THIS IS YOUR BRAIN ON MUSIC
Forms III–VI
Contemporary popular music and the rap/hip-hop culture and genre, in particular, seem to dominate the music world. Still, without Beethoven and his gang, would country, gospel, rock, and rap music even exist? With a pulse on today’s music and artists, this one-semester course journeys through the development of musical genres and time periods including the middle ages (medieval), rock, orchestral and movie music, baroque, gospel, rap, Motown, and country as well as music from around the world. On this journey, historical and social connections will provide insight into the personalities and conditions that inspired and continues to give life to this art form—MUSIC!

MUSIC COMPOSITION
Forms III–VI
Designed to explore music from the inside out, this practical one-semester course is an introduction to the fundamental materials and simple compositional procedures of tonal music. The development of basic musicianship skills augments the study and practice of composing, including work on the notating of music, on understanding and originating rhythmic and harmonic progressions and two-part counterpoint, and ultimately, on the writing of original music from an informed perspective. Although helpful, prior study of music is not necessary for success in this course.

THEORY OF JAZZ, ROCK, AND BLUES
Forms III–VI
This course addresses the fundamentals of music theory as they apply to jazz, rock, and blues music. As an alternative to Music Composition, it teaches many of the same basic lessons in scales, chords, keys, music notation, and composition but examines them through the lens of the history of these specific genres. Students learn how musicians improvise over chords, interpret rhythms, and write melodies and chord progressions. They also learn to construct basic scales, intervals and chords. Supplemented with learning exercises and ear training, these lessons help students understand how to listen to, play, and compose music. Assignments and tests involve analyzing melodies and
chord progressions, writing original tunes, and responding to questions regarding scales and chord functions. Students will write entries in a listening journal in addition to the theory work.

This course is designed for students of variable levels of musicianship from Forms IV-VI and fulfills one semester of the diploma requirement in arts as an “appreciation” course. Form III students may take this course with permission of the Department. No prior music theory or playing experience is necessary. The course is highly recommended for members of any of the school’s jazz or rock ensembles.

**Art Independent Study**

A student who wishes to pursue art beyond the level offered in a regular or advanced course may create his own direction in art study, by approval of the department chair and through sponsorship by a member of the arts faculty. A written proposal to the Dean of Curriculum outlining a direction and focus of study is required.

**Performance Based Groups**

**B-FLATS I, II, III, IV**

*full year course*

Forms III-VI

B-Flats is Belmont Hill’s top musical ensemble. Students from B-Flats will learn songs from a variety of genres and showcase their singing skills to the school and broader community. Students who complete one year of B-Flats will earn a participatory art credit. Students who complete two years of the ensemble course will satisfy their art requirement. The course meets during the academic day in F Block.

**CLASSICS**

Through the study of Classical Languages, we seek to develop students with orderly and well-disciplined minds, capable of translating Latin and/or Ancient Greek from the original, and capable of expressing themselves in clear and correct English.

In the lower levels, we focus upon the mastery of grammar and vocabulary and the understanding of syntax, and we devote significant time to the acquisition of good study skills. In the upper levels, readings from Caesar, Cicero, Pliny, Petronius, Vergil, Horace, Ovid and other authors form the core of the curriculum. At each level, we incorporate into our classes the study of Greek and Roman culture. The goal of our teaching in the Classics Department is to broaden and strengthen students’ intellectual powers and to instill an appreciation for literature, individuals, ideas, and ideals long respected in the tradition of western civilization.

Instruction in Latin begins in Form I. The first (Alpha) and second (Gamma) years of study are devoted to the acquisition of a solid foundation in grammar and
LATIN 2
This course combines rigorous grammar review with translation and interpretation of ancient texts. Selections from Livy, Caesar, and other authors introduce the student to concepts of accurate reading and critical analysis of seminal works of western literature.

ADVANCED LATIN 2
This course is open to boys who have displayed a particularly strong aptitude for Latin at the Gamma level, regular or advanced. The course delves deeper in Caesar's Commentaries and studies a broader range of Latin authors than the regular class. In the late spring the class will read selections from Suetonius' Caligula as a means of gaining an introduction to both the literature and the history of the early Empire.

LATIN 3
Students in Latin 3 will study a range of authors and styles. The fall semester is anchored by Cicero and the spring by Ovid, though numerous other works will be incorporated at the discretion of the teacher or by request of the students. Completion of Latin 3 satisfies the language requirement, although students often elect to continue on to Latin 4 or 4AP.

ADVANCED LATIN 3
This course is open to those students who have displayed a particularly strong aptitude for reading Latin at the second-year level, regular or advanced. The fall semester revolves around the history and politics of the Late Roman Republic. Students read Cicero's First Oration Against Catiline and Quintus Cicero's Little Handbook of Electioneering. They also study Roman rhetoric. In the spring, students read Ovid, Martial, the Vindolanda Tablets, and a selection of Medieval authors. They will also learn sophisticated philological research techniques and
poetic scansion. Finally, students compete in Holy Cross’ Manuscripts challenge and gain some exposure to Ancient Greek.

**LATIN 4**

Students in Latin 4 will also study a range of authors and styles. In the fall, they study the Roman historian Livy. In the spring they turn their attention to Vergil, reading selections of the Aeneid in the original. Other works are often incorporated at the discretion of the teacher or by request of the students.

**AP LATIN**

This full-year course follows the Advanced Placement curriculum, providing an in-depth reading of Vergil’s great epic, the Aeneid, and a detailed look at Caesar’s Commentaries on the Gallic Wars. The goal of the course is for students to continue to develop their translating skills while at the same time developing a critical eye for Latin poetry. In addition to substantial reading in Latin, course time will be devoted to examining Vergil’s Homeric models, studying literary criticism, mastering dactylic hexameter, and reading at sight. It is expected that all students enrolled in Latin 4 (AP) will take the Advanced Placement exam in May. The weeks following the AP will be spent reading from Latin authors chosen by the teacher and class.

**LATIN 5**

This course is offered to boys who have completed Latin 3 or 4, and it is designed to give a broad exposure to a wide variety of authors and styles. Readings are selected from four areas: Lyric poetry and epigram (Catullus, Horace, and Martial); philosophical and scientific observation (Cicero’s De Senectute and the Elder Pliny’s Historia Naturalis); and “lesser known” Latin (including medieval works, the Bayeux tapestry, and music).

**ADVANCED ELEMENTARY GREEK**

This full year course is offered as an elective to Juniors and Seniors. An extensive Latin background is necessary, as the course relies on the students’ understanding of Latin to convey linguistic concepts quickly. Students begin with no Greek and will be reading Homer’s Odyssey, Book 9 by mid-spring. Students will read New Testament Greek by December and then move on to selections from Aesop, Xenophon, Plato, Herodotus, and Homer. Students will also be introduced to the basics of Greek Art and Architecture.

**ENGLISH**

Around the Harkness table, English students lead the way as they delve into the abundant subjects at hand: literature and life itself. Discussion-based teaching encourages students to discover answers for themselves, to venture forth, and to take the kinds of risks that promote intellectual growth and self-confidence. The department offers a widely diverse set of texts from the ancient to the contemporary, designed to reflect the backgrounds and experiences of our own school community and of the nation and globe beyond. Reading is the foundation: English scholars immerse in these stories, making connections to their own lives and communities, and then share and listen with intention, developing their capacity to explore, interrogate, interpret, and analyze language and key messages. Students participate daily in discussions, deliver more formal presentations and speeches, and have the opportunity to participate in language-based school competitions. Writing—from analytical to narrative nonfiction to fiction and poetry and more—caps the English experience as students integrate their ideas and interpretations in order to express their points of view.
MIDDLE SCHOOL ENGLISH
Forms I-III
Students learn to read carefully, annotate texts effectively, and arrive in class ready to both clarify and analyze the assigned reading. Moving from the literal to the figurative, they expand their focus beyond story, tracking a text’s established themes, recognizing a variety of literary devices, and articulating what the surface details of the story may symbolize in regards to character and message. With a focused study of vocabulary and grammar, students learn new words and nuance and practice key syntactical constructions. Writing centers around the building blocks: sentences, paragraphs, and classic structures for essays and other written work.

ENGLISH 1
Form I
English in the First Form presents students with a rich and varied array of literature and language experiences. The theme for the course is the hero. What characteristics do heroes have? What do we value in ourselves and in others? The short stories, poems, myths, and selected novels challenge readers to look beyond mere events into the dimensions of voice, tone, theme, character, and style. Expository writing responses to literature move from the book report format to more analytical, interpretive pieces and must show evidence of organization, critical thinking skills, sound mechanics, and a sense of style. The readings may also serve as inspiration for creative writing, in which character development, plot, sentence structure, or attention to detail might be the focus of an exercise. In close conjunction with the literature comes language learning, with grammar and vocabulary studied from separate workbooks but always with an eye to application in the student’s own writing.

Texts include:
The Diary of Anne Frank, Goodrich
The Pearl, Steinbeck
The House on Mango Street, Cisneros
The Call of the Wild, London
Heroes, Gods, and Monsters of the Greek Myths, Evslin
A Midsummers Night’s Dream, Shakespeare
New Kid, Craft
Warriors Don’t Cry, Melba Pattilo

ENGLISH 2
Form II
English 2 continues much of the skill development in reading, writing, grammar, and vocabulary begun in English 1, while also embracing intellectual growth through Harkness table discussions. Producing clear, efficient, engaging prose remains the goal of most writing assignments as students learn to write drafts and to share work with classmates. While other creative pieces are written, carefully-constructed, thesis-based analytical writing, particularly in response to readings, receives special attention. Through different assignments, English 2 students are also positioned to contribute to The Hill newspaper, the Middle School Public Speaking Contest, Poetry Fest, and other Belmont Hill benchmarks.

ENGLISH 3
Form III
This class emphasizes and builds on writing, discussing, and close reading skills. Our goal is to continue to develop critical
thinking as we tie reading and writing to Form III themes: Leadership, Responsibility, and Empathy. As in Forms I and II, students read and write about several literary genres, including nonfiction and poetry, that introduce them to different voices and perspectives. We continue to study vocabulary throughout the year, as well as to learn new grammatical constructions that the students can use in their writing. Although we emphasize analytical writing, we mix personal/imaginative essays with analysis throughout, concluding the course with a longer autobiographical Vignette Project.

Texts include:
The Absolutely True Diary of a Part-Time Indian, Alexie
American Born Chinese, Gene Luen Yang
The Hate U Give, Thomas
The Catcher in the Rye, Salinger
Romeo and Juliet, Shakespeare
Their Eyes Were Watching God, Hurston
True Grit, Portis

ENGLISH 4
Form IV
English 4 is transitional: students arrive from their Middle School experience having attained organizational skills that are the necessary prerequisites for the kind of independent learning and critical thinking expected of them as tenth graders. Entry into the Upper School also requires some adjustment in terms of conceptual thinking and the ability to independently analyze literature. Standards and expectations are predicated on previous foundational work in grammatical literacy and the craft of writing. The reading experience is incrementally challenging, with an even greater expectation for students to engage productively in class discussions and activities. The purpose of this year-long course is to build upon students’ critical perspectives — as readers, writers, and speakers. By examining varied literary texts, students gain a stronger understanding of and appreciation for the literary devices that affect and support plot, setting, character, and theme. Class discussions are also geared towards cultural competency, a growing awareness of contextually relevant cultural and social issues. The course culminates in the Profile Project, an experience that puts students in the role of an investigative reporter.

Texts include:
The Handmaid’s Tale, Atwood
The Great Gatsby, Fitzgerald
Macbeth, Shakespeare
Persepolis, Satrapi
Sing, Unburied, Sing, Ward

AMERICAN LITERATURE
Form requirement for Semester 1
Form V
As a diverse nation, we have many traditions from contributing cultures, and each group’s literary traditions enhance our individual and collective identities. In this course, we explore meaningful works from the seventeenth century to the present, with an emphasis on the nineteenth century, and in particular, the role of slavery as America’s original sin, with its painful legacy. We establish foundational arenas of American identity, then we examine how those identities have intersected with literature, evolving over the years. We open up—through reading, writing, and discussing—different interpretations of our American traditions. Many of the books read in this course share a concern with American history (and the material covered in U.S. History and AP U.S. History). Additional shorter readings include poetry by Walt Whitman, Emily Dickinson, Clint Smith, Mary Oliver, and Paul Laurence Dunbar; short fiction by Andre Aciman, Amy Tan, and others; and excerpts from Frederick Douglass’s auto-
biography and Harriet Jacobs’ Incidents in the Life of a Slave Girl.

Texts include:
Beloved, Morrison
The Scarlet Letter, Hawthorne

ADVANCED AMERICAN LITERATURE
Form V
As a diverse nation, we have many traditions from contributing cultures, and each group’s literary traditions enhance our individual and collective identities. In this course, we explore meaningful works from the seventeenth century to the present, with an emphasis on the nineteenth century, and in particular, the role of slavery as America’s original sin, with its painful legacy. We establish foundational arenas of American identity, then we examine how those identities have intersected with literature, evolving over the years. We open up—through reading, writing, and discussing—different interpretations of our American traditions. Many of the books read in this course share a concern with American history (and the material covered in U.S. History and AP U.S. History). Additional shorter readings include poetry by Walt Whitman, Emily Dickinson, Clint Smith, Mary Oliver, and Paul Laurence Dunbar; short fiction by Andre Aciman, Amy Tan, and others; and excerpts from Frederick Douglass’s autobiography and Harriet Jacobs’ Incidents in the Life of a Slave Girl. In this advanced version of the course, students will be assigned more complex and challenging texts, will have longer daily reading assignments, will bear more specific and extensive responsibility for daily Harkness discussions, and will compose longer and more complex written work.

Texts include:
Beloved, Morrison
The Scarlet Letter, Hawthorne

AP AMERICAN STUDIES
Full year course
Form V
AP American Studies is an interdisciplinary course designed to integrate the study of American literature and history. The co-taught course will take up two sequential class periods, meeting back to back for integrated lessons at a minimum of once a week. The course will seek to leverage Wednesday long blocks for field trips and collaborative, project-based work.

The course will study the American experience chronologically: students will have the opportunity to take deep interdisciplinary dives into important themes within each unit of study. During class, students will grapple with the complexity of the American experience, analyzing a variety of historical texts, literary genres, and primary sources to help them come to their own conclusions about American social, economic, and political developments. The course’s co-curricular sessions along with its discipline specific meetings will focus on helping students synthesize historical and literary studies and thus become more incisive readers and critical thinkers. Furthermore, they will build their capacity to understand and empathize with multiple perspectives and to engage in academic dialogue at the Harkness table. By the end of the course, students will be prepared to take the AP Exam for Literature and Composition and American History.

Each semester will culminate in a major assessment. At the conclusion of the first semester, students will write a critical essay of their own design rooted in course literature. As they enter the literary conversation, students will be required to research and engage with literary critics and compose an Annotated Bibliography. As a part of their graduation requirement, students will be required to write a major
research paper rooted in a topic related to American Studies. This essay, due at the end of the second semester, will be equivalent to the term papers that students are required to complete in their U.S. History course. Students will submit this paper for publication in the Concord Review.

**ELECTIVES FORMS V and VI**

As students enter their last year and a half at Belmont Hill, their study of English continues but expands into a menu of diverse and more specialized electives. Here, upper schoolers can explore a wide variety of interests, challenge themselves in a number of ways, progress deeper into their established areas of interest, and learn more from the specific expertise and passions of their teachers. These upper-level courses often draw more on multimedia, on contemporary topics, on social-emotional concerns, and on interdisciplinary subjects. Courses last a semester rather than a year, allowing students to explore several different courses. Students are expected to take more initiative, shape and lead discussions, and engage deeply with material and assignments. Harkness-style discussions remain core to our program.

**FORM V ELECTIVES**

_Semester 2_

**ADVANCED CONTEMPORARY LITERATURE**

“Books help us understand who we are and how we are to behave. They show us what community and friendship mean; they show us how to live and die”—Anne Lamott. Seeking such vital understanding of ourselves and our 21st-century world, we turn to today’s visionary literary artists and immerse ourselves in their views of people, places, and ideas. By taking turns building on and breaking from the past, these authors experiment with form, voice, and narrative style—and bring to bear their diverse backgrounds and perspectives. We combine traditional close-reading and exploratory discussions with real-world context for these characters, and the predicaments and societal issues that affect them. We also consider poetry (Marilyn Chin, Clint Smith), music (Childish Gambino, Lady Gaga), and visual art (Mary Ellen Mark, Jean-Michel Basquiat) as related in terms of themes, aesthetics, and worldview.

Texts include:

- New York 2140, Robinson
- Such a Fun Age, Reid
- The Marriage Plot, Eugenides

**AFRICAN AMERICAN LITERATURE**

This course will introduce the themes, histories, and rhetorics of African American literature from the mid-18th century to today. We will read poetry from Phillis Wheatley and Jupiter Hammon, to Langston Hughes and Claudia Rankine and explore the political oratory of Sojourner Truth, Malcolm X and Barack Obama. Additionally, we will read excerpts from the slave narratives Solomon Northup and Harriet Jacobs. There will be special attention paid to The Harlem Renaissance and The Black Arts Movement. Students will read the novels The Color Purple and Underground Railroad and explore the cultural contexts, aesthetic debates, and socio-political forces that surround the production of the African American literary tradition.

**CREATIVE WRITING**

Creative Writing is both a personal adventure and a team sport. Working together as writers and editors, student authors compose stories, poems, one-act plays, and flash fiction (short-short stories). They work from prompts designed to stimulate imagination and get the ball rolling. Students examine closely the
building blocks of good writing, drawing on examples from established writers, as well as past student work; they investigate and try out specific elements of fiction, poetry, and drama—such as character interaction, symbolic settings, meaningful dialogue, and rich imagery. Through frequent exercises designed to put imagination to use and to keep in practice as writers, students experiment with different techniques and forms. In addition to closely analyzing distinct styles of writing—from Lorrie Moore to Clint Smith to Gwendolyn Brooks—student authors workshop each other’s stories, plays, and poems, getting to know each other’s styles and supporting each other as they grow and change as writers. The emphasis is on taking creative risks, learning to read like a writer, and the revision process.

Texts include:
Bird by Bird, Anne Lamott
The Piano Lesson, Wilson

**FAULKNER AND THE SOUTHERN TRADITION**
As an historical interpreter of the South, William Faulkner (1897-1962) reflects historical fact in his fiction: the unlawful appropriation of Indian land; the systematic and institutionalized oppression of blacks as an integral function of Southern economy during and even after slavery; the high-minded appeal to honor, loyalty, and courage even in the face of the racism and prejudice that corrupted these high-minded values; the guilt, shame, and hypocrisy that accompanied the division between practice and principle; the implacable resistance of the Southerner to outside interference or criticism (especially from the North); the pride in the Confederacy and the bitterness and shame that some Southerners still feel over its defeat. The work of many Southern authors is equally steeped in this history. The details of their stories—the particular characters, the variant scenes, the life stories—are all fictional, but all rooted in the permanent truths which comprise the South’s history and character.


Other major works include Flannery O’Connor’s The Violent Bear It Away, Robert Penn Warren’s Brother To Dragons: A Tale in Verse and Voices, Jean Toomer’s Cane, and representative pieces by Eudora Welty, Carson McCullers, Katherine Anne Porter, Allen Tate, Peter Taylor, and Zora Neale Hurston.

**GOTHIC LITERATURE**
By considering texts from the Victorian Gothic tradition, the American Gothic tradition, and the Southern Gothic tradition, Gothic Literature explores how texts both old and new construct fear and shock in order to frighten their readers. Students will work to consider both where and how the sensations of horror, suspense, and shock are created within texts. Moreover, by considering the evolution of specific types of monstrosity, for example vampires in literature, Gothic Literature will root itself in a consideration of how monstrosity ultimately rests upon the stereotypes that lie at the center of how society defines its collective identity. By considering monsters as a form of otherness, the course will show how fear and horror are not organic reactions to what we read and see but rather learned qualities that reflect stereotypes and beliefs instilled within us begin as children. At its core, Gothic Literature will examine how the way we fear is what we have been taught to fear by exploring the distance and difference between acceptable social norms and monstrosity. In addition to studying print texts, students...
will view a number of film texts outside of class. The course’s graded work will consist of crafting analytical, personal, and creative essays; developing and delivering group presentations; and working to create a culminating video project in which students dive into crafting a gothic text of their own.

Texts include:
Frankenstein, Mary Shelley
The Shining, Stephen King
A Good Man is Hard to Find, Flannery O’Connor
“A Good Man is Hard to Find”
“The River”
“The Life You Save May Be Your Own”
“A Late Encounter with the Enemy”
American Gothic Tales. Ed. Joyce Carol Oates
“Masque of the Red Death” Edgar Allan Poe
“The Yellow Wallpaper” Charlotte Perkins Gilman
“Afterward” Edith Wharton
“A Rose for Emily” William Faulkner
“The Lovely House” Shirley Jackson

THE HERO IN LITERATURE
This course focuses on different conceptions of heroism. Class discussions explore both the heroic qualities in literature and the social context in which it occurs through assignments in fiction and nonfiction. While the focus of the course is literature, class discussions also explore film, painting, sculpture, and the conceptions of the heroic in popular culture. The texts utilized in this course follow two major tracks of discussion: the mythic (“Hero’s Journey”) hero and the tragic hero formulated by the Greeks. We will read excerpts from the theoretical texts underpinning these tracks and then examine these ideas in practice through four seminal texts in Western literature.

Texts include:
Harry Potter and the Prisoner of Azkaban, Rowling
Hedda Gabler, Ibsen
The Hero With a Thousand Faces, Campbell
The Hobbit, Tolkien
Julius Caesar, Shakespeare
Poetics, Aristotle

LITERATURE AND SOCIAL JUSTICE
Arresting and original language, new ideas, classic ideas from a new perspective, characters who live and breathe—these are the gifts of literature, which inspire us and change us in terms of how we live in the world and how we interact with people, whether their lived experience feels familiar or differs dramatically from our own.

What is social justice? Is “justice” universal? Is it particular to one’s perspective in a particular time, place, social environment? This course asks you to consider social justice topics of both timeless and contemporary concern—such as immigration, science and our relationships with the environment, race and gender—and to explore deeply how these topics are depicted, questioned, and probed.

Striving to empathize with humans who encounter injustice—interpersonal and/or structural—and who fight back against discrimination, as a group and as individuals, students are invited to approach the texts with hearts as well as minds, stretching imaginations and intellects through encounters with literature, film, art, and music. Centered on the core question of what it means to be human within a society, students will explore their own ideas and attitudes about the social contract. Student-led discussion, imitative writing, presentations, and college-essay writing accompany traditional analytical writing. The course draws upon a variety of “litera-
FORM VI ELECTIVES
Semester 1

ADVANCED MEDIEVAL LITERATURE
Medieval English Literature offers students a chance to explore the origins of the English language and the English literary tradition. While learning how to read and recite Middle English, students will also think about the role of oral traditions, myth creation, and the power of written language in creating cultural and political institutions. Vikings, Popes, dragons, King Arthur, Pagan rites, barroom brawls, divine miracles, and shape-shifting sorcerors—Medieval English Literature should have something for everybody! Students will gain insight into the cultural melting pot that constituted Medieval England and Europe and a new appreciation for the formation of the discipline of study we refer to as English.

Texts include:
Beowulf: A New Verse Translation, Heaney
A Book of Middle English, Turville-Petre and Burrow
Sir Gawain and the Green Knight: Original and Translated Version, the Gawain Poet and Nielson

ADVANCED NARRATIVE WRITING
In this course for seniors, veterans of the Creative Writing course or Nonfiction Writing course—or students who have invested a significant amount of time outside of school in narrative writing or poetry—continue to create in those arenas, as well as trying out new kinds of writing. Poets, Woodbury public-speaking participants, short-story writers, journalists, debaters—any student who loves language and stories can continue to grow and practice skills in this course.

Texts include:
Drown, Diaz (excerpts)
Homegoing, Gyasi (excerpts)
Interior Chinatown, Yu
Interpreter of Maladies, Lahiri (excerpts)
Parable of the Sower, Spencer
There There, Orange (excerpts)

SCIENCE FICTION: SOCIETIES OUT OF TIME AND SPACE
Science fiction appears at the edge. It details worlds and technologies at the edge of current human understanding, at the edge of the known universe, and at the edge of the far future. Science fiction is out of our space and our time, or indeed out of spacetime itself. Waves of science fiction writing occur most often when societies must reckon with new technologies or world orders. Science fiction distills the social paranoias of the day and crystallizes them into digestible chunks, allowing societies to critique their present by examining their possible futures. Each of the texts examined in this course engages with its own contemporary moment, giving us as readers a window into the preoccupations of the period. The class will leverage students’ skills in close reading, research, and semiotic analysis to understand these implicit arguments at a deeper level. Assessment will include quality of class discussion, short reading responses, and analytical essays.

Texts include:
1984, Orwell
The Hitchhiker’s Guide to the Galaxy, Adams
Journey to the Center of the Earth, Verne
Kindred, Butler
Using the workshop model, students draft, share, and critique work on a regular basis. Writing assignments include—among others—prompts, exercises, considerations of character/narration, symbolism, setting, meaningful dialogue, and rich imagery. Work in this class would connect with other special areas of school life: Students are invited to write Woodbury speeches, contributions to student publications, plays to be staged, literary-magazine stories, Panel articles, Podium op-eds, and poetry slam entries. Narrative writing can be a blessing, a chance to get creative, express yourself, and write from the heart.

Texts for the course: Yann Martel, Life of Pi, Graham Greene’s The Power and the Glory, Baldwin’s Go Tell It on the Mountain, Malamud’s The Fixer, O’Connor’s Wise Blood, Coetzee’s Disgrace, Milton’s Paradise Lost, Book IX and Samson Agonistes.

NONFICTION WRITING
In this course, you won’t find analytical writing with five-paragraph essays, dissecting quotations, or developing and then supporting a thesis. Students will instead look within themselves, exploring who they are and how they fit into the world around them. In any given week, students might write a profile on a parent, reflect on an experience with racism, consider masculinity in our world, or recall a moment of failure. Composing as many as twenty essays of 1-2 pages over the course of the semester, students will focus on writing as a process that includes careful observation, rhetorical invention, thorough editing, and poignant storytelling. We’ll be guided by Stephen King’s On Writing and Roy Peter Clark’s Writing Tools and inspired by other writers like John McPhee, Annie Dillard, Frank McCourt, David Sedaris, and Trevor Noah.
PAGE AND THE STAGE
Page and Stage is a single-semester senior year elective that fulfills both a student’s art appreciation requirement and his English requirement. Page and Stage offers students the opportunity to explore plays both as literature and as performance. Over the course of the semester, students will read plays from a variety of different time periods and genres, discuss these plays in depth, and then bring sections of these plays to life through exercises and scene studies. The central question guiding our exploration will be how characters are created on the page and how these characters are brought to life on stage. By exploring the simple inquiry question of “who is this character,” we will consider how characters can be perceived and created in a variety of different ways. As part of their coursework, students will be expected to perform for each other in exploratory exercises taken from the plays. Students will not be graded on the quality of their acting skills, but on the thoroughness and thoughtfulness with which they apply these experiences to their understanding of the written text.

Texts include:
Circle Mirror Transformation, Baker
Copenhagen, Frayn
Father Comes Home From the Wars, Parts 1, 2 & 3, Parks
Hay Fever, Coward
Machinal, Treadwell
Our Town, Wilder

SHAKESPEARE
This course gives students the opportunity to develop their independent thinking and questioning skills, and to develop a critical, analytical framework for the better understanding and appreciation of Shakespeare’s dramatic narratives and poetry. Discussions involve artistic, linguistic, structural, and dramatic explorations: considerations of figurative language, prosodic techniques, linguistic ‘play’ by association, and staging.

Rich in traditions of Renaissance thought, the course offers a study of selected canonical plays with their historical, literary, philosophical and political contexts. Selected ‘interpretations’ of Shakespeare’s works include film versions by Olivier, Jacobi, Branagh, McKellen, Zeffirelli, Kozintsev, Kurosawa, and Peter Brook, and the dramatic re-castings of Stoppard, Harwood, Madden, and Verdi. Students prepare critical essays in conjunction with their reading, and take a comprehensive, written final examination. Choice of texts varies: Romeo and Juliet, Richard II, Henry IV, Henry V, Hamlet, Othello, King Lear, Measure for Measure, Antony and Cleopatra, The Tempest, Twelfth Night, and Macbeth. as well as a variety of poetry and shorter fiction.

MODERN AMERICAN LITERATURE
Not offered 2022–2023
While the study of American Literature often explores how, in Emerson’s words, “An institution is the lengthened shadow of one man,” Modern American Literature will focus on the chorus of voices that move outside of the realm of the single Canonical author. By focusing on the marginal voices that both singularly and collectively lend themselves to the richness, diversity, and complexity of contemporary American identity, students will draw comparisons between the texts that they read during the previous semester in American Literature. In addition, they will draw parallels between the texts that they will read this semester and the world around them. By exploring a variety of texts – prose and poetry, fiction and nonfiction, print and film – this course seeks out what is uniquely American in a spectrum of writers’ constructions of and commentary on class, race, and gender.
in modern America. While American Literature courses often explore literature chronologically, Modern American Literature will place texts in dialogue based on shared themes and topics. Over the course of the semester, students will consider what it means to be a part of what we as a society traditionally label as “American” and also what it means to live outside of these traditional notions of identity.

INQUIRY COURSES

In Inquiry courses, teachers will explore some of the intricacies and fascinations of their own intellectual passions. Organized around a particular theme, each course will make use of different types of knowledge and ways of thinking – history, science, economics, etc. – to examine core controversies and sometimes cutting-edge debates within subjects. Many Inquiry courses will be interdisciplinary to a degree, combining different approaches and materials, to raise key questions about what we know and how we know it. Specific assignments for the courses will vary but will include collaborative work, use of technology, and opportunities for public speaking; visits by outside lecturers will add a real-world dimension. Each Inquiry course will be a means to practice the art of good writing, and papers will include an in-depth study of a limited topic chosen by the student.

ADVANCED SCIENCE RESEARCH

In the Advanced Science Research Inquiry, students already enrolled in the year-long Advanced Science Research course will explore the core question of what leads to sound, unbiased scientific research. Using selected readings from the field of Research Ethics and current professional journals, students will first examine the methodology of impartial laboratory research and determine what constitutes concise yet sound scientific writing. As a culmination of their two years of research in the Advanced Science Research program, each student will develop an original scientific poster to summarize their experimental procedures and findings. Students present and defend their posters to the Belmont Hill community during the annual Advanced Science Research Poster Night at the end of the semester.

BREAKING DOWN THE 4TH WALL: EXPLORING CONTEMPORARY CULTURE THROUGH FILM, MUSIC, AND WRITING

Throughout the course students will explore a diverse array of films and music meant to enhance their understanding of the world around them. How does Kid Cudi express and handle his struggles with mental health and drug abuse in The Pursuit of Happiness? What unheard voices within American culture are intentionally highlighted throughout Forrest Gump? How does Tupac Shakur bring to light the struggles of life in the projects in his “letter,” Dear Mama? Using open conversation and collaboration the course also aims to best prepare students for the mental and emotional challenges awaiting them next year as first-year college students. The films and songs were deliberately selected to represent a variety of themes including mental health, drug and alcohol abuse, poverty, love and redemption. The course is intended to provide seniors with an opportunity to guide their own learning and make an impact on their community, valuable skills for continued success on college campuses. Each unit will include student-centered projects ranging from developing a pilot script for a movie or show, writing a portfolio of song lyrics, developing a research-based essay about a meaningful theme, or even organizing a student-led group on campus.
EVOLUTIONARY PSYCHOLOGY
Evolutionary psychology is a relatively new branch of psychology that studies human behavior through the lens of evolutionary biology. It presumes that all human behaviors reflect the adaptations that enabled our ancestors to survive, reproduce, and pass on their genes to the next generation. Evolutionary psychology encompasses the fields of psychology, anthropology, genetics, and evolutionary biology to understand human behavior.

In this course, we will explore our evolutionary roots to discover why we do the things we do. What motivates us? What drives our decision-making process? Why do we feel emotions such as jealousy and love? What is the reason behind bias? Why is fear such a big motivator in the news media, politics, and marketing? What does it mean to be part of an in-group or out-group? Which human emotions are universal, regardless of culture? What is the benefit of introversion? Why do we feel the same butterflies in our stomachs before a test, a game, or when we see someone we are attracted to? Why do mental and physical illnesses persist, despite being maladaptive? Why do we crave foods that, in excess and over time, cause disease? Why is it so difficult to plan ahead? Why do teenage boys take so many risks? We will ask Darwinian-based questions across cultural and historical perspectives to answer these questions about human behavior. The goal of the course is to enable students to gain a better understanding of themselves and each other.

Books will include Evolutionary Psychology 101 by Glenn Geher, The Selfish Gene by Richard Dawkins, On Human Nature by E.O. Wilson, among others. Assessments will include writing weekly reflections on articles, book excerpts, films, and other forms of media, presentations, and debates. The final project will be to create and conduct an experiment that investigates one aspect of evolutionary psychology.

FILM AND LITERATURE
This course will be both an introduction to film appreciation and a comparative study of movies and the literary sources upon which they are based. Students will gain an understanding of the different aspects of filmmaking from cinematography, to production design, to direction, etc. They will learn how character development, plot, narrative, symbols, and language are translated from literary texts to film, as well as the practical and theoretical problems of adapting literature to motion pictures. Students will analyze and respond critically to film and text through class discussions, written reviews, examinations, and presentations.

While we will view shots and scenes from a wide variety of films, we will spend more extended periods with:

Film & Text:
12 Years a Slave (12 Years a Slave)
Million Dollar Baby (Rope Burns: Stories from the Corner)
Lincoln (Team of Rivals)
Life of Pi (Life of Pi)
Children of Men (The Children of Men)
Minority Report (“Minority Report”)
O Brother, Where Art Thou? (The Odyssey)
A Midsummer Night’s Dream (A Midsummer Night’s Dream)

Books will include Evolutionary Psychology 101 by Glenn Geher, The Selfish Gene by Richard Dawkins, On Human Nature by E.O. Wilson, among others. Assessments will include writing weekly reflections on articles, book excerpts, films, and other forms of media, presentations, and debates. The final project will be to create and conduct an experiment that investigates one aspect of evolutionary psychology.

GOD, MYTH, AND HUMANITY
Does God exist? How do you know? What is the ultimate goal in the practice of a religion? This course blends a selective survey of all the major (and some of the minor) religions of the world with world literature that addresses the relationship between God and man. Students
will compare and contrast stories from particular faiths about creation, the flood, the apocalypse, and the afterlife. Guest speakers from our community and beyond will talk about their own religious backgrounds and search for meaning. Texts will include selections from The Inferno, Paradise Lost, The Canterbury Tales, The Tao Te Ching, and The Bhagavad Gita as well as stories from more modern authors such as Dostoyevsky, Camus, Joyce, and Kafka. To broaden our perspectives, we will have the opportunity to listen to popular music dealing with the themes of god, the devil, man, and myth.

IMMIGRATION TODAY: A MULTIDISCIPLINARY APPROACH

Immigration has been front and center in the news in the United States and across the globe. Refugees continue their exodus from war-ravaged countries including Syria, Afghanistan, and South Sudan while migrants continue to seek refuge from the violence and poverty in such countries-in-crisis as Venezuela and El Salvador. According to the U.N. Refugee Agency, 69 million people were forcibly displaced in 2017, “a record for the fifth straight year”. In this course we aim to understand the causes and consequences of migration by focusing on such questions as: where do refugees go and what is the responsibility of countries that take them in? How have recent trends in migration shifted global and national politics and policy? What is the migrant experience in the United States? How are communities in the Greater Boston area shaped by recent immigrants?

Our goal is to tackle these questions from a variety of disciplines including political science, economics, ethics, literature, and film, and from a variety of perspectives including immigrants, professors, community leaders, law enforcement, politicians, artists, and journalists. We will collect and analyze data, gain information from scholarly journals and academic books, host and visit with experts, and get out into the field.

Resources & Books:

- DATA: Migration Policy Institute; Pew Research Center

THE MAINE COAST: A CULTURAL HISTORY

The Maine Coast has developed a particularly rich history and unique culture from the time of its indigenous settlements, to its early history as a European fishing outpost, to its ascendance as a shipbuilding center, to its most recent role as an anti-city, an escape from the context of urban America. This course will start with a study of the literature, art, history, and geography that help us understand the unique culture of the Maine coast.

In the second half of the course, we will build Dacron skin on wood canoes which represent a blend of Native American design, New England boat-building practices, and 20th century materials. We will take the canoes on a two-day journey along a section of the coast to understand the geography and the unique culture that has grown up along its shores. The boats are designed to be constructed by
amateurs with no previous wood-working experience and take 60-80 hours to build.

**RESTORATIVE JUSTICE**
What is the purpose of law? What are the basic tenets upon which it rests? How do laws reflect specifically American interests and values? By examining the evolution of our system of justice, we can achieve a fuller sense of what we most value and stand for as a nation. This course will be an exploration of the concept of justice in the context of the American legal system. Besides reading various literary texts, watching films depicting legal issues, and hearing outside speakers with different areas of expertise, we will study transcripts of celebrated court cases that involve major challenges to established law. The class will visit the Moakley Federal Courthouse to witness trials in progress.

**THE STATISTICAL REVOLUTION IN SPORTS**
With ballooning professional sports contracts and the high stakes of major league athletics, the ways in which players are evaluated are being re-examined. Are fantasy sports leagues using the right statistics? How should teams use the draft? What impact do general managers have on teams? How does the salary cap impact decision making? With the recent success of Moneyball and the controversial work of Bill James, the conventional measures of talent are being questioned. This course will investigate the statistical revolution that is going on in professional sports right now, challenge students to make up their own minds about how to evaluate talent, and look to answer the question “Who is the greatest of all time?” In addition to specific athletic applications, students will be asked to explore other areas, such as financial markets, where discrepancies exist between mathematics/technology and practice.

**SENIOR HUMANITIES COURSES**
As a part of their fall, one-semester English and History requirement, Belmont Hill Seniors have the option to enroll in courses in the humanities program. Humanities courses are interdisciplinary classes that include cross-disciplinary thinking in English and the Social Sciences. A humanities course may count as either the student’s History or English requirement. Thus, students taking humanities courses will have the opportunity to focus more intently on the discipline of their choice, whether it be English or History. Additionally, they will have the opportunity to enroll in a class that focuses more intently on un-siloed thinking.

**ADVANCED AFRICAN-AMERICAN STUDIES**
*Full Year*
The goal of this year-long, advanced course is to foster a better understanding of the complex experiences, both past, and present, of Americans of African descent. The multidisciplinary approach analyzing literature, historical texts, art, and sociological perspectives, will foster a framework for exploring the complex and diverse development of the African-American experience. The course will look to draw detailed parallels between historical and contemporary events, arts, culture, and institutions within and across the breadth of African-American history. Students will explore the Black experience in America drawing from primary and secondary sources, reading classic and contemporary literature while delving into music, social and print media, poetry, and film. Projects include traditional analytical essays, reflective responses, and presentations. Class-based group experiential activities promote perspective-taking and foster an in-depth and critical understanding of the varieties of the African-American experience and tradition. Students who are interested in this
HISTORY AND SOCIAL STUDIES

At Belmont Hill, we value the study of History as an opportunity to develop national and global awareness, as well as critical historical thinking and argumentation skills. The study of a broad range of historical subjects and the analysis of multiple perspectives are integral in fostering an environment where our students can strengthen their understanding and develop their own unique viewpoints.

Our department utilizes a variety of sources and methodologies that allows our students to master content knowledge in order to formulate and assess evidence-based arguments. Students are encouraged to cultivate their own voice in our discussion-based classes and draw on their connections to our shared history. The program offers a balance of required and elective courses, as well as a robust offering of advanced courses to meet every student’s level of intellectual curiosity. The curriculum consistently offers students opportunities to advance their reading comprehension, perform independent research, and present logical arguments—both oral and written. Our passionate and knowledgeable faculty work with students to provide the historical context underlying today’s conflicts and crises and give students a platform to research the genesis and causation of these issues. Students are given the tools necessary to become active and informed members of our society today.

THE MEDITERRANEAN CLASSICAL WORLD

Form I
The Mediterranean Classical World, more simply known as “History I”, begins in the second marking period after our new First Formers study mythology in English, enjoy two months of Art Class and
are introduced to Latin. All three of these curriculums align and support the Form I theme of “Heroes” as does History I when it replaces Art in November. The study of Classical Greece and Rome is central to the course as these civilizations develop, prosper and decline, but they do not do so in a vacuum. Persia, Egypt, Phoenicia and Carthage are integral to the course in terms of connections, contributions and conflict. So, too, are topics of citizenship, historiography, leadership, slavery, even gender in the Classical World as well as the study of different political systems. The latter topic provides a direct connection to Form II when the boys undertake the study of US Government. Disguised behind all of this is a very purposeful emphasis on study skills, with a particular focus on critical reading, an effective system of notetaking, essay writing, and test preparation. Most importantly, from a 7th grade perspective, is that we have fun as well begin the Belmont Hill class bonding experience. Central to that mission is the hallowed tradition and culminating experience for the entire Form to compete against the other History I classes each spring in Greek and Roman Field Day. Modelled on the Greek Olympics and replete with many events athletic, intellectual as well as creative, it is a day even Belmont Hill seniors will remember with great clarity and competitiveness five years later and beyond.

**U.S. GOVERNMENT F, S**

**Form II**

This required course provides an overview of the American governmental system. An introduction to the theoretical and historical background of our Constitution and system of government is followed by an in-depth study of the three branches of government and the separation of their powers. Special attention is given to the study of the Bill of Rights, which is examined by analyzing significant legal precedents that have come before the Supreme Court. Students are asked to examine our electoral system with a specific focus on how we elect our President and the effect a two-party system has on our democratic method of government. Finally, students complete an 6-8 page research paper in Chicago-Turabian endnote style to complete the course. Class meetings stress individual participation in class discussion as well as performance in debates and oral presentations. Frequent short papers and in-class essays are required.

**FORM III & IV REQUIREMENT**

At least two semesters of History must be chosen in Forms III & IV by boys who enter Belmont Hill in the Middle School. Middle East & China is a required course in Form III. In Form IV, students are required to take either one semester of 20th Century World History or a full year of AP European History.

Additional courses from the list below may be taken in form III on an elective basis.

**ELECTIVE OFFERINGS IN FORM III**

**FACING HISTORY F, S**

**MIDDLE EAST AND CHINA F, S**

Form III

This semester-long course immerses students in the modern history of the Middle East and China. Through examination of these countries’ unique and storied histories, experiences with European contact, transformations into sovereign nations during the 20th century, and emergence as major global players in the 21st century, students come to understand core concepts that pertain to economic, political, and national identity development. Drawing upon diverse historical, primary and secondary written
forces are examined through the lens of competing “big ideas” in economics, politics, and society such as core v. periphery, authoritarianism vs. political liberalism; protectionism vs. economic liberalism vs. socialism; nationalism vs. European-ism; paternalism vs. self-determination. Through small and large group discussions centered around primary source interpretation and analysis, the course prompts students to identify these big ideas at work in the world and understand how the perspectives and goals of the various countries involved guide their actions. Many of these conversations reference and build upon the themes explored in the Form III course on the Middle East and China. Additionally, the course focuses on the development of critical skills, and students are assessed on the critical reading of primary and secondary sources, and the use of critical writing to formulate an argument. The course culminates in a 6-8 page independent research essay.

**AP MODERN EUROPEAN HISTORY**
Form IV
This course is a full-year elective for students possessed of a strong interest and ability in the study of history. Opening with a study of the Renaissance, the Reformation and age of absolutism, the AP course commences at an earlier point than our regular 20th Century World History course. As such, while it concludes with contemporary European topics and addresses all of the same themes, it moves at a faster pace and is more comprehensive, specifically preparing students for the Advanced Placement examination. Both the AP and regular courses emphasize skills of thoughtful reading, active discussion, test preparation and critical writing.

**FACING HISTORY E, S**
Form III
In this discussion-based course, students investigate a variety of social issues including racism, genocide, and discrimination in the twentieth century through case studies. In doing so, students examine the forces that led to these horrific moments in history and discover connections that impact their world today. The course also looks at the notion of “choosing to participate” by seeing examples of ways ordinary people challenged the status quo and advocated for change, while others stood by. Students additionally explore issues related to identity, belonging, justice, democracy, civic engagement, and activism throughout the course. Facing History utilizes primary and secondary sources, including videos and works of literature. Assignments include nightly readings, journal reflections, tests, several short research papers, and presentations.

**20TH CENTURY WORLD HISTORY E, S**
Form IV
20th-Century World History is a semester-long survey that explores the key developments that shaped the twentieth-century world. Historical events and
FORM V HISTORY
REQUIREMENT

Three discreet comprehensive full year courses in United States History are offered. Students are required to take one of them in Form V. Each course includes a major required research paper.

U.S. HISTORY
Form V
U.S. History immerses students in the characters, conflicts, compromises, and controversies that define the uniquely American story. Through a question-driven curriculum, we investigate critical periods in U.S. History, from the Colonial Era to the Modern Presidency, including the Obama years. The periods are broad, yet they do not cover everything. Our goal is to dive deeper into each subject, allowing for time to reflect on important events and ideas from a range of perspectives. Our objective in teaching this course is to empower students to confidently discuss and coherently analyze major issues in American history as well as understand the historical context underlying today’s conflicts and crises. The culmination of the course is a 12-page independently researched essay.

AP U.S. HISTORY
Form V
AP U.S. History is designed for the student with a well-defined background and interest in history. Individual responsibility for most assigned reading is assumed, allowing extensive class time for thorough examination of selected issues, events, and concepts. Frequent papers, oral presentations, and deep classroom discussions foster clarity of thinking and historical argumentation. A wide variety of supplemental readings is used to complement the primary textbooks. All students complete a major research paper and take the American History Advanced Placement examination in May. A minimum of an A- in Modern European History or a B+ in AP European History or department approval are required for enrollment in AP US History.

AP AMERICAN STUDIES
Form V
AP American Studies is an interdisciplinary course designed to integrate the study of American literature and history. The co-taught course will take up two sequential class periods, meeting back to back for integrated lessons at a minimum of once a week. The course will seek to leverage Wednesday long blocks for field trips and collaborative, project-based work.

The course will study the American experience chronologically: students will have the opportunity to take deep interdisciplinary dives into important themes within each unit of study. During class, students will grapple with the complexity of the American experience, analyzing a variety of historical texts, literary genres, and primary sources to help them come to their own conclusions about American social, economic, and political developments. The course’s co-curricular sessions along with its discipline specific meetings will focus on helping students synthesize historical and literary studies and thus become more incisive readers and critical thinkers. Furthermore, they will build their capacity to understand and empathize with multiple perspectives and to engage in academic dialogue at the Harkness table. By the end of the course, students will be prepared to take the AP Exam for Literature and Composition and American History.

Each semester will culminate in a major assessment. At the conclusion of the first semester, students will write a critical essay of their own design rooted in course literature. As they enter the literary
conversation, students will be required to research and engage with literary critics and compose an Annotated Bibliography. As a part of their graduation requirement, students will be required to write a major research paper rooted in a topic related to American Studies. This essay, due at the end of the second semester, will be equivalent to the term papers that students are required to complete in their U.S. History course. Students will submit this paper for publication in the Concord Review.

FORM VI HISTORY REQUIREMENT
All seniors must enroll in either a Humanities course (listed above) or one of the following courses in the first semester of his senior year. He may elect to take more than one. All are semester courses except Advanced Economics: Macroeconomic Theory, AP Human Geography, and Advanced African American Studies, which are all full year commitments.

ADVANCED MACROECONOMIC THEORY
Full Year
Form VI
How have the international order and the global economy been constructed? What dynamics are likely to pose significant threats to this structure? How can an exploration of history inform our view of conflict to help us understand it in a more nuanced and authentic way? This course will apply a multidisciplinary approach of advanced economic theory, history, and political science to cultivate a framework for exploring the historical sources and economic impacts of the defining political conflicts of the modern era. Over the course of the year, our study will introduce the philosophy and structure of the global economy as well as key economic sectors influencing state decision-making, the competing theory of political realism, and general commentary on the current state of international politics, before turning to five case studies of conflict that will serve as the pillars of this course’s inquiry. For each case study, students will apply a realist, historical framework to explore the relationship between two nations that find themselves in conflict in the modern age before exploring the challenges that this dynamic poses for the global economy. This will culminate in a final project in which each student presents a research thesis and a lecture-based defense, collectively exploring the economic implications of modern global conflict. By the end of the course, students will have an understanding of the conflicts likely to dominate 21st Century geopolitics and global financial markets, as well as a framework for evaluating future conflicts. Students who are interested in this course are required to have maintained high marks in their Form V History and English Courses or have department approval prior to enrollment.

AP HUMAN GEOGRAPHY
Full Year
Form VI
AP Human Geography looks to study the patterns and processes that have shaped human understanding, use, and alteration of the Earth’s surface. It allows students to take an analytical approach to society and the environment. Students are able to study the processes and theories behind the developments they have explored in their previous history courses, which serves to enrich analysis of the impacts of phenomena such as globalization, colonialism, and human-environment relationships on places, regions, cultural landscapes, and patterns of interaction. The approach is spatial and problem-oriented. The content is presented thematically rather than regionally and is organized around the discipline’s main subfields: economic geography,
own conclusions on the challenges and important issues facing the United States in today's global economy.

**INTERNATIONAL RELATIONS Fall**
Form VI
This course introduces students to classic and contemporary theories of International Relations in order to analyze and understand the major crises and conflicts that dominate today’s global politics. We will examine the clash of ideas and ideologies in the post-9/11 world and we will attempt to answer critical questions such as: what is power in the modern world and who holds it; and how do nation states function in an “age of terrorism”. Our case-study driven analysis covers a range of regions and conflicts including the war in Syria and the rise of ISIS, Chinese territorial expansion in the South China Sea, drug wars in Mexico, and the immigration crisis in Europe. We will also consider the role of the United States in international conflict and cooperation, and evaluate the strengths and weaknesses of international organizations from the UN to NGOs. Students are expected to keep abreast of world news, engage in daily discussion on assigned readings, and complete projects, all of which have written and class presentation components.

**GLOBAL ECONOMY Fall**
Form VI
This semester course examines key issues in the international economic community. In the first part of the course, we will explore major microeconomic and macroeconomic concepts. From there, we will branch out to investigate the basics of globalization and development, examining how these issues play out in different regions of the world. We will use Charles Wheelan’s Naked Economics as our main text for the first half and draw from an array of sources in the second. These include handouts, online newspapers, scholarly articles, and audio-visual sources. By the course’s end each student should be able to assess broad patterns at play in the international community and draw his
world that “our daily deeds as ordinary South Africans must produce an actual South African reality that will reinforce humanity’s belief in justice, strengthen its confidence in the nobility of the human soul and sustain all our hopes for a glorious life for all.”

By many measures, the hopes and dreams of South Africans in 1994 have failed to measure up to these aspirational words of one of the most iconic leaders of the 20th century. While South Africa continues to have the largest economy in Africa, it is also a country, which continues to struggle with economic inequality, political corruption, and a high crime rate.

The goal of this course is to allow seniors to explore issues of race, economics, politics, and social justice from an African context, using South Africa as a case study of the past, present, and future of this continent.

**MATHEMATICS**

The courses offered by the Mathematics Department provide discipline in clear thinking and logical reasoning, both inductive and deductive. By investigating topics from different viewpoints—algebraic, graphical, verbal, numerical and application based—students learn appropriate techniques of problem solving in order to focus as much on the process as on the final outcome.

Our course of study typically culminates with Statistics, Calculus, AP Statistics, AP Calculus AB/BC, Multivariable Calculus or Linear Algebra.

At all levels, technology plays an integral role. In addition to course specific software, teachers use Promethean Boards extensively, and all students use TI-83 or TI-84 graphing calculators. Across all courses, the appropriate uses of technol-
Advanced Algebra 1
An introductory course in elementary algebra covering topics through the solution of quadratic equations. This course includes investigation of real-life applications facilitated by use of calculators. Prerequisite: Pre-Algebra or equivalent.

Text: Algebra 1, Martin-Gay

Geometry
This course ordinarily follows Algebra 1 and will provide a thorough and complete overview of plane, solid and numerical geometry, including algebraic applications and work with proofs.

Text: Glencoe Geometry 2018, eStudent Ed.

Advanced Geometry
This course follows Advanced Algebra I. An introductory course in plane and numerical geometry with applications in solid geometry. Various methods of proofs will be introduced while also reinforcing Algebra skills.


Algebra 2 and Trigonometry
This course is the continuation of Algebra 1. Topics include rational and irrational numbers, solving rational, quadratic and simultaneous equations, inequalities, trigonometry, logarithms, functions and graphing, factoring, and formulas.

Text: Algebra 2 and Trigonometry: Structure and Method, Book 2, Dolciani et al.

Advanced Algebra 2 and Trigonometry
This course is the continuation of Advanced Algebra I. Specific topics beyond those listed for Algebra 2 and Trigonometry include complex numbers, conic sec-
tions, trigonometry, logarithms, functions and graphing.

Text: Algebra 2 and Trigonometry: Structure and Method, Book 2, Dolciani et al.

INTRODUCTION TO PRE-CALCULUS
This course integrates ideas of functions and trigonometry with the statistics and data analysis necessary for a person to function successfully in today’s quantitative world. It builds understanding of real-world problems while establishing a foundation for future work in mathematics courses. Applications and modeling excel will also be integrated into the course. Students will be given extensive preparation for the SAT and the ACT tests.


PRE-CALCULUS
This course follows Algebra 2 or Advanced Algebra 2 and Trigonometry for students who intend to go on in mathematics or applied sciences. Topics include analysis of functions, curve sketching, techniques of solving equations, advanced trigonometry, exponents and logarithms, and sequences and series. We hope to explore some of the topics of basic Statistics if time permits.

Text: Advanced Mathematics, Brown

ADVANCED PRE-CALCULUS
This course typically follows Advanced Algebra 2 and Trigonometry, and its syllabus is similar to Pre-Calculus, with the addition of vectors, matrices, and limits. The topics will be treated more rigorously, and greater emphasis will be placed on proof. Ordinarily, students will be expected to go on to Calculus BC. Students will be assigned to Advanced Pre-Calculus by the Mathematics Department.

Text: Advanced Mathematics, Brown

STATISTICS
This course provides a data-oriented introduction to the basic principles and techniques of statistical analysis, with an emphasis on financial and business applications. Topics covered include sampling and data collection, methods for summarizing data numerically and graphically, probability, distributions of random variables, basic inference methods for both quantitative and categorical data, and simple linear regression. The course also explores the fundamentals of supply and demand, interest and debt, and investing. Techniques for formatting, summarizing, and analyzing data in Microsoft Excel are integrated throughout the course, with exploration of other software applications as relevant.


AP STATISTICS
This full-year, non-divisible course covers the complete Advanced Placement statistics curriculum, including exploring data, planning a study, probability and behavior of random variables, statistical inference, and linear regression. It also includes a unit on modeling and a number of special projects and readings intended to help students connect the topics studied with real-world applications. Students are required to take the AP exam in May.

Text: Advanced High School Statistics, 2nd ed (free online text) by David Diez et al.

Prerequisite: Advanced Algebra and Trigonometry or the permission of the teacher

CALCULUS
Introduction to Calculus covers the basics of the traditional theory and techniques of differential and integral calculus. Equally important will be the significant emphasis on the many applications of calculus. These include such areas as finance, economics, business, motion of an object (e.g., velocity and acceleration), and population growth (both exponential and logistic, through the study of differential equations).

**AP CALCULUS AB**
This full-year, non-divisible course in elementary calculus covers the syllabus for the AB, CEEB Advanced Placement Examination in May, which students are required to take. Prerequisite: Completion of Advanced Pre-Calculus, A- in Pre-Calculus. Exceptions considered by the Department Chair.

Text: Calculus, 8th Ed., James Stewart

**AP CALCULUS BC**
This is an extensive, rigorous, non-divisible, full-year calculus course designed to meet the syllabus of the BC, CEEB Advanced Placement Examination in May, which students are required to take.

Prerequisite: Advanced Pre-Calculus

**LINEAR ALGEBRA OR MULTIVARIABLE CALCULUS**
These courses are intended for students who have successfully completed BC Calculus and are interested in studying upper level mathematics. Students in the course work collaboratively to develop rigor in both the notation and language of mathematics. Largely through problem-solving exercises, students spend time learning how to use computer algebra systems to work with realistic mathematical models and systems.

Prerequisite: AP Calculus BC
Text: Multivariable Calculus, James Stewart, 4th Ed; Linear Algebra with Applications, Otto Brescher

**MODERN FOREIGN LANGUAGES**

The Modern Language Department at Belmont Hill strives to help students reach a high level of proficiency, while also expanding their knowledge of culture throughout the regions we study. During their years of language study, students discover what they can do with the language, establishing building blocks that stay with them throughout their studies both here and at the collegiate level.

Proficiency in a foreign language is increasingly important and valued at the professional level, and, as such, we attempt to give our students an experience that will serve them beyond Belmont Hill. Varying levels of proficiency in Chinese, Spanish and French are achieved through texts, film, podcasts, visiting speakers, trips and specific grammar and structures. Introduction courses focus on some content learning, while upper level courses are primarily focused on skills. Once the required three years of language study are complete, each language offers additional courses (4, 5, AP) and independent studies, tailored specifically to students’ needs. Combined with the formal classroom environment, the department also offers clubs for each language, enabling students to expand their language learning experience in a more informal environment. Students take great pride and ownership in their language studies at Belmont Hill, regularly returning to campus during college to confirm that their foundational skills acquired on the Hill are serving them well in the collegiate arena.
FRENCH 1
In this introductory course, basic French oral and written comprehension and expression skills are developed. Considerable oral practice and frequent exercises help students to begin to master French grammar, and to rapidly expand their vocabulary. Students learn to converse about important ideas in French, including describing themselves, and responding to a French speaker with ease about myriad topics. Students also learn to write effectively in French, using the present, future, simple past and imperative tenses. Through viewing video cassettes in French, students develop a better sense of understanding the grammatical and cultural lessons which are presented to them each day, also. Through selected readings, including poetry and a short novel, students begin to develop basic literary analysis skills which they will continue to improve in subsequent French courses. Each student is also required to research and give his own PowerPoint presentation on a country where the language he is studying is spoken, during the third quarter.

Text: D’accord! Level 1

FRENCH 2
Students will expand their vocabularies and learn to use more sophisticated grammatical structures, including the imperfect, future, and conditional tenses, and the subjunctive mood. They will be required to speak in French in order to practice their oral communication. Many supplementary readings from well-known franco-phone authors and the study of one/two films offer topics for classroom discussion, and with regular journal entries, written skills continue to be honed. Finally, the students will also be exposed to the culture of the French-speaking world by the study of various countries, cities, monuments and
the completion of a PowerPoint project.

Text: D’accord! Level 2

FRENCH 3
The basic grammatical structures of French are reviewed and fine-tuned. The study of different grammatical tenses and moods, including the imperative, imperfect, pluperfect, conditional, subjunctive and passé simple, allow students to improve their oral and written comprehension of the language. Through extensive practice speaking, reading and writing, students improve their abilities to express themselves in the language, also. In addition to the study of grammar, and vocabulary building, students read four challenging books over the course of the year. In doing so, they build their vocabulary, learn how to analyze characters and themes, and are introduced to the culture and lifestyles of various French-speaking countries. They are required to write medium-length to long compositions on each work. Each student is also required to research and give his own PowerPoint presentation on an important person in French history during the third quarter.

AP FRENCH LANGUAGE AND CULTURE
This course focuses on honing the students’ written and spoken proficiency while building on their deeper understanding of the French-speaking world by reading articles, poems, websites and excerpts from novels and by listening to interviews, podcasts, newscasts, etc. Throughout the year, students will explore the six topical and cultural themes set out by the College Board. These themes are vast and often intermingle. They serve as spring-boards for our discussions and work in and out of the classroom. This idea of cultural understanding and cultural comparison is the basis for this course. The language is the scaffolding we use to discuss and write about it. Along the way, students will also familiarize themselves with the different sections of the AP exam which is taken in May.

ADVANCED FRENCH 5
In this advanced French course, boys are able to explore areas of French and the French-speaking culture that are of interest to them. We explore literature, by reading and discussing short stories by Maupassant, a selection of franco-phone poetry and, depending on time and interest, L’étranger by Camus. We discuss current events by reading articles and listening to newscasts on TV5, RadioFrance, RadioAfrique or the like. We watch two movies, one from Martinique and one from France. From casual conversations to formal debates to regular presentations, students further develop their listening, speaking and cultural proficiency in a completely immersive environment. This course is for students who have completed through level 4 or AP.

SPANISH 1
Basic oral and written comprehension and expression skills are developed. Students learn to converse about daily living situations, and they rapidly expand vocabulary. By June they are able to do limited narration and description in the present, past and future tenses.

Text: Descubre 1

ADVANCED SPANISH 1
Advanced Spanish 1 is designed for students who have strong language-learning skills. In addition to covering the Spanish 1 curriculum at a significantly faster pace, the boys will learn and use several verb tenses that are covered in a typical Spanish 2 course. Students will acquire a more expansive active vocabulary by dint of supplemental readings, audios, and videos.

Text:Descubre 1
SPANISH 2
Students expand their vocabularies and learn to use more sophisticated grammatical structures, thus enabling them to express themselves with greater precision. Supplementary readings offer topics for classroom discussion. Basic written composition skills are developed and practiced, and short stories are read during the course of the year.

Text: Descubre 2

ADVANCED SPANISH 2
For students who have demonstrated exceptional skill in Spanish 1, this course focuses on developing a student’s proficiency in Spanish, both spoken and written, while building vocabulary and developing an advanced grammar base. All this is done at a much faster pace than in Spanish 2. Students should come prepared to actively participate in Spanish and to constantly push themselves in order to communicate at a more advanced level. Students need the recommendation of their current Spanish teacher in order to place into this advanced level 2 course.

Text: Descubre 2, Vista Higher Learning

SPANISH 3
In Spanish 3, the emphasis is oral communication. The course does not use a textbook. It is a proficiency-based course, which follows the main and most recent guidelines from the American Association of Teachers of Foreign Languages (ACTFL). It is based on a teacher-created, student-centered syllabus, focused on real life and culturally-rich scenarios, which also prepare them for Spanish 4. The emphasis is on differentiated instruction, encouraging each student to show what they “can do” with the language, making progress within the proficiency ladder, which at this level is considered Intermediate Mid (Intermediate Mid low to Intermediate Mid high). Students acquire proficiency in different communication modes: interpretive (reading and listening comprehension); interpersonal (non-rehearsed oral communication); and presentational (writing; presenting). They also practice doing circumlocution to sustain communication. Useful words such as connecting words, and conversational expressions and phrases are also required for their communication to be richer, more fluent and authentic. Grammar is not the focus; it is highlighted in context and rarely assessed out of context. Most communication happens in the present tense, with some attempts to use the preterit and the future, when needed. Students are immersed in Spanish 90-100% of the time during class.

Text: Enfoques: Curso Intermedio de Lengua Española
SPANISH 4
Spanish 4 is an option for students who wish to continue practicing their language skills, and who do not want to take AP Spanish. In Spanish 4, the emphasis is on more spontaneous oral communication. The course does not use a textbook. It is a proficiency-based course, which follows the main and most recent guidelines from the American Association of Teachers of Modern Foreign Languages (ACTFL). It is based on a teacher-created, student centered syllabus, focused on real life and also on interesting hot topics such as climate change, technology and social media. The syllabus may be re-adjusted depending on students’ interests and motivations. The last marking period focuses on Spanish movies to better understand the culture. The emphasis is on differentiated instruction, encouraging each student to show what they “can do” with the language, making progress within the proficiency ladder, which at this level is considered Intermediate Mid (Intermediate Mid low to Intermediate Mid high). Students acquire proficiency in different communication modes: interpretive (reading and listening comprehension); interpersonal (non-rehearsed oral communication); and presentational (writing; presenting). They also practice doing circumlocution to sustain communication. Useful words such as connecting words, and conversational expressions and phrases are also required for their communication to be richer, more fluent and authentic. Students are immersed in Spanish 95-100% of the time during class.

AP SPANISH LANGUAGE AND CULTURE
This course focuses on honing the students’ written and spoken proficiency while building on their deeper understanding of the Spanish-speaking world by reading articles, poems, websites and excerpts from novels and by listening to interviews, podcasts, newscasts, etc.

Throughout the year, students will explore the six topical and cultural themes set out by the College Board. These themes are vast and often intermingle. They serve as springboards for our discussions and work in and out of the classroom. This idea of cultural understanding and cultural comparison is the basis for this course. The language is the scaffolding we use to discuss and write about it. Along the way, students will also familiarize themselves with the different sections of the AP exam which is taken in May.

SPANISH 5
This one semester course is thematic based, using our short-stories book, Album, to guide us through various readings. We begin with Women in the Spanish-Speaking world, Good and Bad Luck, and One’s Conscience, culminating with How to Better One’s circumstances. Every theme is accompanied by several short stories and regular visits to online resources, exposing students to authentic sources and current-day situations. This class is conversation based, and students are required and expected to present both individually and in groups throughout the semester. Throughout the course students are practicing reading, listening, writing and speaking, culminating with an individual 10 minute presentation about what it would be like to professionally work in the Spanish-speaking world after college.

ADVANCED SPANISH 5
Advanced Spanish 5 seeks to engage ambitious students wishing to continue their language proficiency beyond AP. This full-year course will have 3 components: tutoriales, where students will write, analyse, defend and craft essays pertaining to current events in the Spanish speaking world; literature, where students will take a deep dive into well-known pieces of
CHINESE 1
Chinese 1 is a highly interactive course designed to provide students with the basic skills necessary for meaningful communication in Chinese. With strong emphasis on listening, speaking, comprehension and writing, students explore the Chinese language through rhymes, poems, movement, role-playing and hands-on activities. Learning is also enhanced with cultural references to Chinese geography, customs, traditional games, and the art of the Chinese paper-cut. By the end of the school year, students will master Pin-yin, the Chinese sound system, and learn about 400 Chinese words. They will also understand the basic principles, traditions and philosophies of Chinese characters.

Text: Discovering Chinese 1/2

CHINESE 2
Rigorous practice of spoken and written Chinese in more complex communication activities will be complemented by intensive drills to fine-tune pronunciation, expand vocabulary, and internalize more complex grammatical constructions. Basic writing skills are developed and practiced. Supplemental reading materials such as short stories are employed. Special emphasis is given to developing a greater fluidity and flexibility in expression and response. Students will be able to write a diary and social letters.

Text: Discovering Chinese 2/3

CHINESE 3
The basic grammatical structures of Chinese are reviewed and fine-tuned, and more complex structures and vocabulary are introduced. Through extensive practice in speaking and writing, students improve their ability to express themselves in the language. Oral presentations provide students with additional speaking opportunities. Selections from Chinese videos and other materials are used to deepen students’ knowledge and understanding of Chinese culture and ways of thought.

Text: Discovering Chinese 4

CHINESE 4
The course includes frequent oral presentations and spontaneous conversation about various aspects of contemporary Chinese culture. Reading and discussion of supplemental materials and practice speaking Chinese in a variety of functional, everyday situations allow students to expand their vocabulary and to solidify previously learned grammatical structures. Selections of Chinese videos are used to deepen knowledge and understanding of Chinese culture. Although designed as a full-year course, it may be taken on a semester basis.

Text: Integrated Chinese 2 Part I

ADVANCED CHINESE 4
In this course, students are expected to go beyond the normal rigor of Chinese 4, learning new and fascinating linguistic and cultural concepts at a faster pace. In addition to the Chinese 4 textbook, Integrated Chinese Levelb2: Part 1, we will also be using supplementary materials found in Magical Tour of China, as well as cultural videos to supplement evening assignments.

One of the most crucial skills of the 21st century is one’s ability to speak another language. In Advanced Chinese 4, we will thus be further strengthening these
Chinese through extensive oral and written practice and interaction. Lessons will be conducted in Chinese and developed from materials in the Integrated Chinese Level 2, Part 2 textbook and workbook, though several other outside sources will be incorporated as well, such as Sina Weibo, Lingt Language and other resources. By the end of the year, students will be able to write about and discuss a variety of topics relevant to life in the 21st century using Mandarin Chinese such as holidays, traveling, religion, interviewing for study abroad programs, gender issues and equality, as well as several other culturally related topics. Students will complete the course having established a level of proficiency with which they may springboard into the next stage of their career in Chinese.

The Lingt Language Classroom online tool will be used to assess students’ oral skills through recorded practice, and frequent posts will be made by students on the largest micro-blogging website on earth, Sina Weibo. Aided by this multi-purpose tool, students will learn to move seamlessly between learning in our textbooks, class discussions and through the blogosphere, with which they may be exposed to more cultural trends and current issues. In addition, there will also be 2-3 tests per quarter, to assess the students’ acquisition of characters, their ability to write and their listening comprehension.

Advanced Chinese 5 is designed for advanced Chinese language students who seek to pursue their studies in a full year course in order to improve in all four areas of linguistic communication: listening, speaking, reading and writing. In order to sign up for this course, a student needs to have an A- or above in Advanced Chinese 4 or an A in Chinese 4.
SCIENCE

Science is a field that thrives on scrutiny and, through the process of “peer-review,” enjoys a level of reliability not achievable in other less quantifiable disciplines. Ultimately, sound science should be the basis for good decision-making. Given the backdrop of the challenges we face: climate change, global disease, cyber-terrorism, healthcare inequities, among others – a foundational understanding of science is critical to support an informed citizenry prepared to participate in the creative and rational design of a more just, equitable, and sustainable future. The practice of science at Belmont Hill fosters skill development in multiple areas, including inquiry, critical thinking, problem-solving, collaboration, communication, adaptation, creativity, and resilience.

SCIENCE 1
Form I
This three-quarter course takes an interdisciplinary approach to science instruction, exposing students to the fields of Biology, Environmental & Earth Science, and Chemistry. Throughout the course, students will not only engage with rich and relevant content, but also build critical skills for scientific investigation. At the conclusion of each marking period, students will complete a culminating project demonstrating the skills and knowledge they have gained throughout the quarter.

The first Marking Period takes students through an inquiry of the characteristics of life, the many organisms that inhabit our planet, and the human body systems. This quarter incorporates lessons on note taking, lab safety and procedures, and scientific research. Students will then use these skills combined with their knowledge of human body systems to work with a partner to diagnose a patient based on a list of symptoms and defend their decision with evidence through research.

Students then transition into focusing on the environment and the many interactions that take place within it. This quarter emphasizes the importance of humans and their effects on the planet and its ecosystems. The conclusion of this section of the course includes a deep dive into environmental justice where students research case studies and current events to highlight these issues and suggest solutions to solve them.

The final Marking Period of the course provides a survey of chemistry principles, including an introduction to matter, the periodic table, atomic structure, and bonding. In the chemistry unit, there is a strong emphasis on developing presentation and public speaking skills, as well as further development of data analysis through use of basic statistics. In the final weeks of the course, students work with a partner to design and demonstrate a chemical experiment in front of their class. Students are introduced to the lab report writing process in addition to practicing their laboratory and safety skills.

The goal of this course is to instill a passion and interest in science and scientific investigation, as well as provide students the academic tools necessary to succeed in future science courses.

INTRODUCTORY PHYSICAL SCIENCE f, s
Form II
This course is a semester laboratory course in Introductory Physical Science required in Form II. Students perform a well-planned series of experiments. Each boy keeps a detailed account of every experiment in his laboratory notebook, along with a record of the class results, a summary of the class discussion, and
a generalized conclusion. The majority of concepts in the course are uncovered by the process of active scientific inquiry and guided reasoning. Students are encouraged to be less dependent upon the teacher and more confident in their own analytical ability.

Throughout the course, many lab techniques and analytical skills are developed: careful observation, precise measurement, clear organization of data, using proportions, problem solving strategies, significant figures, scientific notation, histogramming, and graphing. The metric system is used exclusively.

Topics include: volume vs. mass as a measure of matter, conservation of mass, characteristic properties, and separation techniques. The course culminates in a two-week long laboratory experiment known as the “Sludge Lab.” The experiment tests a boy’s ability to work with a partner to devise a procedure to separate and identify a mixture of unknown solids and liquids using the techniques they learned throughout the course. Students are evaluated on their ability to work in an organized manner with minimal direction from their teacher, to keep detailed records, and to accurately identify the components of the unknown mixture.


ENVIRONMENTAL SCIENCE f, s
Form III

This course is dedicated to the exploration of the range of environmental problems facing humankind as it moves into the 21st century. From resource depletion, ecosystem degradation, climate change, population growth, loss of biodiversity, to environmental racism - this course exposes students to complex issues and the myriad social, scientific, technological, economic, and ecological challenges they pose for the future. Using a case study approach when possible, the conflicts between man and nature can then be considered and weighed through the lens of human experience and history, facilitating a more holistic analysis of these complex issues. The course seeks to balance the study of problems with the search for new technologies and solutions and to promote a sense of optimism about the future. In the face of global challenges, the course is designed to put scientific information into a social context that can help young citizens make informed choices and to take a measure of responsibility for helping to design the future they want. This course invites students to demonstrate evidence of their engagement in a variety of ways including a poster project, a research paper, a shark-tank exercise, Loom video presentations, and the keeping of a “Naturalist Notebook” that includes a suite of field observations. Finally, this course takes advantage of a relationship with Massachusetts Audubon and includes a number of outdoor excursions to their conservation property, Habitat, contiguous with Belmont Hill’s campus.

Text: Living in the Environment, Miller and Spoolman.

FORM III SCIENCE ELECTIVES

All form III students will enroll in one semester of Environmental Science. In addition to this course, they have the option of taking one of the following one semester electives. Returning students may opt to take Facing History. However, all new students must sign up for one form III science elective.

COMPUTER SCIENCE 1
Form III
This project-based course allows stu-
dents to familiarize themselves with the fundamentals of task-oriented computer programming. The course seeks to foster creative thinking, teamwork, and problem-solving in a coding environment. Over the course of the semester students will acquaint themselves with programming as they meet design challenges and discrete goals. Specific projects vary for a particular semester but generally will include programming a website, a video game, and a smartphone application. The semester culminates in an independent final project of the student’s choosing. The course is designed to introduce students to the many applications of code for innovation.

CONCEPTUAL PHYSICS f, s
Form III
This course is designed to rigorously pursue three goals:

1. A foundational, deep, though not comprehensive, understanding of conceptual physics, kinematics (the study of motion), plus one or more other topics in physics, dependent upon time constraints.

2. Applied physics & design skills. These include familiarity in designing and prototyping a project using CAD software, 3D printing and the Epilog Laser Cutter. Being familiar with lab safety protocols, lab equipment, observation and measurement. Testing and analyzing your work (qualitative and quantitative critiquing and processing of what went on in your personal lab experience, and using 3D modeling tools such as fluid dynamics software. The end goals are to build a full-scale project (toboggan in the fall & coroplast boat in the spring) based off of your designs and dovetail your experience into the larger context of the course with respect to concepts learned throughout the semester.

3. Crucial problem-solving skills. We will use arithmetic, basic algebra, right angle trigonometry and graphing topics to help us understand and solve interesting problems in mechanics. As the year moves onward, your math skills will improve and we will take advantage of this by solving more complex problems.

Text: Conceptual Physics, Paul Hewitt.

ENGINEERING f, s
Form III
Introduction to Engineering aims to introduce students to “needs based problem solving” and the Engineering Design Process. These ideas will be discovered through a series of group based projects and assignments covering various areas of the Engineering field, meant to reinforce the concepts. Students will also be introduced to 3D Printing, Computer Aided Design (CAD), laser cutting, and basic electronic circuits. Students will be expected to thoroughly document their engineering design process in their Design Notebook to aid in construction of multiple PowerPoint based presentations.

The class will culminate with a design project in which students join the Maker Movement by volunteering for one of the many organizations, such as Makers Making Change, that create accessibility devices for people in need.


UPPER SCHOOL
SCIENCE PROGRAM
Students in the upper school must complete two full year lab science courses (designated below). Additionally, they have the option to enroll in a rich tapestry of science electives and AP classes. Students who see themselves as scientists
can enroll in either Advanced Science Research or Advanced Biomedical Engineering as a sixth course in their Form V and VI years upon the formal review of the Science department.

Lab Science Courses: Biology, AP Biology, Chemistry, AP Chemistry, Physics, AP Physics I, AP Physics C, AP Environmental Science

LAB SCIENCE COURSES

AP BIOLOGY
Form IV-VI
AP Biology aims to give the student a strong background in biological science to relate to his biological experiences in the future. The core theme is evolution, which accounts for both the unity and diversity of life. Among the supporting themes is the correlation of structure and function, a relationship that students can apply at all levels of biological organization.

Class lectures, discussions, and labs supplement the text with information to help achieve this aim. The approach taken is designed to develop the reasoning power of the students through the use of inquiry and investigation of concepts rather than mere memorization of facts. The course is specifically designed to prepare students for the Advanced Placement exam in May.

Major topics include cytology, Mendelian genetics, Recombinant DNA technology, anatomy and physiology, ecology, and recent scientific discoveries. The lab acquaints the student with techniques and procedures of dissection, microscopic investigation, biotechnology, and chemical analysis.

Text: Biology: Biology in Focus, et al.

BIOLOGY
Form IV
Biology is a standard high school course designed for the student who has not been exposed to a previous life science course. Focus is on the practical applications of biology with less theoretical material than Biology AP contains. Development of fundamental skills such as problem solving, classifying, predicting, reasoning along with laboratory analysis and dissection are goals of the course.

The role biology plays in the everyday life of the student is also emphasized. Several of the topics covered through discussion and outside reading include health, nutrition, pollution, population growth and genetic engineering.

Text: Biology, Miller and Levine

AP CHEMISTRY
Form V-VI
Designed for those who are likely to continue science study in the future, Chemistry AP provides students with the necessary background in problem solving and laboratory techniques for more specialized study. Measurement and descriptive chemistry are emphasized at the start; quantitative methods and the theories of chemical bonding are built up during the year. The laboratory work is centered on experimental design, the use of technology to collect and analyze data, and the development of skills in analysis of unknowns. Students perform experiments that embrace topics such as energy and rates of reactions, chemical equilibrium, acid–base chemistry, gas laws and electrochemistry. Students are expected to take the Advanced Placement exam upon completion of their study.

Prerequisite: Concurrent enrollment in either Pre-Calculus or Pre-Calculus A.
CHEMISTRY
Form V
This course is designed to give students a working knowledge of the concepts and principles of chemistry that will empower them to make decisions on issues that directly affect their lives and the environment. The skills of analysis and logical thinking are emphasized in solving problems and performing laboratory experiments. Some of the main topics studied include the structure and function of matter, chemical energy, aqueous solutions, reaction rates and electrochemistry.

Prerequisite: Algebra 2.
Text: Fundamentals of Chemistry, Burns

PHYSICS
Form VI
Physics is an algebra-based course that provides a comprehensive introduction to classical and modern physics. Topics of study include Newtonian mechanics, thermodynamics, electricity and magnetism, wave and geometric optics, as well as topics in modern physics, such as radioactivity and quantum mechanics. Emphasis is placed on the significance of the transition from the Aristotelian physics towards the development of modern and non-intuitive ideas like wave-particle duality and relativity theory. Physics is a laboratory-based course, allowing for the exploration of inquiry-based (both guided and open) laboratory exercises, where students examine the laws of physics in real world settings with the use of modern probes and sensors for data acquisition. Through these lab exercises, students will develop a robust sense of experimental uncertainty, and craft ways to minimize error when collecting data. Students in Physics will be asked to reflect upon their findings in the lab by maintaining a laboratory notebook. Ultimately, this course is designed to be broadly beneficial to those wishing a solid introduction to physics whether or not they intend to go in the natural sciences.

Prerequisite: Algebra 2 and Geometry
Text: Physics, Giancoli

AP PHYSICS I
Form VI
Advanced Placement Physics I is the equivalent to a rigorous first-semester college course in algebra-based physics. The course covers Newtonian mechanics (including rotational dynamics and angular momentum); work, energy, and power; and mechanical waves and sound. It will also introduce electrostatics and electric circuits. Students will keep lab journals and will be heavily tested while following a college level syllabus.

Prerequisite: Concurrent enrollment in a calculus course.
Text: Physics, Giancoli 7th Edition

AP PHYSICS C
Form VI
Advanced Placement Physics C is the equivalent of two rigorous second-semester college courses in calculus-based physics. Fundamental algebraic principals will be introduced and further explored with calculus. The first half of the course covers Newtonian mechanics (including rotational dynamics and angular momentum); work, energy, and power; including changing accelerations and drag forces, while the second half of the year will delve into electricity and magnetism. Students will keep lab journals and will be heavily tested while following a college level syllabus.

Prerequisite: Completion of or concurrent enrollment in AP Calculus BC
**AP ENVIRONMENTAL SCIENCE**  
Form VI  
Designed to build upon the environmental science curriculum taught in the ninth grade, the AP Environmental Science course provides students with the scientific principles, concepts, and methodologies necessary to solve environmental problems. This course will allow students to understand interrelationships in the natural world, identify and analyze environmental problems, evaluate the relative costs of environmental degradation, and develop solutions for these environmental issues. Environmental Science is interdisciplinary; it embraces and utilizes a variety of topics from different areas of study, including ecology, chemistry, geology and biology, economics, and politics. The course includes rigorous discussion and debate, laboratory investigations, inquiry-based and student-centered experimentation, and the reading of environmental literature. Students are expected to take the AP exam in May.

Prerequisites: Environmental Science, Biology, and Chemistry.

**UPPER SCHOOL SCIENCE ELECTIVES**

**AP COMPUTER SCIENCE PRINCIPLES**  
This course is designed for students who have moderate to no prior experience coding, with a little more than half the content covering programming fundamentals and the rest covering topics around computer science such as: how the internet works, algorithms, cybersecurity, data science and machine learning, and the software development life cycle. The class is intended to serve both as an introductory course for potential computer science majors, providing a solid foundation for future study, and as a course for people who will major in other disciplines who want to be informed citizens in today’s technological society. The course is recommended for students who have a strong interest in logic and problem solving, languages, and technology, as well as those who seek to develop their programming skills.

**AP COMPUTER SCIENCE A**  
The goals of the AP Computer Science A course are comparable to those in the introductory course for computer science majors offered in many college and university computer science departments. The course is most suited to students who have some degree of programming experience already, although particularly motivated students without prior programming experience should also be able to do well. AP CS A goes into depth with the Java programming language, and topics covered include programming fundamentals as well as object-oriented programming and inheritance, multidimensional arrays, and recursion. Throughout the year we will prepare for the AP exam, which is a combination of multiple choice questions and free-response programming questions.

**COMPUTER SCIENCE 1**  
This project-based course allows students to familiarize themselves with the fundamentals of task-oriented computer programming. The course seeks to foster creative thinking, teamwork, and problem-solving in a coding environment. Over the course of the semester students will acquaint themselves with programming as they meet design challenges and discrete goals. Specific projects vary for a particular semester but generally will include programming a website, a video game, and a smartphone application. The semester culminates in an independent
final project of the student’s choosing. The course is designed to introduce students to the many applications of code for innovation.

GEOLGY
The course begins with the introduction of plate tectonic theory as a framework for understanding global features such as the distribution of earthquakes and volcanism, the origins of mountain building and the features of the ocean floor. Students then change their scale of observation from the global laboratory to the smallest clues the rock and fossil record provide which are the basis for unravelling 4.5 billion years of Earth history.

Like a great detective story, the study of geology is similar to putting together an immense jigsaw puzzle with most of the pieces missing. Students learn that the study of geology is a creative discipline and challenging, requiring an understanding of chemical, biological, physical, climatic, ecological and geological concepts. The origins of mass extinctions and other natural disasters speak to the student of a dynamic and evolving planet Earth, often unpredictable and always spectacular.

The course culminates with exercises which challenge the student to reconstruct paleoenvironments and millions of years of the earth's history using all that has been learned about the genesis of rocks and associated structures, the importance of fossils, and relative age-dating relationships.

Text: The Earth – An Introduction to Physical Geology, Tarbuck and Lutgens

MARINE BIOLOGY
This course is designed to rigorously pursue the following goals:

1. To provide the student with an understanding of the major ecological and evolutionary processes that shape past, present and future marine communities.

2. To provide the student with an understanding of the significance of marine biodiversity and global environmental changes, especially those affecting the marine environment.

3. To provide the student with an understanding of how policy issues relating to marine biodiversity and conservation are shaped by physical and biological characteristics of the marine environment.

4. The overall goal of the course is to enable students to be informed, educated citizens that are capable of understanding, discussing, and/or voting on issues related to the marine environment and its biodiversity.

5. The course will have an active learning component, with participatory discussion by both the teacher and students.

6. The course will be integrated by a common set of principles across all topics covered, i.e., we will identify a foundational set of environmental, ecological and evolutionary processes that organize marine communities across all of the major marine habitats considered.

QUANTITATIVE PHYSIOLOGY Fall
Forms V & VI
Sports Physiology is a Spring science elective being offered to Juniors and Seniors. The central theme of this course is to fully understand how our bodies function during exercise. The types of questions that will be addressed include the following:

- What mix of neurotransmitters results in super-athlete performance?
- How does warming-up enable a transition between anaerobic and aerobic performance?
• What are the physiologic differences between a short distance and long-distance runner?

• How should one prepare nutritionally for competition?

• How do performance enhancing supplements such as creatine work?

• What is the molecular basis of strength?

• What happens when things go wrong:

• What is blood doping and why does it work?

• How can consuming too much water kill you?

• How can the risk of injury be reduced?

Students will answer these questions by designing, executing, and interpreting experiments. This is a lab-based course where active learning is the primary method of instruction.

Belmont Hill Collaborative Programs

In the Fifth and Sixth Form, students are eligible to enroll in one of the options below as a sixth course. These courses are collaborative and project-based. Student enrollment in them is subject to a rigorous application process.

Advanced Action Research (AAR)

Form V

Belmont Hill’s Advanced Action Research (AAR) Program emanates from its membership in the School Participatory Action Research Collaborative (SPARC), a consortium of 11 independent schools in partnership with the Graduate School of Education at the University of Pennsylvania.

The purpose of this partnership is to provide diverse groups of students with college-level social-science research skills and experience to improve school culture, policy, and practice. Student groups at each school conduct a research project that examines a central aspect of school life and develop action steps or recommendations that address the topic selected. At the end of the school year, these student groups present their research projects at a roundtable conference held on campus at the University of Pennsylvania. Student groups also present their research at school-wide assemblies, at faculty meetings, and to their board of trustees. The fundamental goal of this partnership is to empower students to inform school change in meaningful ways.

Advanced Science Research I, II (ASR)

Form V and VI

In the Advanced Science Research (ASR) course, students build upon their existing classroom knowledge from the science curriculum to conduct empirical projects in areas of cutting-edge scientific research seldom open to high school students.

With the School’s close proximity to some of the best universities and hospitals in the world, enrolled students are placed with mentors in local research facilities. Students learn how to conduct the “business” of doing research in the real world at their placements. ASR is modeled after a handful of such courses around the country. Students work intensively and closely for four–five hours in a laboratory with a mentor who is a professional research assistant.
about 10 hours of individual work over the summer may be required to get up to speed especially in the area of physics.

If you are interested in enrolling in this class, please contact Dr. Goldberg: goldberg@belmonthill.org.

ETHICS

All boys in Third Form (9th grade) participate in an Ethics course taught by the Head of School. This seminar-style, case-based course meets one afternoon per week for one-third of the school year. The course aims to engage boys to think and talk about some of the important and complex issues in their lives and in the world around them. Listening to a case and then discussing it, the boys are pushed to think not only about what they believe, but why they believe what they believe. Often using cases covering current events or school issues, the class explores ethical issues relating to medicine and health care, war, racism, drinking, sexual behavior, homophobia, peer pressure, and bullying.

HEALTH AND WELLNESS

The Belmont Hill Health and Wellness program for Forms I-IV aims to empower young men to lead a healthy physical, mental, and social lifestyle. The class occurs on a weekly basis for one season each year and provides students an opportunity to discuss a variety of relevant topics related to the ongoing changes and challenges they are encountering. The curriculum is progressive in nature and addresses issues that are timely in a student’s development with topics that include: Nutrition, relationships, safety, sleep, exercise, stress management, sexuality, consent, substance use and abuse, and social media.
The Independent Study program is designed to make it possible for a student to pursue an interest which is not included in the school’s academic course offerings. To this end the Dean of Studies considers proposals from boys, consults with his teachers and advisors, offers suggestions and sponsors projects which they feel will advance the development of the student. These projects may be of a traditional nature, such as a research project or taking a course at a neighboring school or college, or they may involve such activities as working for a politician, museum, or local institution. The type of proposal which will be accepted is limited only by a judgment of what is in the best interests of the boy.

Projects may be given academic credit, but in past years many have not been for credit. In order to be eligible for credit, a project must have the academic substance of a course for at least one semester, and it must also be evaluated. Students doing projects for credit have the option of receiving a letter grade or a pass-fail rating.

Applications for projects involving academic credit for the first semester must be in the Director’s hands by June 1 and for the second semester by mid-December.

Applications for projects not intended for academic course credit may be submitted at any time.